Session Descriptions

2024 Conference & Trade Show

May 26 to 29

River Rock Casino Resort

Richmond, B.C.

Wood Use in BC – Navigating the Code and Alternative Solutions

Derek Ratzlaff, Canadian Wood Council, and Joe Krevs, Ratio Code Consultants Ltd.

Session Description

An Explanation of Encapsulated Mass Timber Construction (EMTC) and the evolution of building types in response to code changes over the last 20 years, followed by a description of the upcoming code changes in the BCBC and strategies in wood construction.

Derek Ratzlaff, Struct.Eng, P.Eng, PE – Derek began his career in the wood industry in high school working on single and multi-family light wood construction. He then received a degree in civil engineering and worked in structural consulting for close to 20 years. Derek has worked in all types of wood construction and played key roles in the delivery of iconic BC wood structures, the Richmond Olympic Oval and Grandview Heights Aquatic Centre. He brings his experience in design and construction to support the industry as the Woodworks BC Technical Director.

Joe Krevs, P.L. Eng, BCQ – Joe is an experienced Engineer (Professional Licensee Engineering with EGBC) and former Building Official (Building Code Qualified with BOABC). Joe is a Principal at Ratio Code Consultants Ltd. He has over 16 years' experience as a Code Consultant in the private sector and Building Official with two metro Vancouver municipalities. Joe specializes in Part 3 of the BC Building Code, Vancouver Building Bylaw as well as the upgrade triggers of the Vancouver Building Bylaw. Joe has reviewed and prepared numerous code reports and alternative solutions for assembly, residential, institutional and industrial occupancies. Joe currently sits on the Building Code Interpretation Committee and successfully completed the Certified Professional program in May of 2022.

Session Descriptions

Decrypting the Data

Mark Bernhardt, Bernhardt Contracting

Session Description

Using big data and big dreams of low carbon this session will dig into large energy model data sets. We will pick through big data to find common errors, trends and interesting stories. All of these have an impact on how we enforce the Energy and Zero Carbon step codes. This session will aim to inform and improve the "snif" test that building officials have for applications that come across their desk.

Mark Bernhardt, B.Sc. CPHC, REA – Mark is the President of Bernhardt Contracting Ltd. and CEO of Energy Code Solutions. For the last decade he and his team have spent their time developing, building, retrofitting, and consulting on some of Canada's highest performance homes.

Mark is a Registered Energy Advisor and Passive House Consultant, and over the past few years has spent much of his time helping other builders gear up for Step Code and higher performance buildings. He serves on several provincial code committees and is CHBA BC Vice President and past chair of the technical committee.

Overview of Proper Acceptance Testing / Commissioning of Sprinkler Systems

Matt Osburn, CASA

Session Description

This presentation will review how to properly conduct the Acceptance Testing / Commissioning of Fire Sprinkler Systems, Standpipe Systems and Fire Pumps. Fire sprinklers, standpipes and fire pumps are installed in stages, and in some jurisdictions across Canada inspections are required during the construction of the building. The NFPA standards provide guidance and details on what tests need to be required and documented to ensure the installation has been installed according to the appropriate NFPA standards. This seminar will review the proper Acceptance Tests and Commissioning requirements that must take place before the systems are approved and placed into proper operation. It will also point out and show examples of proper testing procedures and test reports.

Session Descriptions

Matt Osburn is Vice President of Codes & Standards at the Canadian Automatic Sprinkler Association. Matt attended Seneca College in Toronto, where he studied in the Fire Protection Technologist program. Matt has over 24 years of experience in the Fire Sprinkler Industry, and his background has primarily dealt with Codes and Standards in the Fire Sprinkler Industry. Matt is a past member on the Canadian Commission on Building & Fire Codes Standing Committee for Fire Protection (Part 3) and serves on multiple fire sprinkler related NFPA Technical Committee's as a Principal Member and Alternate Member role.

Best Practice Review of Building Regulation Enforcement

Ken Kunka

Session Description

Building Regulatory & Code enforcement is an ever-evolving area within the duties of a Building Official and department Manager. With today's focus on Customer Service, it has created additional challenges in dealing with enforcement efficiently and fairly in matters related to Building Bylaws, Codes and other land use issues.

Over the past 13 years as Building and Permitting Manager for the City of Penticton, Ken had initiated various strategies to educate and use different strategies to seek compliance. This session will review and encourage discussion on local government best practices and case examples to help building officials gain compliance more efficiently and avoid errors and undo stress for all parties (including owners and elected officials) in resolving enforcement matters.

