

MEETING NOTES

Building Research Committee Meeting
Wednesday, May 25, 2011, 8:30am to 12:00pm
Executive Hotel & Convention Centre
4201 Lougheed Highway, Burnaby

In Attendance:

Bill McEwen	Masonry Institute of BC (Chair)	Jason Teetaert	SMT Research Ltd.
Bob Thompson	Building and Safety Standards Branch	Gamal Mustapha	SMT Research Ltd.
Allan Dobie	CMHC	George Humphrey	BOABC
Denisa Ionescu	HPO branch of BC Housing	Hamid Heidarali	Morrison Hershfield
Karen Hemmingson	BC Housing	Mary Kenny	RCITO
Misha Nordquist	BC Housing	Mark Lawton	Morrison Hershfield
Fitsum Tariku	BCIT	Les Yard	Dow Chemical Canada Inc.
Rodrigo Mura	BCIT	Anton Van Dyk	Centra Group
Jieying Wang	FPInnovations – Forintek Division	Richard Madden	Adera Development Corp.
Brian Hubbs	RDH Building Engineering	Scott Croasdale	JRS Engineering
Eric Burnett	RDH Building Engineering	Bernie Hoing	Travelers Canada
Dave Ricketts	RDH Building Engineering	Ralph Moore	Travelers Guarantee
Graham Finch	RDH Building Engineering	Rick Alexander	WBI Home Warranty
Douglas Watts	Read Jones Christoffersen	Theresa Weston	Dupont Building Innovations
Fred Tai	Simpson Strong-Tie	Ryan Foster	Dupont Building Innovations
Charlie Gould	C Gould Engineering	Ernest Kortschak	Dupont Building Innovations
Bob Sloat	Surety Association of Canada	Doris Deiter	HPO branch of BC Housing
		Gary Parsons	Dow Chemical USA

Regrets:

David Bruce	Ministry of Energy	Mark Gauvin	GVHBA
Liliana Dominguez	HPO branch of BC Housing	Sukh Johal	Wood WORKS/BC
Don Hazleden	Morrison Hershfield	Ron Rapp	Morningstar Homes Ltd.
Gary Brown	WDMA-BC	MJ Whitemarsh	CHBA BC
Mark Emanuel	Spratt Emanuel Engineering Ltd.	Brennan Vollerling	Halsall Associates Ltd.
Richard Kadulski	Solplan/AIBC	Gordon Monk	BC Hydro Power Smart
Patrick Shek	BOABC	Kimberly Tompkins	Tec Agencies
Warren Knowles	RDH Building Engineering	Patrick Roppel	Morrison Hershfield

1. Approval of the Agenda/Additional Items

The meeting was called to order at 8:40 a.m. B. McEwen welcomed everyone to the meeting on behalf of BRC. The May 25, 2011 BRC meeting agenda was approved.

2. Approval of November 24, 2010 Meeting Minutes

The minutes from the November 24, 2010 BRC meeting were approved.

3. Air and Watertightness of ICF Walls and Window Interfaces

B. Hubbs presented the results of the ICF Water and Air Penetration Testing. Testing was done on a full scale test wall at the Langley facility with no cladding. The final report is currently being developed.

There are opportunities for further testing including testing with different types of cladding.

4. Movement of Wood Frame with Masonry Veneer

B. McEwen presented findings of a site study currently underway on movement of wood frame with masonry veneer. More data is required and there is a need for additional building projects where this could be studied.

5. Building Enclosure Design Guide & Window Thermal Performance and Compliance Bulletin

D. Ricketts presented highlights of the upcoming *Building Enclosure Design Guide*. The energy chapter includes the newest/most updated content. Other features include additional material relevant to six-storey wood frame construction, updated code references and the impact of building science research since 2001, (moisture index, monitoring, drying, various wood products, others). The *Guide* is now in the final production stage and will be available for purchase within the next few weeks via the HPO website.

D. Ricketts also presented the outline of an upcoming bulletin on window energy performance – clarifying requirements for residential buildings. Areas of consideration range from building code requirements to letters of assurance to specifications.

