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Ms. Trudy Rotgans, MAIBC
Manager, Codes Development
Building and Safety Policy Branch
Office of Housing and Construction
Ministry of Housing and Social Development
PO Box 9844 Stn Prov Govt
Victoria, BC, V8W 9T2

Dear Ms. Rotgans:

RE: PROPOSED AMENDMENTS to the BC BUILDING CODE 2006 to enable
RESIDENTIAL MID-RISE WOOD-FRAME CONSTRUCTION

The AIBC is pleased to provide you and your provincial government colleagues with feedback at this juncture in the evolution of this challenging initiative. We are moved first to extend our appreciation for the open, consultative process to date. Your sharing with the industry of both early findings and concerns, respecting technical, process and other aspects alike, is sincerely appreciated. We have gladly participated through your technical and stakeholders advisory groups; your series of 'plenary' expositions; and in direct dialogue with you, Jeff Vasey and other professionals working on the initiative.

We have reviewed our previous submission of 18 July 2008 (prepared jointly with the APEGBC) which remains no less pertinent today. Its concerns are highlighted herewith on two levels: (A) code proposals limitations and, most importantly (B) process-related implementation concerns. Also submitted are (C) responses for future ideas, and (D) recommendations prior to implementation.

(A) Code Proposals Limitations

While the specific code proposals available for review on-line since 13 November 2008 are reasonably well-framed in their technical terms, *they do not yet address adequately the following considerations* in a comprehensive way:

- (i) Coordination of shrinkage effects with regard to all building systems and with referencing in other parts of the code (including structural performance, building envelope, mechanical / plumbing / drainage, electrical, elevating devices, and such life safety aspects as stair tolerances).
- (ii) Resolution of current technical difficulties with 4-storey wood-frame construction, such as with achieving proper fire resistance rating continuity, robustness and practical details.
- (iii) Provision of coordinated fire rated assembly tables for use in wood frame construction. Perhaps Division B Appendix A, A-9.10.3.1 tables for use in Part 3 buildings could be amended.
- (iv) Extension of mid-rise wood frame construction to assisted living or congregate care uses.
- (v) Extension of mid-rise wood frame construction to mixed-uses and occupancies.
- (vi) Fire-fighters' and emergency responders' exposure to risk, especially in the event of exterior staging.
- (vii) Durability standards.
- (viii) Maintenance provisions, such as window washing anchors.

(B) Process-Related Implementation Concerns

Notwithstanding the technical merits and limitations of the code proposals, the larger process-related issues remain of serious concern. It is our opinion that *implementing the code proposals by 15 January 2009* (as is being indicated) under such circumstances *would be premature, unnecessarily risk-prone and therefore not entirely in the public interest*. The following must first be addressed:

- (i) Course-of-construction fire loss risk.
- (ii) Uniformity and consistency in water supply and fire flow capacity requirements for sprinklered buildings in various jurisdictions.
- (iii) Evolution of buildings' usage and changes over time (e.g. as its residents age in place and buildings become altered).
- (iv) Education and training for design professionals and building officials.
- (v) Development of best practice design and detail guides.
- (vi) Development of best practice installation guides .
- (vii) Education and training for trades and contractors.

The foregoing issues apply to any wood-frame building but are potentially exacerbated in buildings with a 50 per cent increase from the current maximum allowable height. Until their successful resolution, the advisability of implementation is in question.

(C) Future Ideas: Invited Responses

The provincial government's website presentation also seeks feedback on the following four particular future ideas:

(i) Horizontal Exiting: *(caution)*

If 100% horizontal exiting were proposed, it would need to be based upon credible risk assessment and analysis as there is a real potential for entrapment in a fire condition under certain circumstances.

(ii) Independent Third-Party Review: *(unacceptable)*

This concept is not acceptable even on an interim basis and we recommend its pursuit be discontinued. The mid-rise wood-frame initiative is touted as a simple enabling of increased height for wood-frame construction. As such, it should not place its participants at particular risk. Registered professionals (architects and engineers) should also be able to use the new code sections confidently, with understanding and associated best practice guides, in an industry prepared to build accordingly. Anything less indicates an idea whose time has not yet come. As a further, practical matter, the pool of third-party "experts" will be very small, costly, and not necessarily privy to the project's objectives and integrated design considerations.

The current independent structural concept review protocol is, however, accepted as a different and necessary process, and would be suitable for this initiative.

(iii) Field Review: *(caution; legislated professions' standards must govern)*

The registered professionals' mandate needs to be as currently defined under architectural and engineering standards of practice, consistent with the current building code. Nothing else is acceptable. Inspections by authorities need to be consistently undertaken without local variation of standards.

(iv) Education: *(essential)*

A comprehensive education component is absolutely necessary across the industry to ensure that all participants have consistent information and a good sense of acceptable design-and-construction practices and alternatives. Rather than simply a good idea for the future, this needs to happen now.

The challenge, of course, is to strike an appropriate balance of interests. In this case, that would entail covering commercial market prospects and societal risk / benefit as well as technical feasibility, professional capacity and assurance, industry readiness and system tolerance. ***The initiative remains worthy of pursuit but is inadequately deliverable at this time.***

(D) Recommendations Prior to Implementation

The AIBC strongly recommends a set of interrelated approaches prior to regulated implementation that will develop and support:

- (i) Reconciliation of code limitations;
- (ii) Complete “best practices guides” for design, detailing and construction, produced with industry input;
- (iii) Unified educational sessions to industry participants across the province;
- (iv) An industry advisory group to guide implementation; and
- (v) A number of pilot projects, sharing the results with industry.
- (vi) Establishment of a Provincial Code Interpretations Office that can provide uniform code interpretations in response to ongoing queries relating to the initiative.

I trust the foregoing is of help to you, and look forward to continued participation together regarding the further evolution of this initiative.



Michael A. Ernest MAIBC
Director of Professional Practice
Architectural Institute of British Columbia

cc. APEGBC; BOABC; AIBC Regulatory Coordination Committee