Ken Kunka – Since graduating from Confederation College with a degree in Architectural Technology Design, Ken has had the privilege of working with a lot of great people in various areas of BC as a framer, consultant, designer with over 30 years as a Building Official, and 13 years as Building and Permitting Manger with the City of Penticton overseeing Building, Licensing, Bylaw Enforcement and local government reviews for liquor licenses.

Having worked on both sides of the counter – Ken's background in municipal regulations, leadership, marketing, design and construction has provided him with a unique perspective on the daily operations and challenges that all building officials and industry partners face. This

experience has given Ken a greater understanding on how critical proper communication, building industry-wide relationships, fair service, transparency, and shared education are to ensure health and safety as well as move the building industry forward together.

Mass Customization – Renovating our Cities

Jake Fry

Session Description

Showcasing the role of mass customization in the creation of vibrant, inclusive neighborhoods, and provide actionable strategies to create gentle density homes people truly want, need, and deserve.

Jake Fry started Smallworks in late 2005 and became a strong advocate for the introduction of laneway housing. He established Smallworks Studios and Laneway Housing Inc. and worked with the City of Vancouver to help develop zoning by-laws based on his experience and interaction with literally hundreds of potential small home clients. Jake not only wanted to build small but to build sustainable. He brings together a team of dedicated people and develops homes which blend innovative techniques and incorporate modern building science and Flat Pac with hand-built finishes and millwork.

Step Code Stories from Around BC

Lisa Mak and Rachel Buskie

Session Description

Lisa Mak – Lisa is passionate about the climate and supporting communities to reduce their energy and emissions for a happier and healthier future. She plays a key role in developing and delivering projects with high impact deliverables in communities across BC, as well as coordinating peer networks for local government staff to connect, share, and collaborate on initiatives to accelerate the transition to low carbon communities.

Having worked with local governments, the BC provincial government, and industry associations for the past five years, Lisa has a deep understanding of the importance of collaboration and relationship-building to advance initiatives for energy efficiency and electrification.

Rachel Buskie – Rachel has over 20 years international experience leading multiple programs and projects across a diverse platform of asset and natural asset management, climate action and resilience planning. In her role as Program Manager, Capacity Development – Built Environment, Rachel leads organizational efforts to engage industry professional and community stakeholders in zero-carbon and resilient building practices, as well as oversees the implementation of the Kootenay Clean Energy Transition, CEA's services related to implementation of the BC Energy Step Code, and engagement with building professionals and associations on developing capacity to implement zero-carbon and resilient retrofits at scale.

Minor Code Changes, What Do They Mean?

Kevin Wong, UPONOR

Session Description

In the NPC 2020, there have been a number of administrative changes, minor changes and alignment with current referenced standards.

Kevin Wong, MBA, BSc, CAE, is the Canadian Codes Manager with Uponor. Prior to joining Uponor, Kevin spent a 12-year tenure as the Technical Manager for CIPH and the Executive Director of CWQA. He has worked with MIFAB, Cimatec, and Jacques Whitford Environmental Engineers & Consultants. He is actively involved over the last 25 years in various U.S., Canadian, and international standards/codes committees including NSF, CSA, WQA, and National Master Spec of Canada. Kevin served as a member of the Standing Committee on Plumbing & HVAC at Codes Canada. Kevin is an environmental sciences graduate from York University and holds an MBA from the Schulich School of Business, with various certificates from University of Toronto and the Canadian Society of Association Executives.

Session Descriptions

Advancing Mass Timber Construction – Innovations in Code Development

Aman Gill, Ministry of Housing and Cameron McDonald, Ministry of Jobs, Economic Development and Innovation

Session Description

Presentation will detail the pilot code development process recently undertaken by Provincial partners for advancing EMTC building code provisions, as well as a summary of the code content.

Aman Gill – Aman is the acting Director of Policy and Legislation in the Building and Safety Standards Branch, Ministry of Housing where his responsibilities include energy efficiency and greenhouse gas reduction policies for buildings. He has a background in urban studies and previously worked in local government as a senior planner.

Cameron McDonald – Cam is a former level 3 building official and currently an associate member of the BOABC. He now works in the Office of Mass Timber Implementation, under the Ministry of Jobs, Economic Development and Innovation, as the Lead of Technical Solutions and played an active role in the development of the new code provisions for EMTC in BC.