Two other projects are currently underway – one jointly with HPO, WDMA, BC Hydro PowerSmart, City of Vancouver – window and door replacement programs in wood-frame buildings, providing guidance to builders and home owners. The other project focuses on Managing a Renewals Project including general renewals projects and how to manage them. This will be of particular interest to Strata Corporations. The project is funded by the HPO.

6. Three-Coat Stucco Veneer Attachment Schemes for Continuous Insulation Foam Based on Experimentally Validated Finite Element Modeling

L. Yard introduced G. Parsons of Dow Building Solutions who presented results of a project started a few months ago to review how fastening patterns work under various test conditions and provide the industry with some guidance.

Results of the screw fastening model were displayed, with or without washers.. Testing was also conducted on fastening patterns under various wind pressures and gravity deflection. Controlling for temperature is the next step where they will look at testing existing buildings to obtain live data versus results under modeled conditions. Rain-screen assemblies may also be considered.

7. FPInnovations' Research Plan on Energy Efficiency

J. Wang from FPInnovations presented information on an upcoming research project on energy efficiency. The scope includes research for both Part 9 and larger buildings. Please contact J. Wang if your organization is interested in participating in the study.

FPInnovations also provided an update on the shrinkage monitoring project. One building was tested during the winter and testing on a second building will be completed by the end of 2011. After the

second building, FPI would like to continue testing in other buildings so please advise if there are other buildings that could be tested.

8. Current Research Projects

HPO

D. Ionescu presented information on the following research projects:

- An illustrated guide to seismic requirements Part 9 resulting from a collaborative effort between FPIInnovations and the BC Building Safety Standards Branch is to be produced by November 2011
- A report on SAFERhome Standards for universal, adaptable homes will be released in the Fall, 2011
- Two Builder Insight Bulletins were distributed at the meeting:
 - Builder Insight Number 7 – *ASHRAE 90.1 Requirements for the Building Enclosure*
 - Builder Insight Number 8 – *Compatibility of Fasteners and Connectors with Residential Pressure Treated Wood*
- The HPO is currently touring the province with the *Building Smart* Seminar series on changes to the BC Building Code – seismic and energy requirements
- The HPO is preparing six *Maintenance Matters* bulletins including topics of exposed wood structures, cladding, energy efficiency in buildings and how to tune up your building for energy efficiency, developing a maintenance and renewals plan.

BCIT

F. Tariku provided an update on BCIT's Master's in Engineering in Building Science which was officially launched on May 20, 2011.

RDH

G. Finch discussed an upcoming study on high rise residential buildings focusing on airflow within and airflow through buildings. The HPO is funding this research. Additional research partners are being thought for this study. If interested, contact the HPO.

9. Building Code Part 10 Energy Efficiency for Houses

B. Thompson provided an update on Energy Performance of Part 9 Housing which will be included in the next BCBC – Fall 2012. The overall purpose is to better meet BC's energy and climate change objectives.

Process has ranged from scoping, research and analysis, online questionnaire, energy modeling, analysis of ventilation requirements, etc.

Next steps – public review, education/training advisory group, code change approval with the final effective date aimed for Fall 2012 and ongoing.

Information is available at www.housing.gov.bc.ca/building/green/index.htm

10. Equilibrium House Initiate and Update on the EQ Harmony House Project

A. Dobie presented preliminary results of the first five national projects that have had a full year of monitoring for energy efficiency with solar heating. The goal of net zero is close. There will be more information to come as the project completes the monitoring period.

11. Using Linear Transmittance to Handle Thermal Bridging Calculations

M. Lawton presented findings of 40 different thermal bridges modeled in buildings. It was recommended that the industry start using linear transmittance formula. Study findings will be incorporated into ASHRAE 90.2.

12. Premature Concrete Spalling on Balcony Slab Edges

B. Hubbs presented findings of an internal research that is underway at RDH on balcony slab edge premature deterioration, causes and restoration solutions. . There are still many causal factors and questions that need to be answered.

13. Attic Ventilation and Moisture Research Study

M. Lawton presented information on issues that will be reviewed in the upcoming attic ventilation and moisture research study using a live test site at a strata complex in the Lower Mainland.

14. Open Forum and Discussion – Issues Requiring Research Attention

There were no issues brought forward for discussion.

15. Next BRC Meeting

Meeting scheduled for November 23, 2011, 8:30 AM.