

## Nicol, John SG:EX

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Monday, May 16, 2011 11:33 AM  
**To:** Nicol, John SG:EX  
**Subject:** RE: Thoughts on construction fire issue

I did find it on the Alberta govt website. I sent out both links.

Thanks,

Trudy

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**From:** Nicol, John SG:EX  
**Sent:** Sunday, May 15, 2011 11:24 AM  
**To:** Rotgans, Trudy SG:EX  
**Cc:** Lam, Roger SG:EX; Henderson, Jeff SG:EX  
**Subject:** RE: Thoughts on construction fire issue

Hi Trudy,  
I'm thinking that OFC's construction fire safety bulletin should also be in the mix for that conversation. I can also remind you that Alberta did a report on high intensity fires a couple of years ago, which contained a number of recommendations, many of which were not adopted by the Alberta government. I can probably find both the report and the Alberta government's response when I'm back in the office on Tuesday.

John

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Friday, May 13, 2011 9:41 AM  
**To:** Nicol, John SG:EX  
**Cc:** Lam, Roger SG:EX; Henderson, Jeff SG:EX  
**Subject:** FW: Thoughts on construction fire issue

fyi

Not Responsive

Page 2 redacted for the following reason:

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Not Responsive

Not Responsive

**From:** Rotgans, Trudy SG:EX  
**Sent:** Monday, May 9, 2011 4:38 PM  
**To:** Ferguson, Dave SG:EX; Brewer, Gail P FLNR:EX  
**Cc:** Denlinger, Becky SG:EX; Elangovan, Joan TTI:EX; Vasey, Jeff SG:EX  
**Subject:** RE: Thoughts on construction fire issue

Hi Dave and Gail,

Now that there is a bit more time to think about the construction fire in Richmond, it is worth thinking about how to reduce the risk of construction fires in multi-storey wood-frame buildings. Are there actions that would drastically reduce the risks of this reoccurring on other sites in the future? Does this issue require action on our part? Is there a particular phase in the construction process when wood frame buildings are particularly vulnerable?

- The Remy was the first project designed as mid-rise wood frame when BC developed the mode change allowing mid-rise wood frame in 2009, and it was the closest to completion.
- For many, it was a demonstration project and the site of many tours for interested observers in other Canadian and international jurisdictions.

- Because of this, the fire has created a great deal of uncertainty about bigger “combustible” buildings in Ontario and other provinces contemplating a code change similar to BC’s, as well as jurisdictions in the US and Asia.
- Forest Innovation Investment (FII) reports that a Chinese official who had very recently toured the Remy has called to express his serious concern.
- We believe that properly built and maintained 6 storey wood frame residential buildings do not pose a greater risk than other building types
- The current issue is a construction safety issue, not a concern about the fire safety systems in the finished building

First, I wonder if the OFC could provide some stats for construction fires in multi-storey wood buildings under construction. For instance, it comes to mind that over the past few years there have been several: the Remy, Quattro in Surrey, Bear Mountain hotel in Victoria, Penticton hotel/building, Sun Peaks hotel. Can you provide a more accurate list and some idea of magnitude (\$\$ and any injuries)?

S13

If we do pursue the construction fire issue further, at some point we may want to engage stakeholders such as: Insurance Industry; Fire Chiefs Assn; Building Officials; Local Assistants to the Fire Commissioner; Contractors; WorkSafe; BC Housing; Architects; Engineers; Canadian Wood Council; Masonry Institute, Cement Association, steel industry etc.

I’d be very interested in your comments. Let me know what you think or, if you prefer, we can arrange a conference call to discuss further.

Thanks,

Trudy Rotgans, MAIBC  
A/Executive Director

Building and Safety Standards Branch  
Ministry of Energy and Mines and Minister Responsible for Housing

Tel: 250-387-3754

<< OLE Object: Picture (Device Independent Bitmap) >>

## **Nicol, John SG:EX**

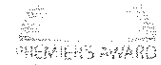
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**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 11, 2011 3:45 PM  
**To:** Rotgans, Trudy SG:EX  
**Subject:** RE: letters

I'd note as well that Jeff V and I attended a meeting with the Fire Services Liaison Group in Richmond on November 7, 2008 to discuss FSLG's report issues and provide more clarity on the rationale for the approach we took on fire issues, based on our expert advice and code consultant's risk analysis.