Realizing Resilient Buildings in BC

Cariad Garratt, Pinna Sustainability

Session Description

Resilient buildings can better withstand the stresses and shocks from climate change and earthquakes, enabling building occupants to care for themselves and their neighbours in the face of adversity. However, there are significant barriers to implementing resilient strategies in new and existing buildings across BC. This session will share research findings on the barriers and recommendations to advance resilience in buildings identified through the Realizing Resilient Buildings project.

Cariad Garratt is Founding Principal of Pinna Sustainability, a strategic consultancy supporting governments and organizations to advance their sustainability goals. Over the last two decades, Cariad has accumulated extensive expertise in helping governments advance complex strategic initiatives that involve multiple partners and stakeholders. She led the consulting team for Metro Vancouver's Non-Potable Water Use Project,

and has supported province-wide initiatives, including the BC Energy Step Code, Realizing Resilient Buildings, and the Development Approvals Process Review.

CSA F280 HVAC Requirements for Part 9 Buildings

Todd Backus, TECA

Session Description

Todd Backus will discuss the requirements for heating and cooling load calculations required by the BCBC under article 9.33.5.1.

Sizing heating equipment according to CSA F280 standards ensures that the correct capacity mechanical systems are reliably installed. An accurate heat loss & heat gain calculation is the foundation of an HVAC system, and it prevents over or under sizing furnaces and heat pumps.

Todd Backus has worked in the HVAC industry since 2003. He completed his red-seal ticket as a sheet metal worker in 2009. As the owner/operator of Backus Mechanical, he specialized in forced air system installation & design for custom homes.

In 2019, Todd graduated from BCIT with a degree in mechanical engineering. Afterwards, he worked as a mechanical consultant for Rocky Point Engineering designing HVAC, plumbing, & fire suppression systems. In 2023, Todd completed his Professional Engineering certification and joined TECA as the Manager of Programs Development.

The Building Official's Role in Managing Geotechnical Risks

Peter Johnson, Stewart McDannold Stuart

Session Description

This presentation will provide an overview of the liability risks to local government building officials in authorizing and permitting construction in areas subject to natural hazards such as land slip and flooding, the statutory powers available to building officials in managing those risks, what

to look for when reviewing the reports of qualified professionals, and how to effectively manage liability risks including through the registration of section 219 covenants.

Peter Johnson is a partner with the law firm Stewart McDannold Stuart in Victoria, BC, a firm that provides legal services to local governments throughout British Columbia. Peter provides legal advice and assistance to local governments on a wide variety of matters, including interpretation of local government legislation, planning and development law, real estate and other commercial transactions, contract tendering issues, bylaw drafting, expropriation, environmental law issues, freedom of information and privacy issues, and conflicts of interest.

Standard for AHJ on Approval of Modular Construction

Khaled Habib, CSA

Session Description

CSA Standards A277, Z250, Z252 for Modular Construction and Modular High-Rise Construction

Khaled Habib is a professional engineer and certified safety codes office in Alberta (Part 9 and HVAC Residential). Khaled is a Principal Technical Lead with CSA Group, responsible for the CSA manufactured building programs (CSA A277, Z240 MH, Z240 RVs, Z241, etc.), pre-cast concrete programs and all other CSA structural programs within CSA Group.

Power Pathways – How BC Hydro is Working with Local Governments

Robyn Wark and Chris Higgins

Session Description

This panel session will address the current policy landscape with regards to

1. Policy context – green buildings and multiplexes – how City of Vancouver is working closely w BCH to facilitate clean, green housing
2. What BCH is doing to prep for this

3. Ensuring Building Officials have good guidance for ESC and ZCSC implementation

Robyn Wark, MRM is Manager of Market Transformation at BC Hydro. The team works with industry and government on standards, policies, and regulations to support buildings and transportation that are efficient, decarbonized, and grid-friendly. Prior to that, she was the team lead for BC Hydro's Sustainable Communities program for almost a decade, working with local government partners on building low carbon communities. Robyn is Co-Vice-Chair of the BC Energy Step Code Council, on the Leadership Council of the Building to Electrification Coalition, Treasurer of the Board of the Community Energy Association, and a Mentor for Women4Climate. She has taught at Royal Roads University and BCIT. Outside work, she coaches her 2 sons' unruly soccer teams – which is by far her most challenging job to date.

