# Specifier

Construction Specifications Canada is an organization representing diverse interests in the construction industry and related professions. It is dedicated to improving the quality and flow of information between these interests, whether in the form of specifications, contract administration or marketing.

#### March 2024 Edition

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Editor: Tracey Stawnichy

# Specification-Related Issues on Construction Projects

**Date:** Thursday, March 14, 2024 **Time:** 11:45am – 1:00pm

Place: Matrix Hotel – Amber A Room

10640 – 100 Avenue NW, Edmonton, AB T5J 3N8

**Registration and Lunch Served:** 11:45am, **Presentation**: Noon-1:00pm **Presentation By:** Robert Wirth, Revay Group

This 1-hour presentation will discuss specification-related issues on construction projects and help to develop understanding and mitigating the risk associated with a project's technical specifications.

Issues associated with a project's technical specifications are often a leading cause of disruption and delay on construction projects. It is therefore important for anyone involved in the construction industry to be aware of what these issues commonly are, and what each

stakeholder can do to avoid or mitigate their negative effects. Issues that will be discussed include ambiguity in the specifications; loose coordination of the spec-writing effort; incautious reference of product alternatives; specifying means and methods; uncertain definition as to which party has design responsibility; and difficulties in

finalizing/approving technical specifications.

Please join us as we listen, learn, and discuss.

# National Building Code Changes

#### **2023 Alberta Edition**

Date: Thursday, March 21, 2024

**Time:** 11:45am – 1:00pm

Place: Matrix Hotel – Amber A Room

10640 – 100 Avenue NW, Edmonton, AB T5J 3N8 **Registration and Lunch Served:** 11:45am, **Presentation** Noon-1:00 pm **Presentation By:** Paul Chang, Alberta Municipal Affairs

Learn about some of the changes in the National Building Code – 2023 Alberta Edition (NBC(AE)). Discuss Technical changes, explore the Harmonization Project and gain insight into the application of Alberta's Tier 1 for Section 9.36 of the NBC(AE) and the National Energy Code for Buildings 2020.

2024 Edmonton Chapter Executive			Advertising Rates	
			Business Card: April 1 to May 30	
Director	Tracey Stawnichy	780 994 3699	Rates cover your ad on our website 24 hours per day 7 days per week.	
Chairman	Andrew Brassington	587 341 5268	Business card on-line:	
Vice-Chairman	Dylan Leclair	587 335 9552	Annual \$100 if received by May 1; \$75 if received by August 1;	
Secretary	Jessica Prosser	587 340 7169	\$50 if received by November 1;	
Treasurer	Catherine Osborne	780 705 7108	\$25 if received by February 1 Add \$50 to have a link to your company web site f	
Architectural	Kevin Osborne	780 717 1007	the CSC Edmonton Chapter web page.	
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#### FOR FURTHER INFORMATION

Contact any member of the Executive, attend one of our Chapter Meetings, send your name and address to CSC Edmonton Chapter, PO Box 35093 Mid Town PO. Edmonton, AB T5J 0B7, or go to edmonton.csc-dcc.ca for additional contact information.

#### **GOALS OF CSC**

Construction Specifications Canada is a multi-disciplinary non-profit association dedicated to the improvement of communication, contract documentation, and technical information in the Construction Industry. CSC is a national Association with Chapters in most major Canadian Cities.

To this end, CSC pursues the study of systems and procedures that will improve the coordination and dissemination of information relevant to the construction process.

We seek to enhance the quality of the design and management aspects of the construction activity through programs of publication, education, and professional development, believing that by so doing, we can contribute best to the efficiency and effectiveness of the construction industry as a whole.

#### **OBJECTIVES OF CSC**

To foster the interest of those who are engaged in or who are affected by the compilation or use any forms of specifications for the construction industry.

To publish literature pertaining to the construction industry.

To engage in activities to improve procedures and techniques related to the construction industry.

The opinions and comments expressed by the authors do not necessarily reflect the official views of Construction Specifications Canada. Also, appearance of advertisements and new product or service information does not constitute an endorsement of those featured products or services.