### ***John Nicol***

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



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**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 11, 2011 3:21 PM  
**To:** Nicol, John SG:EX  
**Subject:** letters

<< File: BldgCode changes reply Lam Feb 2009.doc >> << File: Fire Services Liason Group Comments BC Bldg Code Amendments.pdf >>



## **Fire Services Liaison Group**

#9 – 715 Barrera Road  
Kelowna, BC V1W 3C9  
Phone: 250-862-2388  
Email: [fcabc@shaw.ca](mailto:fcabc@shaw.ca)

February 2, 2009

Roger Lam, Senior Policy Analyst  
Building and Safety Policy Branch  
Ministry of Housing and Social Development  
Box 9844, Stn Prov Govt  
Victoria, BC V8W 9T2

Dear Mr. Lam:

Further to our conversation last week on the changes made to the BC Building Code to allow six storey wood frame construction, the Fire Services Liaison Group feel that after providing your branch with our concerns and attending the various meetings that were held, there are outstanding issues that we have not had a reply on.

The new Code requires sprinklering to NFPA 13, but the local governments have not been given the authority to implement sprinkler bylaws in their jurisdiction. There is no requirement for mandatory inspection of buildings in Regional Districts. The public should be assured safety no matter where the building is situated. We are awaiting a response to our request for consideration in the Code to the capability of the local/responding fire department. Fire services are a local government service and as stated previously, local governments have not been able to enact sprinkler bylaws. Therefore, who will be responsible for the costs of firefighter training, materials, and resources particularly in unorganized areas where buildings are not inspected?

The fire-resistant exterior cladding, NFPA 13 standard sprinklers, and height limitation of 18 meters are a great start for public safety, but the FSLG would like your branch to advise if you are considering our other recommendations such as non-combustible exit stair shafts, smoke control measures, and emergency generators to name a few.

Yours truly

Stephen Gamble, CFO, MIFireE  
Chair, FSLG  
President, FCABC

Cc: Office of Fire Commissioner  
BC Professional Fire Fighters Association  
Volunteer Firefighters Association of BC  
BC Training Officers Association  
Fire Prevention Officers Association of BC  
Union of BC Municipalities



## **FIRE SERVICES LIAISON GROUP**

Unit 9 – 715 Barrera Road  
Kelowna, BC V1W 3C9  
Office 250-862-2388

### ***Fire Service Liaison Group comments re: Amending BC Building Code to allow for 6 storey wood-frame construction***

This report has been prepared by the Fire Services Liaison Group, which is comprised of the five associations whose members are directly involved in fire service delivery in the Province of BC – Fire Chiefs' Association of BC; Volunteer Firefighters Association of BC; BC Fire Training Officers; Fire Prevention Officers of BC; Professional Fire Fighters Association of BC and a representative of the Union of BC Municipalities.

At a recent conference of Mayors in May of 2008, Premier Gordon Campbell stated that he wants to support the province's forest industry by allowing the construction of wood-framed condominiums above the current four-storey limit.

Housing Minister Rich Coleman advised the Canadian Home Builder's Association that he wants to see wood-framed buildings up to six storeys high. He also indicated that the necessary building code changes could be accomplished through regulatory change and could be in place by September 2008. Forests Minister Pat Bell supported the Premier's and Minister Coleman's position to change the building code to allow more height which will help revitalize the forestry industry.

Canadian Wood Council VP Etienne Lalonde has stated they have been lobbying for a change in the BC Building Code the past year and in a struggling forest industry, mid rise construction is a new and viable market.

Under the National Building Code wood framed construction has been limited to three storeys, whereas in BC, builders are allowed to go to four storeys. Architects have said that BC is already pushing the limit under the National Building Code by going as high as four storey's in wood specifically because any shrinkage in the thickness of floor joists tends to compound with each additional storey.