Chris Higgins, CoV is the Senior Green Building Planner at the City of Vancouver. He develops and implements bylaws, policy and incentive programs to achieve new buildings that run on reneable energy, while at the same time helping to reduce greenhouse gases from existing homes. Chris helps Vancouver lead on Multiplex development, easing electrical connections, and enabling the shift to zero emissions energy for low rise homes. Prior to joining the City of Vancouver, Chris worked for the Canada Green Building Council from 2008-2014, developed the LEED Canada for Homes program for single along with multifamily homes and supported its delivery in all provinces and two territories. Chris has served on the board of directors for Passive House Canada.

Understanding the Code Changes for DWV Transitions & Radon Mitigation

Cory Norman, IPEX

Session Description

This presentation focuses on two of the 2024 BCBC updates: DWV transitions and radon mitigation system rough-ins.

DWV Transitions: How we address DWV transitions is about to change because the new Sentences provide us guidance on this application. We will review the transition testing results from the burns that Sentences 3.1.9.4.(7) and (8) are based on and use common DWV system arrangements to understand how to apply the new sentences. The purpose of this is to help the construction community apply the new Sentences in a consistent way.

Session Descriptions

Let's Talk Radon

Cory Norman, IPEX

Session Description

The changes related to radon mitigation are significant because, due to the removal of Table C-4, the entire province will be required to install a capped rough-in. For some municipalities it will be business as usual, but for the inspectors who are working in municipalities that were previously exempt from radon rough-ins, you will find this presentation an especially helpful resource to increase your radon knowledge.

We will discuss how radon collects in buildings and why it is a health concern, the difference between 'best practice' and 'code compliant' can be the difference between a functional rough-in or one that gets abandoned, and we will review the code verbiage to understand why radon rough-ins must be considered for all buildings and occupancies, not just Part 9 residential construction.

Cory Norman is a professional engineer who studied mechanical engineering at the University of Alberta and the Northern Alberta Institute of Technology. Currently he is the plumbing and mechanical regional engineer for IPEX, supporting the consulting and inspection community across western Canada. Prior to his seven-year tenure with IPEX, he started his professional career as a firestop specialist with Hilti before working as a code consultant at Jensen Hughes.

Code Interpretations and Appeals

Patrick Shek, P.Eng., CP, FEC, Don Pedde and Kate O'Brien

Session Description

Interpretations and appeals are two resources available to building officials and to the construction industry. Understand the similarities and differences, the processes and outcomes, and the benefits of being familiar with both.

Session Descriptions

Patrick Shek, P.Eng., CP, FEC – Patrick has been a building official for over 40 years. He started as an Inspection Engineer with the City of Calgary in 1980 and joined the City of Burnaby in 1996 as the Supervisor of Plan Checking. He was appointed Chief Building Inspector in 2008. He retired in April of 2023.

He obtained his B.Sc. in Civil Engineering in 1978 from University of Alberta. He is a professional engineer registered in BC and a member of the Engineers Canada Fellowship. He is also a Certified Professional.

He is currently the Chair of the BC Building Code Interpretation Committee; member of the Certified Professional Advisory Group and NRC Standing Committee on Structural Design.

Don Pedde (PeeDee) is the Chair of the Building Code Appeal Board. Don has extensive experience in the building construction industry including as a journeyman carpenter, as an architectural technician, as a building official, and as a Senior Codes Administrator at the Building and Safety Standards Branch.

Don served two terms as a Ministerial Appointee to the Executive and Complaints Committees of our Association and was instrumental in creating the regulation for building official qualifications.

Kate O'Brien is the Deputy Registrar for the Building Code Appeal Board, Surface Rights Board and Safety Standards Appeal Board of BC. She has worked in the independent board and tribunal sector of BC for 7 years in various roles, ultimately building a background in operations, finance, facilities, and human resources.

Alternative Solution Peer Review Process

Andrew Harmsworth, PEng, and Tim Ryce, PEng

Session Description

Andrew and Tim will present the Peer Review process for Alternative Solutions from the perspective of the applicant and the Building Official.

Andrew Harmsworth is the founding Principal of GHL Consultants, well know to most Building Officials, Andrew Harmsworth has been a Fire Engineer and CP for more than 30 years. He brings to us here his experience in Peer Review of Complex Alternative Solutions.

Session Descriptions

Tim Ryce is a Professional Engineer and Chief Building Official for the City of North Vancouver. He has developed and implemented construction regulations relating to green building, energy efficiency, and accessibility, both at the local and national level, and is a member of the BC Mass Timber Advisory Council and Provincial Digital Advisory Council. Recently, he introduced new unified service delivery systems at the City and completed the transition to a fully paperless electronic permit process.