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#### **Announcements:**

# **Chair's Message**



Andrew Brassington, CSC Edmonton | Chapter Chair

Hello Chapter Members,

March already? We have braved two winter events so far this year...-60 and recently a big snow accumulation. I use the word brave because these are not small events and posed challenges for a lot of people. I encourage you to be brave this month and take a chance on not one, but two events this month. They are both lunch presentations. Specification Related Issues on Construction Projects and National Building Code Changes – 2023 Alberta Edition. Follow our Eventbrite page for the most up-to-date information on events we are planning. We appreciate all your support, and we look forward to seeing you soon.

Cheers!

# **Membership in CSC**

Dave Lawrence



In the construction industry's fast-paced environment, the need for and value of Construction Specifications Canada is greater than ever. CSC brings together individuals from all segments of the construction industry. All who have a vested interest in Canada's largest industry are invited to join CSC. When you join CSC, you become part of the only association that brings together professionals from all aspects of the construction industry.

#### **DESIGN TEAM**

CSC offers members of the Design Team the opportunity to meet with other members and exchange information. It also affords you the chance to help improve technology and its management, and the means to improve ways in which your ideals are translated into clear, concise, and complete documentation.

#### **BUILDING TEAM**

If you are a member of the Building Team, CSC offers you the opportunity to become involved in formulating specifications. Your valuable input into the programs can help generate time and cost savings, as well as improve performance.

#### **SUPPLY TEAM**

The multi-disciplinary composition of CSC allows members of the Supply Team to meet with other members of the construction team. CSC programs in data filing and information retrieval are geared to present convenient and concise information on your products for proper evaluation and specification.

#### THE STUDENT

If you are a student of architecture, engineering, or construction technology, CSC will provide you with a greater exposure to, and a better understanding of, the construction industry, giving you an excellent opportunity if you plan a career in the construction field.

#### **People and Places – Welcome to new and past CSC Edmonton Chapter Members!**

#### Fresh Faces (New Members)

#### Sarah Whittal Student at NAIT P: (780) 940-0152 E: sarah.a.whittal@gmail.com

#### Yes, We've Moved (Contact / Mailing Address Update)

Joseph Trivellin, CTR Northern Alberta Technical Rep. Barrier Tek Inc. 401 – 18 Avenue Nisku, AB T9E 7T5 P: (780) 237-3595 E: josepht@barriertek.com

#### Previous Members Re-Joining / Re-Activated

None this month.

# **CSC Education:**



#### Mike Ewaskiw, CTR, Manager, Architectural & Engineering Services, Stonhard

#### Principles of Construction Documentation

The PCD course is an introductory course that will enable the student to have a better understanding of construction documentation (specifications, drawings, and schedules), products, bidding procedures, and contracts. It is also a prerequisite to all the other CSC education courses.

#### Specifier 1

Specifier 1 is an intermediate level course that will take the individual beyond the concepts previously introduced in the PCD Course. Although some of the same topics are included, the depth of comprehension and explanation exceed that of the PCD course. The Specifier 1 is a prerequisite for the Certified Specification Practitioner (CSP) designation from CSC. Successful completion of the course may be credited toward the experience component requirements for the Registered Specification Writer (RSW) designation.

#### **Technical Representative**

The TR course provides a better understanding of contract documents and bidding procedures, product representation, professionalism, and ethics, and will provide a new depth of understanding and explanation of concepts beyond what was previously introduced in the PCD course. The course is designed for the individual involved in the supply section of the construction industry, such as manufacturer representatives, agents, or distributors of products. The student will have successfully completed the PCD course. Contact Mike for all your education needs. P: 780-237-7844 E: mewaskiw@stonhard.com

# **EDUCATION COURSES**

# **Upcoming Classes:**

Principals of Construction Documentation (PCD) –January 8, 2024 Specifier – January 8, 2024 Construction Contract Administration (CCA) – January 8, 2024 Technical Representative (TR) – TBD

# **Upcoming Classes Online:**

Principles of Construction Documentation (PCD) – January 8, 2024 Construction Contract Administrator (CCA) – TBD Specifier – TBD Technical Representative (TR) – TBD