Recently in the PublicEyeonline.com, interim president David Davey of the Structural Engineers Association of BC, recommended that the government



conduct a "proper study on the effects of increasing the construction height of wood buildings" in BC.

The PublicEyeonline.com article goes on to say that "coincidentally, the government quietly announced it was looking for a consultant to review its planned code amendments". The RFP states

"In May, 2008, the Minister announced plans to change the Building Code to allow for wood-framed residential occupancy buildings of up to and including six storeys. By late September, 2008, the Minister will announce details of the proposed changes."

The RFP goes on to state,

"the project is divided into three phases, all of which are included in this RFP." The first phase (to be completed by September 5, 2008) is a research phase, reviewing and identifying technical literature and risks associated with increasing the maximum number of storeys. The second phase (to be completed by October 31, 2008) will focus on developing a technical proposal for changing the Building Code to meet the government's objective. The third phase (to be completed by November 30, 2008) is to prepare a presentation to multi-stakeholder workshops in conjunction with Building Safety and Policy Branch.

All of the above is not making the BC fire service comfortable.

A major concern for the fire service is the response capabilities many fire departments in BC. Most fire departments do not have the training or resources to respond to a high rise fire incident. Additionally, outside of municipal boundaries, there is no mandatory requirement for building inspections, so many small or rural fire departments end up responding to an incident where they have not conducted a pre-fire plan nor have they been consulted with as to the whether they have the capability to mitigate the incident.

UBCM has stated in a staff report that six storey structures require hi-rise firefighting tactics which are much different than those used for low-rise structures (1-4 storeys). The current 3 and 4 storey wooden structures provide for demanding challenges when fighting fires from an external upper floor access perspective as it is. Most fire departments are able to access 3<sup>rd</sup> floor balconies with ground ladders, but are challenged if they need to reach any higher. The more floors a building has, the longer it takes to escape and with our aging population more time will be needed in the future for occupants to safely exit a structure during a fire.

UBCM's Executive indicated cautious support for the proposed six storey wood framed construction based on the following measures:

- Phased implementation – from four storey, to five storeys on top of one story non-combustible construction;

- Informed evidence based decision making – need to consider construction techniques, fire protection issues, enforcement/regulation issues, and potential liability concerns;
- Education/training and best practice guidelines for building industry, building officials and firefighters;
- Public review of proposed Building Code changes.

The Martin Lofts project in Kelowna is technically a four storey wood frame building but looks like a six storey structure. The under building concrete parking is mostly above ground, forming the first floor. There are four storeys of condominiums with a fifth storey of lofts, accessible only by stairs from the fourth storey units. Without corridor access, lofts are allowed and are not counted as an extra storey under the building code. Conceivably, if the building code starts to allow six storey wood buildings, they could stretch to eight storeys if exposed under building concrete parking and lofts are added. Assistant Fire Chief Bryan Collier, Kelowna stated that it is an issue of more property loss and greater risk for occupants and firefighters in the event of fire, as wood is more combustible than concrete and steel.

A recent paper by Sean Tracey, Canadian Regional Manager, NFPA, (*Comments regarding BC Proposal to Increase Lightweight Frame Construction to 6 Storeys*) raised the concern that expected building performance criteria must be established. Currently in the codes, the expectations for continuous structures above three storeys, is to require 2 hour fire resistive construction. This is intended to prevent the structure from collapse; to provide adequate time for occupants to safely evacuate; and to allow time for the fire service to conduct an interior search and rescue as well as fire attack. Tracey maintains if a combustible structure is to be permitted it should not go below the requirements of:

- Provide structural sufficiency for occupant evacuation and firefighter operations
- Minimize damage to the structure
- Limit or prevent damage to adjacent structures.

Tracey goes on to indicate that BC has a wide variety of fire department response capabilities and approvals of such structures must consider the fire department response capabilities. The Codes in BC make certain assumptions already on the adequacy of the fire department response, in regards to limiting distances, but does not define these.