Plan Checking and Inspection Process

Manda McIntyre and Andy Christie

Session Description

This will be an interactive session for Building Officials to review a Part 9 Step Code Compliance Checklist with real life examples through photos and videos. Building Officials Andy Christie and Manda McIntyre will be presenting on the process of a Step Code Project from the time of application to the final or occupancy of the building. Together you will work through a Pre-Construction Compliance Checklist at the plan review stage, this will also involve document submission samples on screen that you can follow along with an example checklist provided to you at the start of the session. We will then go out on site virtually through pre-recorded short videos to see good and bad examples of construction. There will be an open discussion and question period at the end of the presentation.

Manda McIntyre is the Senior Building Official and the Regional District of Central Kootenay (RDCK) in Nelson. Prior to becoming a Municipal Building Official, she came from over 12 years in the Building Industry as a Project Manager in the private sector working both the design and construction sides for new construction, restoration and building envelope-based projects. She is a keen participant in several local government peer networks, committees with The Building Officials Association of BC, and is the Co-chair of the LG Step Code Peer Network. Manda has been able to use her wide-ranged experience and apply it to her almost decade long career as a Building Official.

Andy Christie is a Registered Building Official who works for the City of Kimberley located in the Purcell Mountains of British Columbia. Starting in 2008, Andy has worked in the Kootenay region with the Regional District of East Kootenay and the City of Cranbrook as a Building Official. Before becoming a Building Official, Andy was employed as timber framer, carpenter and commercial construction site supervisor. Projects ranged from 25 million dollar homes in Whistler BC to re-building arena roofs in Kimberley and have offered a wide range of skills and construction knowledge. Andy's inspection process is solution based and he is extremely resourceful in providing options to the local building

community to achieve their aesthetic goals and Code compliance. Having a passion for sustainability has influenced everything Andy works on with the City of Kimberley and he often speaks to a broad range of groups about the successes with energy efficiency and sustainabilty in Kimberley.

Non-potable Water Systems – Results from the City of Vancouver

Phillip White, City of Vancouver, and Christopher Radziminski, City of Vancouver

Session Description

Non-potable water systems can help reduce demands on sewer and drinking water infrastructure. The National & BC Plumbing Code provide guidance for rainwater use in Division B, Section 2.7, and Vancouver's Plumbing By-law differs in important ways. The presenters will discuss the regulations and share their experience with examples from the City of Vancouver.

Phillip White has over 25 years of experience designing, installing and inspecting mechanical systems. He is the City of Vancouver's Manager of Plumbing and Mechanical Inspections and contributes to policy development and regulation redesign.

Christopher Radziminski works closely with Phillip White on the development and implementation of plumbing-related regulations, addressing issues ranging from *Legionella* to sewer overflows. He is a Professional Biologist, a Professional Engineer, and a certified Small Water System Operator. His background includes a B.Sc. in Microbiology, an M.A.Sc. in Civil Engineering and a Certificate in Power Equipment Mechanics.

Practice Advisory: Professional Conduct Between Submitting Professionals and AHJs

Alice Kruchten, EGBC and Trevor Welsh, City of Surrey

Session Description

In September 2023, Engineers and Geoscientists BC published a practice advisory on *Professional Conduct Between Submitting Professionals and Authorities Having Jurisdiction*. This practice advisory addresses common communication challenges that arise between Submitting Professionals

and AHJs during the approval and/or submissions processes. This presentation will provide an overview of the content of the advisory including practical considerations related to communication issues, and some lessons learned through situations handled via practice advice inquiries.

Alice Kruchten is a professional engineer and Practice Advisor with Engineers and Geoscientists BC. She is responsible for managing the development of the organization's professional practice guidelines, engaging with stakeholders to address professional practice concerns, and providing advice to registrants regarding practice issues. Alice holds a Bachelor of Applied Science (in Civil Engineering) and a Master of Engineering Leadership (in Integrated Water Management Engineering), both from the University of British Columbia.

Trevor Welsh – After attending the British Columbia Institute of Technology, where Trevor studied building construction technologies, he began his career as a Building Official working for the District of North Vancouver as a Plan Reviewer. Trevor worked for a number of years with the City of Port Moody as a Building Official, which involved working as a Plan Reviewer and Building Inspector including conducting plumbing plan reviews and inspections. He obtained his professional designation as a Registered Building Official, as well his Level 2 plumbing official certification, in 2017.