## **Upcoming Virtual Classes:**

Principles of Construction Documentation (PCD) – January 12, 2024 Construction Contract Administration (CCA) – February 23, 2024 Specifier (SP) – February 23, 2024 Technical Representative (TR) – February 23, 2024

Social Media:

Check us out:







DOUBLE TREE BY HILTON 16615 109 AVE NW, EDMONTON

CSC

# 2024 INFONET

https://edmonton.csc-dcc.ca/

#### SCHEDULE FOR THE DAY

11

**APRIL** 

3:00PM	RECEPTION AND TRADESHOW
5:30PM	HOST ANNOUNCEMENTS
5:45PM	DINNER
7:00PM	HOST INTRODUCTIONS
7:20PM	KEYNOTE SPEAKER
9:00PM	NETWORKING

#### What is InfoNet?

InfoNet is the CSC Edmonton Chapters premier event of the year that combines networking, education, and inspiration. Join us for this half day experience and learn about new materials and technologies, reacquaint yourself with people in the design and construction industry and be inspired to foster some "out of the box" thinking.

#### **Looking to Attend?**

This is a sponsor invited event. If you have yet to receive an invitation, please contact your local material representative. Alternatively, you can email edmonton@csc-dcc.ca and a member of the committee will reach out to hosting tables. If you have any questions, feel free to contact any member of the InfoNet Committee

#### **InfoNet Committee:**

Chair, Andrew Brassington: Andrew.Brassington@owenscorning.com Vice-Chair, Dylan Leclair: Dylan.Leclair@IKO.com Program Officer, Abby Sharpe: Abby.Sharpe@whitecap.com Secretary, Jessica Prosser: j.prosser@fullsteriron.com Officer at Large, David Lawrence: davidlawrence@interbaun.com



Kevin Vallely

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# 2024 INFONET

#### **Sponsor Instructions:**

To sign up for the event, please go to Eventbrite and search:

#### **CSC Edmonton InfoNet 2024**

An attendee name is required at the time of sign-up, please enter "TBC" if you do not have a name at that time. There is a waiting list for tickets if a seat at your table needs to be filled. Please contact someone on the committee if you would like to request a name from the waiting list. A completed attendee list will be required no later than March 28th.

#### Who Should You Invite?

CSC Members, Specifiers, Architects, Engineers, City Planners, Developers, Contract Administrators, Trades People, Contractors, Interior Designers, Developers... Anyone you deal with on a regular basis that would like to be inspired!

#### SPONSORSHIP PACKAGES

**Gold Sponsor: \$2200 +GST (1 available)** Includes 8 dinner tickets, tabletop display in the tradeshow, guest speaker at your table, introduction of guest speaker, premium table placement, five page PowerPoint advertisement during the meal.

The Silver and Bronze levels will support the attendance of one student that will be placed at your sponsored table.

#### Silver Sponsor: \$1950 +GST

Includes 7 dinner tickets, tabletop display in the tradeshow, prime table placement, two page PowerPoint advertisement during the meal.

#### Bronze Sponsor: \$1750 +GST

Includes 7 dinner tickets, tabletop display in the tradeshow, company acknowledgement in the PowerPoint presentation

If you don't see a package that meets your needs, contact one of the committee members

All Sponsorship packages include company acknowledgement in the May 2024 edition of the Specifier

# PRESENTING KEYNOTE SPEAKER KEVIN VALLELY

After spending nearly twenty years testing the limits of human endurance in the most inhospitable environments on the planet, Kevin Vallely inspires audiences with his core belief that it doesn't take a hidden talent or a gift to achieve big goals, it's something we're all capable of doing.

As a keynote speaker, award-winning architect and internationally recognized adventurer, Kevin offers a unique perspective that no matter what the goal, the fundamentals to achieving success as a trusted leader is to walk the talk, create purposeful collaboration, and build psychological trust. Kevin has learned that these fundamentals allow any team to operate at their peak performance regardless of where they operate.