Tracey references the TF2000 project in England where a concern about fire entering into wall cavities and thus spreading beyond the room of origin to other floors was raised. How many BC fire departments have infrared cameras to detect hotspots in wall cavities? He goes on to warn that if an Authority Having Jurisdiction permits such construction in their area, they will need to consider what resources their fire departments will need and at what level of service their firefighters are capable of providing, to properly address such fires. The National

Building Code does not define what an adequate fire department response capability is, so if the fire department does not perform interior fire attack, are they exposing their communities to increased civil litigation? Should a community such as Sechelt allow high rise construction without their fire department having the training, equipment, or sufficient number of firefighters to respond to a fire in that structure?

Tracey feels there is a serious potential disconnect in BC between the minimums in the building code and community expectations. He feels that a worst case scenario in analyzing the fire scenarios must be used. The building proposal must assume that the building will be constructed in a community with a volunteer response with limited resources and training.

NFPA 13R Sprinkler Systems are intended to cover residential occupancies up to 4 storeys. These new proposed structures would no longer be acceptable under NFPA 13R and therefore would be required to be designed to NFPA 13 throughout the structure. This means that all rooms and spaces would need to be sprinklered including attic spaces, all rooms, all closets, exterior balconies, etc. These would be areas that would have been excluded in residential construction up to and including four storeys. NFPA 13 R systems are considered life safety systems and are not installed for property protection.

Timber framed buildings are not resistant to fire until completed. The risky period is during the construction phase, because the timber frame goes up first and the fire protective cladding, plaster board and fire stops are added later. Two recent examples of timber frame fire destruction in New Westminster and Penticton, where fire not only destroyed the condo buildings under construction, but also impacted neighbouring structures and residences. Penticton Fire Chief Wayne Williams stated that, "the drywall wasn't in yet, so it was a fast moving fire, which also required evacuation of neighbouring structures and residences."

FCABC Building Codes & Life Safety Committee Chair, Deputy Chief Mike Helmer recommends that in addition to the current requirements for a 4 storey wood frame buildings the following items should be considered in a five or six storey wood frame building:

1. Fully sprinklered, including eaves and/or soffit area and attic space
2. Minimum 2 hour rated non-combustible exit stair shafts, minimum of two shafts (one for exiting and one for operations)
3. Non-combustible exterior cladding to prevent vertical fire travel
4. Fully addressable high rise type fire alarm system including firefighter telephones and voice communication systems
5. Smoke control measures to pressurize exit corridors and shafts
6. Emergency generators to supply emergency power for a 2 hour minimum
7. Ceilings rated for minimum 1 hour
8. Hose connections (minimum 1 ¾") in corridors adjacent to exit doors and additional locations if travel distance exceeds 30m.

Captain Doug Bell, President of the Fire Prevention Officers Association of BC has also raised the following concerns that need to be addressed:

1. Building to be sprinklered to NFPA 13 – no equivalencies – all balconies to be sprinklered
2. Stand pipes to be NFPA 14
3. Buildings to be classed as Ordinary Hazard Class 1
4. Hallway pressurization – NFPA has recently reviewed the requirements for hallway makeup air and fusible links – further research should be considered
5. Control room for fire department operations
6. Roof access on all stairways
7. Addressable alarm systems
8. Emergency lighting on standby generators
9. Firefighter elevators with elevators large enough for stretchers to fit, without using chair cots.

Smaller or rural fire departments will be challenged to provide higher building protection. The more protections built-in and/or installed, will allow the fire service to better protect BC residents.

Items that the FSLG feel need further consideration include:

1. Fire Department access to site
2. Are there any occupancy classification limitations/restrictions? (e.g. 6 storey assisted living facilities)
3. Does BCBC 3.2.6. high building requirements apply?
4. What are the increased occupant load impacts on evacuations?
5. Will there be a limited use of vinyl siding and other combustible materials used on the exterior of buildings?
6. Will the passive and active fire protection system be increased?
7. How will emergency power be addressed?
8. Will consideration be given to increase fire resistance of corridors and stairwells?
9. Will the jurisdiction where the building is built have adequate water supplies? Will fire pumps be required?
10. What effect will pre-engineered wood assemblies have on structural integrity in a fire? Will they be fire and load tested? Will the fire service have to change their current practices for this type of structure?
11. What are the impacts to existing neighbouring structures in the case of a fire in a wood frame structure still under construction?
12. Will there be a standard grade for height measurement? What are the impacts to height measurement standards if wood frame storeys are built over concrete storeys?
13. Will alternative solutions or performance design be allowed under “objective-based codes”?