Through his career Trevor has held various supervisory and leadership roles within local government including, the Manager of Building, Bylaws, and Business Licences with the City of White Rock as well the Director of the Building Permits Division for the City of Abbotsford, he is currently the Director of the Building Division for the City of Surrey. He has also worked as a part-time instructor at the British Columbia Institute of Technology, instructing on building code courses.

The Second Egress: Building a Code Change

Conrad Speckert, LGA Architectural Partners & Jamie Harte, PUBLIC Architecture

Session Description

The session will focus on a proposed building code change to allow for single exit stair conditions in multi-unit residential buildings of up to three storeys in Part 9, and six storeys in Part 3 of the National Building Code. The code change request was developed by LGA Architectural Partners and David Hine Fire Engineering. It is a recommendation of the 2023 National Housing Accord, the 2022 Ontario Housing Affordability Task Force, as well as the 2019 OAA Housing Affordability Task Group summary report and the City of Toronto's 2010 Midrise Performance Standards

report. Discussion of the code change request will be followed by a presentation of the BC Housing Single Stair Report by PUBLIC Architecture based out of Vancouver.

Conrad Speckert is an intern architect at LGA Architectural Partners in Toronto with degrees from McGill and Waterloo. His graduate research proposed a building code change to allow for single staircase buildings and has evolved as CMHC-funded research project to change the National Building Code of Canada. He joined LGA as project manager for 'ReHousing the Yellowbelt,' a collaboration with the University of Toronto to study gentle densification and support multiplex zoning reform across residential neighbourhoods. He is well-versed in the design of "missing middle" and mid-rise residential buildings, having previously worked for architects in Toronto, Vancouver, Berlin, and Tokyo.

Jamie Harte is a Senior Associate at Public Architecture in Vancouver and is a graduate of the Edinburgh College of Art and the University of Edinburgh, with professional experience in Ireland before moving to BC in 2011. Demonstrating an early interest in residential building, he focused his thesis work on multi-unit housing and inventive social spaces. Since graduating, Jamie has been involved in all aspects of residential architecture including close client engagement, programming, detailed design, and consultation with local municipalities. Highly invested in energy efficiency and low-carbon materials, Jamie worked on the first Passive House standard multi-unit project in Squamish and was the Project Architect for Skeena Residence at UBC Okanagan – the first Passive House residence on a Canadian campus. He is currently Project Architect for Vienna House, a Passive House project that takes on a number of complex issues – the climate crisis, the housing crisis, creating economic opportunities – in one project.

Understanding Building Science for Building Officials

Manda McIntyre and Andy Christie

Session Description

The interactive discussion will relate how building science, the Building Code and energy efficiency logically and practically interact together. This session will help Building Officials with an understanding of these key fundamental building science topics, Building Officials can take this knowledge and apply it to reviewing and understanding various building assembly details, air movement and heat transfer, thermal bridging, air barriers, as well as a short introduction to embodied emissions. The 'Building as a System Approach' will enlighten Building Officials into how the built environment functions, the answer to 'why' some Codes are written.

Session Descriptions

Manda McIntyre is the Senior Building Official and the Regional District of Central Kootenay (RDCK) in Nelson. Prior to becoming a Municipal Building Official, she came from over 12 years in the Building Industry as a Project Manager in the private sector working both the design and construction sides for new construction, restoration and building envelope-based projects. She is a keen participant in several local government peer networks, committees with The Building Officials Association of BC, and is the Co-chair of the LG Step Code Peer Network. Manda has been able to use her wide-ranged experience and apply it to her almost decade long career as a Building Official.

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Digital Transformation in the Housing Construction Sector

Zachary May

Session Description

The Ministry of Housing's Digital Delivery team is working with partners from across the housing construction sector to improve the permitting experience for new housing and encourage the use of tools and practices that will position British Columbia as a North American leader in digital permitting and construction. The Ministry will speak to the work underway to develop a new digital building permit submission tool, make the BC Building Code machine-readable, and develop standardized digital housing designs. These actions will combine to enable more detailed designs earlier in the construction process, remove barriers to automated permit reviews, and support modern methods of construction such as off-site manufacturing.