Kevin has proven that he can thrive in the most adverse conditions imaginable. He has overcome insurmountable setbacks by seeing them as opportunities for creative thinking and innovation rather than as impediments to success. Through his experiences he has garnered a powerful understanding of leadership, resilience and perspective in unpredictable and fast-changing environments and has translated this knowledge into a business acumen that activates and amplifies leadership instincts.

Connecting to WHY he does what he does – the purpose behind his goals – is key to what drives Kevin's actions and the legacy he hopes to create.

Named one of Canada' leading adventurers by the Globe and Mail, Kevin is a member of the esteemed Explorer's Club and was an Explorer's Club Flag recipient when attempting his first human-powered traverse of the Northwest Passage in 2013.

He has skied the length of Alaska's 1180-mile Iditarod Trail in the dead of winter, has retraced the infamous Sandakan Death March through the jungles of Borneo for the first time since WWII and in 2009 broke the World Record for the fastest unsupported trek from the edge of the Antarctic continent to the Geographic South Pole.

A lead facilitator and expedition manager for the leadership development company The AIP Group (Adventures Inspiring Performance), Kevin uses exciting immersive learning adventure simulations with the latest in neuroscience and performance research to optimize leadership learning.

In February 2020 Kevin released his new book Wild Success : 7 Key Lessons Business Leaders can Learn from Extreme Adventurers.





# **Articles of Interest**

## The Future of Energy: Can Buildings Become Reservoirs of Power?

Sourced from: https://www.archdaily.com / Ankitha Gattupalli

Environmental degradation has shed light on the need for new sources of energy. A shift in energy sources calls for innovative means of storing energy. For centuries, buildings have proven able to store people, objects, and systems, inviting a conversation about their untapped potential to efficiently store large amounts of energy. In this new era, can buildings go beyond being structures of function to potential reservoirs of power?

Lithium-ion technology was one the undisputed rulers of energy storage, its widespread use in mobile phones and hybrid cars has been a testament to its reliability. However, it is currently facing criticism due to its environmental toll and geopolitical policies. The construction industry has been able to offer a solution to this 21st-century problem through multiple interventions. Bricks and cement have become contenders for these batteries, offering novel ways of storing energy. Minerals integral to construction are now key components of Thermal Energy Storage (TES) systems which can be installed in buildings in a way that turns them into thermal batteries. A fusion of architecture and technology foretells a scalable solution, leading nations toward a cleaner energy economy.

#### **High Rise Buildings as Batteries**

Soaring buildings serve as a plausible answer to energy storage concerns in the modern world. Researchers have studied and experimented with potential energy in elevators. Termed Lift Energy Storage Technology (LEST), elevators in high-rise buildings transform into dynamic storage units by lifting wet sand containers to store energy during idle moments. A combination of gravity and existing infrastructure provides a cost-effective alternative to store energy and improve power quality in urban landscapes.

#### **Residential Energy Storage**

Apart from high-rises, an increasing number of single-family homes and multi-family dwellings have been utilizing dedicated battery systems and vehicle-to-grid systems. These storage technologies allow for clean energy to be utilized by houses and further shared or sold to the city grid. The United States observed a surge of over 200 percent in installations of such systems between 2014 to 2018, and its demand is projected to steadily grow.

#### **Electrified Cement**

Fusing the ancient and the modern, researchers at MIT have combined the properties of cement, water, and carbon black to create a compound termed as "electrified cement". The nanocomposite allows cement to be used as a supercapacitor, capable of storing and releasing electrical energy at unprecedented speeds. The unique property of electrified cement lies in its ability to form tendril-like forms within voids that act as wires to enhance the material's conductivity. The material has been imaged in building foundations and roads to create city-wide systems of power, providing sustainable energy to homes and electric vehicles in its vicinity.

#### Bricks, Rocks, and Sand as Energy Houses

California-based Rondo Energy has developed a heat battery made of bricks. The self-contained units consist of a stack of bricks with electrical heating elements. The bricks store energy by converting renewable electricity into thermal energy, which can in turn be used for providing optimal heat for various industrial processes. Brenmiller, based in Israel, similarly utilizes crushed rock as its TES technology to transform volcanic rock into a constant steam supply for utility and industrial

applications. A sand battery has been developed by Finland-based Polar Night, claiming to have installed the world's first commercial sand battery as part of a district heating network. These TES systems leverage materials readily available in construction, thereby presenting a viable and scalable solution to energy storage and use.