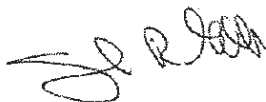


14. Who will be responsible for the costs of firefighter training; materials; and resources?
15. If changes are made to allow higher wood frame buildings, will the insurance industry raise rates to property owners for increased risk?
16. Will there be consideration made in the Code to the capability of the local/responding fire department.
17. What methods/assurances will be made to ensure protection for openings and penetration of fire-rated membranes during the initial construction and later when the building is occupied?
18. How will the Building Code address the issue of 5 to 6 storey buildings becoming 7 & 8 storey buildings (over above ground non-combustible parking garages and the addition of lofts)?
19. Will the Building code changes be restricted to Group C, D, and E occupancies or are others groups being considered?

Two key items that the Fire Services Liaison Group would like to have considered before any changes are made to the BC Building Code are the mandatory inspection of buildings in Regional Districts and the ability for local governments to implement sprinkler bylaws in their local jurisdictions.

The FSLG would also like to see research on impacts done and then consultations with fire service providers and their Authorities Having Jurisdictions before any changes are made to the BC Building Codes and BC Fire Codes to accommodate any amendments.

The FSLG would like to leave the reader with one final thought – most fire deaths and injuries occur in residential wood frame construction – we need to ensure that the safe guards are in place before these residences are occupied.



Stephen Gamble, CFO, MIFireE  
Chair, Fire Services Liaison Group  
President, Fire Chiefs' Association of BC

## Nicol, John SG:EX

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**From:** Green, Tracy SG:EX  
**Sent:** Wednesday, May 11, 2011 3:11 PM  
**To:** Nicol, John SG:EX  
**Cc:** Rotgans, Trudy SG:EX  
**Subject:** FW: URGENT MEDIA REQUEST: Vancouver Sun

**Importance:** High

Didn't you do a BN on this issue??? If not, please provide some bullets so that Trudy may discuss with Maryann

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**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 11, 2011 3:08 PM  
**To:** Green, Tracy SG:EX  
**Subject:** Fw: URGENT MEDIA REQUEST: Vancouver Sun  
**Importance:** High

Not Responsive

Not Responsive

**Nicol, John SG:EX**

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**From:** Nicol, John SG:EX  
**Sent:** Monday, May 9, 2011 2:05 PM  
**To:** Rotgans, Trudy SG:EX; Green, Tracy SG:EX  
**Subject:** RE: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

See responses below in Maryann's e-mail.

*John*

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Monday, May 9, 2011 1:45 PM  
**To:** Green, Tracy SG:EX; Nicol, John SG:EX  
**Subject:** FW: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction  
**Importance:** High

A couple of follow up questions.

Thanks,

Trudy

Not Responsive



Page 17 redacted for the following reason:

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Not Responsive

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Monday, May 9, 2011 8:39 AM  
**To:** Anderson, Maryann PAB:EX  
**Subject:** RE: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

Hi Maryann, So where are we on this? Jeff said we were holding back a few of the responses until this week. Is there anything outstanding for us to review ?

Thanks,

Trudy

**Nicol, John SG:EX**

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**From:** Nicol, John SG:EX  
**Sent:** Monday, May 9, 2011 1:12 PM  
**To:** Nicol, John SG:EX; Rotgans, Trudy SG:EX; Green, Tracy SG:EX  
**Subject:** RE: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

The web address of the OFC bulletin (Q2) is : <http://www.pssg.gov.bc.ca/firecom/info/pdf/firesafeplan.pdf>

*John*

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**From:** Nicol, John SG:EX  
**Sent:** Monday, May 9, 2011 1:00 PM  
**To:** Rotgans, Trudy SG:EX; Green, Tracy SG:EX  
**Subject:** RE: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

Some suggested changes noted below in red.

