

**Meeting Notes**  
**Building Research Committee (BRC)**  
Tuesday, April 14, 2015, 8:30 a.m. to 12:00 p.m.  
**The Italian Cultural Centre Society**  
3075 Slocan Street

**In Attendance:**

Bill McEwen – Masonry Institute of BC (Chair)  
Denisa Ionescu – HPO  
Liliana Dominguez – HPO (recording)  
Remi Charron – HPO (recording)  
Wilma Leung – HPO  
Andy Chase – Building and Safety Standards Branch  
Patrick Roppel – Morrison Hershfield  
Jieying Wang – FPIInnovations  
Gary Hamer – BC Hydro  
Gordon Monk – BC Hydro  
Patrick Shek – City of Burnaby

Dave Ricketts – RDH Building Engineering  
Douglas Watts – Read Jones Christoffersen  
Shakir Rashid – Levelton Consultants  
Sean Liaw – LDR Engineering Group  
Richard Kadulski – Richard Kadulski Architect  
Mark Gauvin – Gauvin 2000 Construction  
Maureen Connelly – BCIT  
Fred Tai – Simpson Strong-Tie Canada  
Bob Sloat – Surety Association of Canada  
Ralph Moore – Travelers  
Martin Austin – BC Housing

---

**1. Approval of the Agenda/Additional Items**

The meeting was called to order at 8:35 a.m. B. McEwen welcomed everyone to the meeting on behalf of the BRC followed by a roundtable introduction. The meeting agenda was approved.

**2. Approval of November 26, 2014 Meeting Minutes**

The minutes from the November 26, 2014 BRC meeting were approved.

**3. Glazing Interfaces**

Patrick Roppel presented key elements of modelling glazing interfaces and other details when accounting for thermal bridges. There was a discussion on the importance of conducting 3D modelling in order to get the level of detail required to assess the impact of small design modifications intended to limit thermal bridges. Morrison Hershfield has also initiated a project to test the accuracy of heat flux sensors installed in the field in order to gain better confidence in validating modelling work.

**4. Overview of the New Mid-Rise Wood Frame Construction Handbook**

Jieying Wang presented an overview of a new Mid-Rise Wood-Frame Construction Handbook that is set to be released this summer complete with ten chapters. The draft, which is at 90% completion, has been developed over the last 3 years with a number of partners from across Canada to complement existing guidance materials.

**5. BC Local Energy Efficiency Partnership (LEEP) Project**

Gary Hamer presented on the LEEP initiative, which seeks the input of builders and suppliers in assessing and selecting key energy savings technologies that may be used to achieve next level targets for high performance homes, and to find practical solutions to overcome barriers to adoption. LEEP is being lead by NRCan, and was previously implemented in Ontario and Manitoba. Pending the success of carrying out LEEP in the Lower Mainland, it may be extended to other climate zones in British Columbia.

## 6. Overview of Technical Details Posted on Masonry Institute Website

Bill McEwen gave a live demonstration of the technical details posted on the Masonry Institute of BC Website ([www.masonrybc.org](http://www.masonrybc.org)), including structural details that have been recently added, and veneer details that have been online for a few years. These details (viewable online, in PDF, autocad, sketchup) can be easily accessed by clicking on different sections of a 3D building model. The graphics that show construction sequencing are very instructive.

## 7. Forum Discussion, 10:45-11:55

- Sean Liaw discussed challenges associated with repurposing and developing heritage buildings. Discussion ensued:
  - from a warranty perspective there are challenges as the whole building needs to be covered under the warranty, even the building elements that are being kept. Warranty coverage is assessed on a case by case basis.
  - developers often assume that building on an existing heritage building will result in similar costs to a new build, but in general, the costs are higher with heritage buildings.
- Jieying discussed a number of projects t being carried out this year by FPInnovations, including projects on on-site water management; assessing drying performance of different assemblies; mid-rise wood research; tall-wood building projects (3 buildings being built across Canada); energy retrofit research; continued research on mould resistant coatings for vented attics. Research group Advanced Solutions for Wood Construction is looking at podium construction, non-masonry firewalls, and modelling.
- Patrick Shek discussed needed work on non-masonry firewalls for future building codes, of which the FPInnovations research will feed into. Building officials are still busy trying to figure out how to enforce the new provisions of the BCBC that came into effect in December. They don't know how much information to require on drawings for 9.32 and 9.36, and what to inspect. They are also struggling with whether and how to apply ASHRAE 90.1 and NECB to renovations.
  - Even though NECB says in its scope that it is only for new construction, the Branch has said that it can be used for renovations as well.
  - Different jurisdictions have been interpreting differently if the airspace in vaulted ceiling and in decks over living spaces should be considered in the effective R-value calculations. Depending on the interpretation, typical 2x10 @ 16" O.C. may or may not comply.
- Douglas Watts gave a brief overview on expected changes to Part 5 coming in 2015 that include: new below grade requirements; other fenestration, sound and flanking; and inclusion of new reference standards for EIFS.
- Denisa Ionescu gave a brief overview of the research being carried out at the HPO:
  - Building Smart seminar is underway and should help with new 9.32 requirements.
  - HRV Guide for Houses to be posted on HPO website in the coming week. HRV Guide for MURBs by the end of the year. There will also be an HRV related Maintenance Matters Bulletin for homeowners, and a Builder Insight Bulletin for builders.
  - Soils and Foundations Guide nearly finished, and should be out within a month.
  - There is an extensive list of ongoing projects that can be accessed on the HPO website.
  - The new HPO Building Excellence Research & Education Grants Program was a success, with 28 applications and 12 project grants awarded. Next round of submissions expected in September/October.
  - HPO will have a half day workshop on mid-rise and tall wood construction in the Fall.

- Gary Hamer mentioned that there is a new CSA – Non-accredited Standard that can be utilised for components that do not fit existing standard. For example, variable capacity heat pump manufacturers are interested in applying it to test their products.
- Gordon Monk discussed the deep MURB retrofit project that has been ongoing. He is hopeful that funding for the next phase of the project should come in shortly. The next phase will see the retrofit of the ventilation system of the MURB by compartmentalizing each unit with their own HRV.
- Patrick Roppel indicated that MH received a grant to do research on inverted roofs.
- Maureen Connolly from BCIT discussed the work that she and her students have been doing at BCIT relating to building acoustics.
- Richard Kadulski informed the group of the closure of the Canadian Housing Information Centre, (i.e. the CMHC library). He also mentioned that he is looking at the impacts of VBBL having implemented very aggressive building code requirements.
- Dave Rickets hoped to have the Building Enclosure Design Guide update completed by the end of the year. RDH has been doing a lot of research for manufacturers. They also conducted research for NRCan looking at implementing mandatory air leakage for the NECB.
- Mark Gauvin updated the group regarding his test facility where they have recently changed their north and south walls. They implemented Roxul to compare the difference between fibrous and foam board insulation. Results expected in 2 years.

#### **8. Next BRC Meeting**

- Meeting scheduled for Wednesday, November 25, 2015, 8:30am – 12:00pm.