The integration of energy storage solutions into buildings also invites the prospect of grid-interactive buildings. These structures can communicate with local power grids to adjust their operations based on real-time data flow. The potential benefits of these alternatives demand attention. If building enclosures simultaneously performed as heat batteries, climate control could seamlessly blend with energy storage for heating, hot water, and electricity. The distribution of renewable power and heat batteries among individual buildings could significantly decrease the demand for centralized utilities, paving the way for a decentralized and resilient energy infrastructure.

Efforts to incentivize end-users, both residential and commercial, to share their distributed storage resources with the central grid become crucial. The coordinated utilization of such distributed resources mitigates the need for massive investments in centralized storage systems. Policymakers and power system regulators play a pivotal role in adopting strategies that encourage the integration of these innovative solutions into the broader energy landscape.

As we chart the course towards a sustainable energy future, the challenges posed by the high cost of energy storage installations and concerns about battery supply chains loom large. However, the promise of decentralized, grid-interactive buildings and innovative energy storage solutions presents a compelling vision. Buildings are not merely structures but potential powerhouses that could redefine the landscape of energy storage.

# World's Largest Cantilever Opens Over Six-Lane Highway in Dubai

Sourced from: https//www.dezeen.com / Lizzie Crook

The cantilevered element measures 67.5 metres / Photography by Hufton + Crow



The world's longest cantilever has reached completion in Dubai, projecting out from between two skyscrapers at the mixed-use One Za'abeel development by Japanese studio Nikken Sekkei.

Measuring 67.5 metres, the cantilever forms part of a longer horizontal structure called The Link, which is dramatically suspended 100 metres above a six-lane highway and topped by a giant infinity pool.

The Link is connected to the skyscrapers at two points. As the towers sit on either side of the highway, Nikken Sekkei designed it to function as a four-storey bridge between them.

Its 67.5-metre-long cantilever, which faces northwest towards the Arabian Gulf, overtakes the 66.5-metre-long observation deck at Marina Bay Sands in Singapore as the longest cantilever in the world.

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The Link doubles as a bridge between the two buildings.



Nikken Sekkei designed The Link as the centerpiece of One Za'abeel, which is a luxury mixed-use development that comprises apartments, hotels, offices, retail, and restaurants. The project is intended as a visual gateway to the city center.

At 230 metres long, The Link is only five metres shorter than the smallest of the two skyscrapers. The second tower extends to 305 metres, cementing its place on Dubai's growing list of supertalls – skyscrapers over 300 metres tall.

According to Nikken Sekkei, achieving a world record "was not the main aim" of the project.

Rather, the studio set out to create a deceptively simple structure with clean-cut glass facades, embodying its minimalist Japanese design approach and challenging Dubai's tradition of more elaborate skyscrapers.

"Adding something new to the skyline of Dubai, that was a challenge for us," reflected Fadi Jabri, the CEO of Nikken Sekkei's Dubai office.

"We tried to come up with something which is very simple," he told Dezeen.

"It was not the main aim to reach that goal [of world's longest cantilever]," added project lead David Lehnort, while on a tour of the development.

"You want to stand out in a certain way," he continued. "I think this is a more Japanese approach, to take a step back. The architecture is

becoming the background for the scenery and all the drama that is going to happen here with all the luxury, sparkle and glamour."

Inside, One Za'abeel encompasses 530,000 square metres, which includes 26,000 square metres of office space and 12,000 square metres of retail space.

In the shortest tower, which is named One Za'abeel The Residences, a total of 264 private homes are located across 59 storeys.

The 68-storey skyscraper, called One Za'abeel Tower, has a further 94 private homes and nine penthouses serviced by luxury accommodation brand One&Only. The brand also has 229 hotel rooms and suites, which it describes as an "urban resort", in the building.