*John*

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Monday, May 9, 2011 12:30 PM  
**To:** Nicol, John SG:EX; Green, Tracy SG:EX  
**Subject:** FW: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction  
**Importance:** High

She needs the response by 2 pm. I'll be back.....

Thanks,

Trudy

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Monday, May 9, 2011 9:19 AM  
**To:** Nicol, John SG:EX  
**Cc:** Green, Tracy SG:EX  
**Subject:** FW: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction  
**Importance:** High

Hi John, Could you give another run at these three answers? Jeff wanted us to rework the messaging on them. Please review them with Tracy and I'll have a look at them after that. Maryann didn't give a time frame but I'm hoping we can get this out prior to noon.

Thanks,

Trudy

Not Responsive

Not Responsive

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Monday, May 9, 2011 8:39 AM  
**To:** Anderson, Maryann PAB:EX  
**Subject:** RE: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

Hi Maryann, So where are we on this? Jeff said we were holding back a few of the responses until this week. Is there anything outstanding for us to review ?

Thanks,

Trudy

Not Responsive

Not Responsive

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**From:** Nicol, John SG:EX  
**Sent:** Thursday, May 05, 2011 07:56 AM  
**To:** Anderson, Maryann PAB:EX  
**Cc:** Rotgans, Trudy SG:EX  
**Subject:** FW: FOR URGENT REVIEW: Remy Fire IN

FYI

***John Nicol***

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



Not Responsive

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**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 12:52 PM  
**To:** Watt, Stephen SG:EX  
**Subject:** FW: FOR URGENT REVIEW: Remy Fire IN

FYI

**John Nicol**

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



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**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 12:49 PM  
**To:** McLaughlin, Katie GCPE:EX; Brewer, Gail P FLNR:EX  
**Cc:** XT:Baker, Ken CAsE:IN; 'Kevin Regan'; Black, Marc GCPE:EX; Rotgans, Trudy SG:EX  
**Subject:** RE: FOR URGENT REVIEW: Remy Fire IN

Here is an excerpt from one of the documents I prepared during the 6wood code change project:

The office of the Fire Commissioner gathers statistics on fires reported at construction and demolition sites in BC. They show that in the past 10 years (1998-2008), there were 37 fires reported in multi-unit residential buildings and no reported civilian deaths or injuries. While the number of construction fires in 2008 was above average (6), the number of permits issued for multi-unit residential buildings in BC almost doubled from 1998 to 2008. However, the percentage of multi-unit residential buildings impacted by construction fires as a percentage of the total number of these buildings for which permits were issues remained low at about 0.03per cent over this period.

I doubt the numbers have changed much but if you'd like to ask OFC for updated numbers, contact Stephen.Watt@gov.bc.ca.

**John Nicol**

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



Not Responsive

Not Responsive

**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 12:28 PM  
**To:** McLaughlin, Katie GCPE:EX; Brewer, Gail P FLNR:EX  
**Cc:** XT:Baker, Ken CAsE:IN; 'Kevin Regan'; Black, Marc GCPE:EX; Rotgans, Trudy SG:EX  
**Subject:** RE: FOR URGENT REVIEW: Remy Fire IN

The Office of the Fire Commissioner keeps stats like these for BC, which confirm that the incidence of construction fires in wood frame MURB buildings is relatively low. I can send you data from a couple of years ago but if you want current info, you'll have to get OFC to recalculate with more current info.

