IIBEC- 26 January 2024 AGM Seminar
Italian Cultural Center
3075 Slocan Street Vancouver, BC

IIBEC President's Welcome	**8:00**	**Speaker**
Responsible Procurement – Pitfalls to Avoid	8:00-9:00	Burt Carver, Apex Building Sciences
Architectural Sheet Metal Roofing RoofStar Standards	9:00-10:00	Doug Wells, RCABC
Coffee and Sponsorship Break	10:00-10:30	
The Fundamentals of Below Grade Waterproofing Systems	10:30-11:30	Harold Louwerse, Morrison Hershfield
AGM	11:30-12:00	President IIBEC WCC
Lunch	12:00-1:00	Lunch
Understanding the Long-term Performance of Conventional Roof Assemblies in BC	1:00-2:00	Graham Finch, RDH Building Science
Code Changes and Updates on RCABC Research Projects	2:00-2:30	Laurence Matzek, RCABC
Coffee Break	2:30-3:00	Coffee Break
Airtightness Testing in Residential Buildings	3:00-4:00	Andrew Peacock, JRS Engineering

DESCRIPTION OF THE PRESENTATIONS

<u>Responsible Procurement – Pitfalls to Avoid</u>

This presentation will provide an overview of Trade Agreements and how they apply to tendered
projects, as well as an overview of best practices and common pitfalls for procurement.
Learning Objectives
1. Familiarize the attendees with the limits and types of work covered by the New West Trade Agreement
2. Identify behaviour that should be avoided to stay compliant with the New West Trade Agreement
3. Identify different methods of procurement and how there can be different contractual obligations
under varying forms.

Architectural Sheet Metal Roofing RoofStar Standards

Learning objectives:

1. To become familiar with architectural sheet metal (ASM) Standards found in the Roofing Practices Manual and to apply them to good roofing design

2. The difference slope makes to design and good practices

3. The importance of communication between the design professional and the roofing contractor

The Fundamentals of Below Grade Waterproofing Systems.

Overview: The presentation will include a review of the fundamentals of below grade design including the difference between water management and tanking, concrete forming methodologies and their impacts on below grade membrane selection, With a plethora of material options out there on the market, evaluation of the various components, evaluating each material independently as well as in a system is important. We'll explore various membrane systems for different situations and their considerations for application. We will look at a few pictures from the field, what typically goes on, a discussion on warranties, some traps to avoid and what can be done when things do not work out quite the way we thought they would.

Understanding the Long-term Performance of Conventional Roof Assemblies in BC

Over a decade ago, a field monitoring study of conventional roof assemblies was initiated in the Lower Mainland of BC. The goal of the study was to better understand and compare the side-by-side differences of whole roof assembly hygrothermal performance of white, grey, and black coloured roof membranes over top of polyiso and mineral wool insulations combinations. Sensors were installed within nine separate full scale roof assemblies to measure temperature, heat-flow, material movement and moisture movement for each assembly combination over several consecutive years. As part of the study, samples were periodically taken to collect insulation and roof membrane samples to assess the material properties changing over time. The field and laboratory findings later informed an energy modeling study to better understand implications of the real material properties on the heating and cooling energy use in a range of building types and climate zones. This presentation will summarize the key findings from this long-term research and other field and laboratory experience to better understand how to design and specify more durable and higher thermal performance conventional roof assemblies in BC.

Learning Objectives:

- Compare conventional roof behaviour influenced by white, grey, and black colour roof membranes over top of different roofing insulation materials and arrangements.
- Analyze how the long-term material properties of roof insulation and roof membrane can change over time and influence whole assembly performance.
- Assess the impact of changing insulation material properties and roof membrane colour combinations on the heating and cooling use of different building types.
- Build more predictable and thermally efficient conventional roofing assemblies, balancing heating and cooling loads for different building types and climate zones.