One Za'abeel Tower also contains Siro – a fitness and wellness hotel that contains 132 rooms – in addition to conferencing and event spaces, a spa, and 11 restaurants. Both the One&Only and Siro facilities are overseen by hotel operator Kerzner.

The Link itself contains three storeys of restaurants and bars, all with column-free interiors thanks to an external diagrid structure. The area at the furthest end of the cantilever has a glass floor, providing views down to the road below.

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The buildings sit on either side of a six-lane highway.



On its roof is another record-breaking feature – the world's longest suspended infinity pool and the UAE's longest rooftop infinity pool, which is intended to resemble "a beach in the sky".

"[This project] gave us the opportunity to think about what an urban resort stands for," Kerzner CEO Philippe Zuber told Dezeen.

"Our view was to say, since we don't have a beach, let's create The Link. This is an elevated pool bar; this is a beach in the sky. This is something that is super special."

One Za'abeel is complete with 14 basement levels evenly split across the towers, and a series of retail and leisure facilities in The Podium – a three-storey structure that links the towers from ground level.

On the roof of The Podium is an "urban park" with gardens and a pool, intended to emulate Balinese landscapes.

The project has met the Gold standard requirements of the LEED Green Building certification, which has been achieved through various energy-saving technologies.

According to Nikken Sekkei, this includes automated electrical, lighting, and ventilation systems, and an energy-efficient glass facade system.

The Link was lifted over the six-line highway in two parts during 2020. The first section, weighing 8,500 tonnes, was lifted over 12 days before the 900-tonne cantilever was secured in place over four days.

Its position, which is approximately a third of the way up the towers, was chosen for visual reasons but also for how it functions programmatically between the private and public spaces. According to the studio, it also helps mitigate the sway of the towers in the wind.

One Za'abeel is not the first record-breaking building in Dubai, as the city is also home to the world's tallest building – the Burj Khalifa. Measuring 828 metres in height, it was designed by architect Adrian Smith while working at architecture studio SOM.

Another building with a record-breaking cantilever is the Busan Cinema Center in South Korea. The structure features a column-free roof that measures 85 metres, making it the world's longest cantilever roof.

## **Net Zero Toronto Police Station Sets High Sustainability Bar**

Sourced from: https://canadaconstructconnect.com / Angela Gismondi

When considering the design approach for the new Toronto Police Services – Division 41 in Scarborough, Ont. architects needed to figure out a way to maintain operations at the existing building throughout the construction process.

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WZMH ARCHITECTS — The new Toronto Police Services – Division 41 building in Scarborough, Ont., designed by WZMH Architects, is a two-storey, 60,000-square-foot building focused on sustainable features. The exterior has ballistic glass cladding and among the green elements is a sloped roof retrofitted with 260 solar panels.



Located at Eglinton Avenue and Birchmount Road, the two-storey, 60,000-square-foot building was designed by WZMH Architects.

The original building, which has been on the site for decades, was formerly a courthouse and over the years was turned into a police station.

"It's outlived its purpose as a police station," explained Nicola Casciato, a principal with WZMH Architects.

"One of the early studies we did was to see if we could use it but things have changed so much in policing and in facilities that it just didn't work in this case."

As a result, the building was designed as two bars aligned along Eglinton.

"Essentially there's a south bar and then a north bar that are parallel to each other," Harrison Chan, principal with WZMH, said in an interview with the Daily Commercial News.

"We've taken advantage of the site itself seeing that at the corner of Birchmount and Eglinton is essentially the high point of the site and as you progress to the northeast corner it does drop significantly.

"There is already an existing parking lot there. We've kept that in place for all the police cars and the building itself is placed closest to Eglinton to reduce the extent of excavation."

The facility will be built in two phases, Casciato added.

"Having the first bar built along Eglinton, that allowed for partial demolition of the existing building and then the remaining portion is still operational," Chan said. "The intent is that once that first bar is complete the police services would move in and then the remaining existing portion is demolished.

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"If you drive by today, you will see that first bar is close to being completely enclosed," he added. "You'll see the sloped roof coming out of the ground. In the overall schedule it's nearing or hovering just past the 30% mark. The current schedule is slated for early 2026."