Zachary May is the Executive Director of Housing Innovations with British Columbia's Ministry of Housing. He leads a team responsible for making British Columbia a leader in digital permits and construction and projects that support innovation in the housing construction sector including pre-approved housing designs and code changes to enable more mass timber. He has led several national and provincial building code initiatives since joining the BC Public Service in 2012, including the development of the BC Energy Step Code.

Session Descriptions

Structural Welding Requirements and the Building Code

Cristian Zanfir, CWB Group

Session Description

This presentation will cover the following topics:

- Building Code and structural welding certification requirements (Part 4 and Part 9)
- Welding certification requirements for welding fabricator and erectors
- Understanding welder qualifications
- Welding Inspection certification for inspectors and for welding inspection organizations
- The difference between good welds and bad welds
- Alternative welding standards

Cristian Zanfir joined CWB Group in 2004 when started his new career as a certification representative in Ontario region. During his career with the CWB Group he's held several roles like Procedure Verification Engineer, Supervisor Ontario Operations, Supervisor Procedure Verification Engineer and Electrodes Certification Department. Today, Cristian is working for the Office of Public Safety of the CWB Group as Manager Standards. His main role is to contribute to developing standards within a large number of standards committees of the AWS, ASME, CSA and ISO organizations. Cristian earned his Bachelor of Engineering in Welding also held a Level 2 Visual Welding Inspector certification.

Future Energy Landscape

Jason Wolfe, FortisBC

Session Description

During his presentation, Jason Wolfe will explain what the Energy landscape in BC currently looks like, the importance of energy choice and key characteristics energy sources should have.

Session Descriptions

Jason Wolfe has been with FortisBC for 20 years and is presently the Director of Energy Solutions responsible for the customer attraction and retention efforts of FortisBC through the residential sales team, and the commercial and industrial account management group, Jason is also responsible for the development of new energy products and services including the recently filed Renewable Gas application that if approved will provide 100% Renewable Gas to all new residential customers.

Residential Heat Pump Requirements for Design & Installation

Gary Milligan, TECA

Session Description

Gary Milligan will present on the current requirements for the installation and design of heat pump systems in BC. He will discuss the trade qualification and permits required to complete the work and the proper design process to comply with the BCBC and best practices.

Gary will discuss the City of Vancouver's approach to permitting heat pump installations and how this approach should be expanded to address air to air heat pumps. He will discuss common errors in design and installation that result in underperforming systems or damage to the building.

Gary Milligan is a highly accomplished professional with over five decades of experience in the HVAC industry. Specializing in the design, installation, and maintenance of mechanical systems for residential projects, Gary is renowned for his expertise in integrating energy-efficient solutions and innovative technologies into his designs. He previously served as the President of TECA and recently transitioned to the role of Treasurer. In his current position, he continues to play a pivotal role in driving the organization's growth and success, advocating for excellence and collaboration within the industry. With his strong leadership skills and strategic vision, Gary is a respected and influential figure, dedicated to advancing best practices and promoting professional development in the field of HVAC.

Session Descriptions

Letters of Assurance in the BC Building Code 2024

Maura Gatensby, AIBC and Allison Chen, EGBC

Session Description

This session will cover a variety of topics related to Letters of Assurance in the BC Building Code 2024. These include:

- A brief history of the LOAs
- When LOAs are required for Part 3 buildings
- When LOAs are required for Part 9 buildings
- Expectations of registered professionals signing Schedules A/C-A (CRP) and Schedules B/C-B (architects and engineers)
- Changes to the structural discipline on Schedule B

Overview of purpose and use of Schedules S-B and S-C

Allison Chen is a registered professional engineer with experience in the structural design of buildings, from high-end custom homes to recreation centres to mid-rise concrete towers. As a practice advisor at Engineers and Geoscientists BC, Allison is responsible for managing the development of professional practice guidelines and advisories for a variety of different areas of practice, primarily related to building design (all disciplines) and seismic initiatives. She is the staff support for the development of the Seismic Retrofit Guidelines and is currently working to finalize the Professional Practice Guidelines – Development and Use of Seismic Microzonation Maps in BC.

New Corner Room Test Method for Protective Coverings for Foamed Plastic

Brad Glazier, 3G Consulting Group

Session Description

Introducing the new CAN/ULC S-145 full scale corner room test for qualifying protective coverings for foamed plastic in both combustible and non-combustible construction.