Code Changes and Updates on RCABC Research Projects

Learning Objectives:

1. Roofing changes to the 2024 BC Building Code
2. Metal Flashing Securement
3. Research that will impact future code requirements

Airtightness Testing in Residential Buildings

Airtightness is at the forefront of energy efficiency in new construction, and through airtightness testing we can measure the actual performance of our design and workmanship. Air barrier materials, assemblies, details, and planning all have an impact on the energy efficiency of a project and the effectiveness of our air barriers. In this presentation we'll discuss what to expect from airtightness testing on site, the prevalent air barrier failures, and improved building envelope assemblies and details to reduce air leakage.

Presenters:

Burt Carver, RRC, RRO, Apex Building Sciences inc.

Mr. Carver is the Owner of Apex Building Sciences Inc. founded in 2008. He has been involved in the building science sector since 1998. In that time he worked in a variety of sectors including restoration, new construction, and asset management. As one of his roles his focus has been the assessment and remediation of building enclosures. He is currently the Western Canada Regional Director and is a Past President of the Western Canadian Chapter of IIBEC.

Douglas (Doug) Wells, RRO, Roofing Contractors Association of British Columbia

-RoofStar Technical Advisor

-Over 30 years in the roofing industry

-14 years as a Roofing Consultant, Registered Roof Observer (RRO) and

-Accepted Observer for the RoofStar Guarantee program

-Previously worked as a roofer, technical representative for 3 different manufacturers and various suppliers

-Proud Dad of three

Harold Louwerse, P.L.Eng, RRO, B.Tech, Morrison Hershfield

Harold Louwerse is the Department Manager of Morrison Hershfield's Building Science group in Vancouver. He has been involved in the construction industry for over 20 years and has been an RRO for over 10 years. He is currently a member of the technical committee at the RCABC. During his time at MH, Harold's focus has primarily been new construction and he has worked on below grade projects in nearly all of Greater Vancouver's communities. In his spare time, he drives around town performing drive-by's of construction sites, evaluating the application quality of the below grade waterproofing on your projects. Good thing he doesn't have any spare time 😊. He stays busy spending time with his wife and kids, coaching youth sports, camping, home reno's, snowboarding, travelling, volleyball, mentoring, and giving back to his community.

Graham Finch, MASc, P.Eng – Principal, Senior Building Science Specialist, RDH Building Science, Victoria, BC

Graham Finch is a building science engineer who specializes in building enclosure design, risk management, research, and investigation work for new and existing buildings across Canada and the US. He also regularly works with the building industry on material research and development and the creation of various industry guidelines and training initiatives. As a result of his experience, he is regularly invited by various organizations and clients to speak to the practical and technical issues of a wide range of building science and enclosure design topics. Graham is also a sessional instructor of building science at the University of Victoria.

Laurence Matzek, Roofing Contractors Association of British Columbia

Laurence is the RoofStar Guarantee Program Director at the Roofing Contractors Association of British Columbia (RCABC). He and his staff oversees the RoofStar Guarantee Program, directs research projects, develops roofing standards in BC, and provides technical support to Owners, Architects, Roof Consultants and Roofing Contractors ensuring good roofing design and application.

Previous to the current role, Laurence has worked as a commercial roofing contractor in the Greater Vancouver area for 30 years, 22 years as an owner.

Andrew Peacock, P Eng, Project Engineer Building Science, JRS Engineering

Andrew is a Project Engineer at JRS Engineering (JRS) and brings seven years of experience in structural engineering and building science. Focused on high-performance buildings, Andrew seeks to provide innovative and practical solutions for a variety of design projects, spanning new construction and existing buildings. With a certification in Energy Large Building Training from Retrotec, Andrew serves as the practice area lead in Airtightness Testing at JRS. Andrew applies his knowledge and experience to a range of project types, including building condition assessments, rehabilitation projects, new construction design and review, window and air leakage testing and warranty reviews. In addition, his robust portfolio includes extensive experience providing whole building air barrier testing and consulting services for new construction projects of various construction types and sizes. Andrew is passionate about finding effective ways to integrate sustainability and community engagement into his projects. For Andrew, developing strong client relationships and fostering a collaborative work environment determines the success of a project.