The new police headquarters building will include general office and admin areas, a gymnasium as well as booking and detention areas.

The exterior of the building features a ballistic glass cladding.

"We're using a stainless steel cladding on the outside of the building," Casciato said. "The one that we selected has a very soft feel to it...We've also introduced some brick on the building that faces Birchmount. We think that's going to give it a very interesting look."

Part of the concept of this building was to make it feel like it was emerging from the landscape, Casciato added.

"Because it's so close to a ravine, which is adjacent to our property, we felt nature was a big part of the design and so we wanted to make it look like it was coming out of the ground," he said. "We designed this mound on the east end of the building to give it that feel."

There is also an Indigenous component.

"The plaza that we created out front was designed in consultation with local Indigenous groups to ensure that they can have a ceremonial gathering in the plaza," he said.

Smudging can take place in the community room and outside, Chan added.

This is also the first building in the Toronto Police Services portfolio designed in compliance with the Zero Carbon Building Standard.

"The City of Toronto now has a mandate to create net-zero emissions buildings moving forward," Casciato said.

"It was important to do that type of design work...very early on. That was really the challenge: how do we make this building net-zero and how do we make it net-zero within the budget?"

The building includes geothermal energy, enhanced energy recovery air handling systems, solar PV generation and a high-performance envelope.

The sloped roof is retrofitted with approximately 260 solar panels, generating more than 100,000 kWh of energy annually. Other building performance features include:

A ground source heat exchanger providing heating, cooling and domestic hot water;

- highly insulated opaque walls;
- triple glazing with low window to wall ratio;
- energy recovery on all ventilation;
- efficient lighting design;
- variable speed pumping for building heating and cooling loops; and
- low flow plumbing fixtures.

One of the main things that came out of the community engagement and the work of the design review panel was the need for community spaces to host events and gatherings in the area.

The multiuse community space, which is unique in a police facility, is located at the corner of Birchmount and Eglinton and is attached to the outdoor event plaza, which is circular in nature and was designed to mimic a campfire experience where everyone is equal.

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# About 26M Pounds of Asbestos, Hazardous Materials Removed from Centre Block

Sourced from: Global News / David Baxter

The Centre Block restoration project is viewed during a media tour on Parliament Hill in Ottawa, June 22, 2023 © Sean Kilpatrick. The Canadian Press



More than 26 million pounds of hazardous materials – including asbestos – have been removed from Centre Block as the massive renovation project of Canada's Parliament continues.

That's roughly the equivalent weight of 1,900 full-sized African bull elephants.

Public Service and Procurement Canada tells Global News that the demolition and abatement work is "substantially complete," but more

hazardous material removals will take place as some structural elements of the building are removed and upgraded.

"That building, as we know, was constructed many decades ago in a world where construction materials were quite different. In 2024, you have to do things in a way that protects the environment and the safety of people," Procurement Minister Jean-Yves Duclos said Tuesday.

However, officials say it is not possible to remove all the asbestos from Centre Block while maintaining heritage elements of the building such as decorative ceilings. In these instances, an encapsulant substance is sprayed to safely contain any hazardous materials.

As for safety pre-renovation, the ministry says that there was no risk to building occupants or visitors before the construction began due to encapsulation work on asbestos that was already in place.

The massive overhaul of the central building on Parliament Hill will be completed in 2030 or 2031 and reopening to the public one year later.

The entire project is expected to cost between \$4.5 billion and \$5 billion.

The most notable new addition for visitors will be a three-level welcome centre. A large trench has been excavated in front of Centre Block to make way for the new welcome centre.