Brad Glazier is the Principal of 3G Consulting Group and Technical Director for International Fireproof Technology Inc. He Has over 15 years' experience in the spray polyurethane foam insulation industry and over 10 years in the related fire protection market where responsibilities

include testing, certification, new product development and Codes and Standards for National and International marketplaces. Brad started as a spray foam contractor which he then built into franchise of installers throughout Eastern Canada then into a specialty building product distributor company which he subsequently sold and now works directly with International Fireproof Technology and as a consultant to OEM manufacturers as a solution finder for today's demanding fire protection requirements. Brad is active in developing new standards and criteria for the use of intumescent coatings over SPF insulation and has worked to bring the ICC-ES AC456 acceptance criteria to the USA and was instrumental in developing the new CAN/ULC S-145 standard for protective coverings for SPF in Canada.

BC Step Codes in Action

Natalie Douglas, ZEIC, Elizabeth Baudinaud, Carbon Wise, and Henri Belisle, TQ Construction

Session Description

Come listen to a builder, energy advisor, and planner discuss the practicalities of building a home that meets the intentions of both the Energy Step Code and Zero Carbon Step Code (i.e., what building systems and elements were used). This presentation will seek to demystify some elements of the Step Codes that most often cause confusion, with special attention paid to the newer Zero Carbon Step Code. Examples of how specific homes met the regulations and how different municipalities have adopted the ZCSC will also be discussed.

Elisabeth Baudinaud is Principal and founder of Carbon Wise, a group of energy and carbon advisors seeking to provide combined operational and embodied carbon services and seeking to serve as a bridge between the realities of on-the-ground construction in the industry and the imperative actions needed to meet our climate targets. Elisabeth and her team have demonstrated themselves as leaders in field with a strong commitment to share their learnings – often publishing case studies to advance research on high-performance buildings and participating in policy development.

Henri Belisle is the President of TQ Construction, a second-generation design/build firm founded in 1985. Henri worked alongside his family in construction, trained as a Red Seal Carpenter at BCIT, and is a Licensed Builder. While overseeing the day-to-day operations of the business, Henri is also the Chair of the HAVAN Board of Directors, Vice-Chair of HAVAN's Custom Renovator and Home Builder's Council, and a Director of the BC Construction Safety Alliance representing CHBABC members.

Session Descriptions

Natalie Douglas manages the Zero Emissions Building Exchange (ZEBx), a program area of the Zero Emissions Innovation Centre (ZEIC) that aims to accelerate building decarbonization by elevating leaders, brokering relationships, and fostering innovation through training, dialogue, curated research, and more. Natalie has a wide array of local government experience writing policy and regulatory updates, facilitating discussions within the building industry, and leading collaborative initiatives aimed at finding ways to build more resilient, efficient, affordable, and less emissive buildings.

NBC 2020 – Soil Gas Control CCMC Evaluations

Caroline St-Onge, CCMC

Session Description

The basic concept of radon and its pathways into the building will be outlined, followed by a detailed review of NBC 2020 subsection 9.13.4, Soil Gas Control. CCMC's assessment of alternative radon barrier and gas permeable layer solutions will then be presented. Time permitting, an overview of CCMC's evaluation services will be presented.

Caroline St-Onge, P. Eng., is Senior Evaluation Officer at the Canadian Construction Materials Centre (CCMC) of the National Research Council of Canada (NRC). She has over twenty-five years' experience in developing evaluation protocols used to demonstrate compliance of innovative products with the National Building Code (NBC). Prior to joining CCMC, she gained practical experience in the private sector investigating building envelope failures. In her current role, she leads technical teams evaluating products and systems in the fields of thermal insulation, air barrier systems, radon barriers and moisture barriers. Her experience also includes assessing the conformity of standardized products to recognized product standards.

Session Descriptions

Building Enforcement Policy

David Tupper

Session Description

Mr Tupper will explain the importance of having a formal enforcement policy to inform and focus the building official's role when enforcing the BC Building Code and the local government's building bylaw. He will also provide information on what should go into a policy and some of the best practices in creating a policy.

David Tupper has been handling liability claims for thirty-one years. He has a Civil Engineering degree from the University of Alberta and spent the first seven years of his insurance career handling professional liability claims for architects, engineers, and land surveyors. Since 1998, David has managed all manner of liability claims for local governments dealing with all governmental departments and areas of municipal operations. With his engineering background and breadth of experience, David specializes in more complex claims, particularly those involving land use and building regulation. As a Risk Analyst, David has also been involved in risk management, public speaking engagements, and various other tasks. David has participated in several stakeholder groups initiated by the Province, primarily in the area of building regulation.