#### ASSOCIATION LINKS

- Alberta Construction Safety Association (ACSA)
  - www.acsa-safety.org
- Alberta Building Envelope Council (ABEC) www.abecnorth.org
- Building Information Modeling (BIM) Forum www.insightinfo.com/bimforum
- Biomimicry Guild
   www.biomimicryguild.com
- Canadian Green Building Council (CaGBC) www.cagbc.org
- CCDC Documents
   www.ccdc.org/home.html
- Construction Specifications Institute (CSI) www.csinet.org
- International Construction Information Society (ICIS) www.icis.org
- OmniClass
   www.omniclass.ca
   www.omniclass.org
- Uniformat
   www.csinet.org/uniformat
- Institute for BIM in Canada (IBM)
   www.ibc-bim.ca

- Architecture 2030
   www.architecture2030.org
- BuildingSMART Alliance (North American Chapter of BuildingSMART): www.buildingsmartalliance.com BuildingSMART International (formerly IAI) www.buildingsmart.com
- Biomimicry Institute
   www.biomimicryinstitute.org
- Canada BIM Council
   www.canbim.com
- Canadian Green Building Council (CaGBC)

   Alberta Chapter: www.cagbc/chapters/alberta
- Construction Specifications Canada (CSC)
   www.csc-dcc.ca
- buildingSMART Data Dictionary bsdd.buildingsmart.org
- **MasterFormat** (https://secure.spex.ca/siteadmin/freedocuments/images/1.pdf)
  - buildingSMART Canada
     www.buildingsmartcanada.ca
  - Ace BIM www.acebim.ca

# **ASSOCIATION LIAISONS**

Alberta Association of Architects (AAA) <u>http://www.aaa.ab.ca/</u> Alberta Painting Contractors Association (APCA) www.apca.ca Alberta Wall & Ceiling Association (AWCA) http://awca.ca Alberta Roofing Contractors Association (ARCA) http://www.arcaonline.ca info@arcaonline.ca

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) <u>http://www.ashrae.org/ / ashrae@ashrae.org</u> Alberta Painting Contractors Association (APCA) www.apca.ca

Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA)

http://www.apegga.org/ dward@apegga.org

Association of Science and Engineering Technology Professionals of Alberta (ASET) <u>http://www.aset.ab.ca/</u>

Russ Medvedev, russm@aset.ab.ca

Building Owners and Managers Association (BOMA) http://www.bomaedmonton.org/ /

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The Canadian Wood Council (CWC) http://www.cwc.ca info@cwc.ca

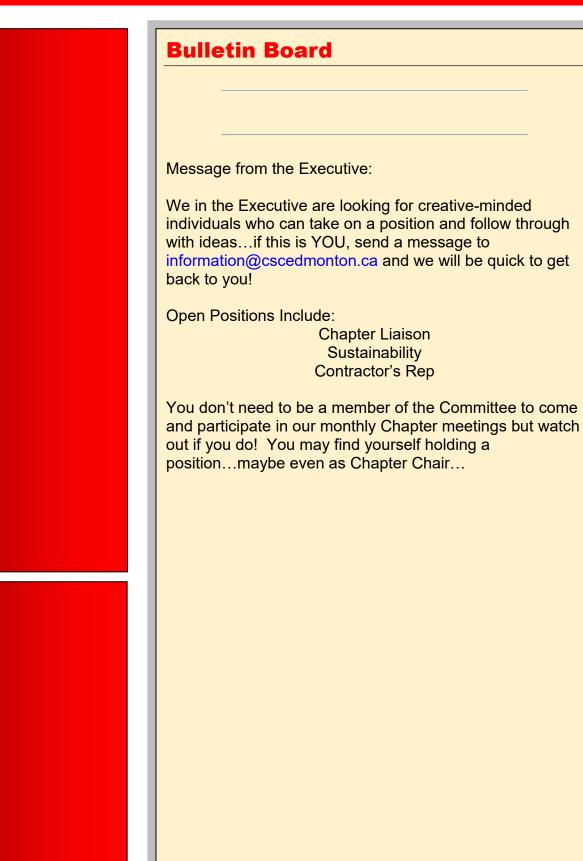
Portland Cement Association ConcreteTechnology@cement.org

Interior Designers of Alberta www.interiordesignalberta.com edmonton@boma.ca Consulting Engineers of Alberta (CEA) http://www.cea.ca/ info@cea.ca

Edmonton Construction Association www.edmca/.com contact@edmca.com

Terrazzo, Tile & Marble Association of Canada (TTMAC) http://www.ttmac.com/ association@ttmac.com





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