***John Nicol***

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



Not Responsive



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Not Responsive

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**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 1:51 PM  
**To:** Anderson, Maryann PAB:EX  
**Subject:** FW: FOR URGENT REVIEW: Remy Fire IN

Hi Maryann,

At Trudy's request, I've been playing traffic cop for the info sharing among the Wood First Folks, the Ministry of Jobs, etc, BC Woodworks and FII in an attempt to head off misinformation and misunderstanding. I hadn't intended this to replace the protocols of PAB shops working things out together and will copy you on all further relevant e-mail traffic. At the same time, I'd like to continue to add value to the discussion by clarifying issues that are apparently being misunderstood so that draft INs coming forward are more useful and accurate. I'd welcome your advice on when/how to do that for our ministry's INs. The ones from other ministries that I've been copied on have contained some significant errors that I've offered advice on to correct and it seemed to me you'd find it easier to deal with cleaner incoming product.

Regards,

**John Nicol**  
Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



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**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 12:49 PM  
**To:** McLaughlin, Katie GCPE:EX; Brewer, Gail P FLNR:EX  
**Cc:** XT:Baker, Ken CASE:IN; 'Kevin Regan'; Black, Marc GCPE:EX; Rotgans, Trudy SG:EX  
**Subject:** RE: FOR URGENT REVIEW: Remy Fire IN

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**John Nicol**  
Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



Not Responsive

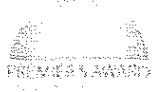
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**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 12:28 PM  
**To:** McLaughlin, Katie GCPE:EX; Brewer, Gail P FLNR:EX  
**Cc:** XT:Baker, Ken CASE:IN; 'Kevin Regan'; Black, Marc GCPE:EX; Rotgans, Trudy SG:EX  
**Subject:** RE: FOR URGENT REVIEW: Remy Fire IN

The Office of the Fire Commissioner keeps stats like these for BC, which confirm that the incidence of construction fires in wood frame MURB buildings is relatively low. I can send you data from a couple of years ago but if you want current info, you'll have to get OFC to recalculate with more current info.

***John Nicol***

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



Not Responsive

**Nicol. John SG:EX**

Not Responsive

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**From:** Nicol, John SG:EX [<mailto:John.Nicol@gov.bc.ca>]

**Sent:** Wednesday, May 04, 2011 1:53 PM

**To:** Janet Sinclair

**Subject:** RE: Briefing Deck for Minister Coleman Ministry of Energy and Mines - May 4, 2011

No sweat Janet. I'm up to my a\*\* in crisis management relating to the Remy fire today, and am going to me in meetings in Burnaby tomorrow.

Thanks for providing this.

Be well,

**John Nicol**

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



Not Responsive

**Nicol, John SG:EX**

Not Responsive

**From:** Nicol, John SG:EX [<mailto:John.Nicol@gov.bc.ca>]  
**Sent:** May-04-11 11:23 AM  
**To:** Mary Tracey  
**Cc:** Brewer, Gail P FLNR:EX  
**Subject:** RE: IN

Hi Mary,

Here (in confidence) is our draft issue note. Please correct any errors you find and add any info we don't have in it please.

By the way, I have tried to contact Bob Furlong, who I believe did the Fire Safety Plan for the project. If I hear back from him, I'll let you know.

**John Nicol**

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



Not Responsive

## ADVICE TO MINISTER

<p><b>CONFIDENTIAL ISSUES NOTE</b></p> <p>Ministry of Energy and Mines and Minister Responsible for Housing Date: May 4, 2011</p> <p>Minister Responsible: Hon. Rich Coleman</p>	<p><b>Fire at Remy development Seniors Housing and first 6 storey wood-frame construction</b></p>
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### KEY FACTS REGARDING THE ISSUE:

**UPDATE\_May4\_9:40 a.m.:** It appears the fire started in the 2nd phase that was under construction. The first phase/structure was almost complete ~~and buttoned up~~, however the sprinklers may not have been hooked up or charged yet. Embers fell on a neighbouring home but were extinguished.

- A fire destroyed two buildings under construction in Richmond. The Remy projects were the first six storey wood frame buildings being built under new B.C. building-code provisions that allowed for mid-rise wood frame construction (six-storey wood buildings).
- The fire broke out around 10:30 p.m. PT at the site located at 9388 Cambie near the intersection of Stolberg Road. The building was still under construction and not occupied.
- Richmond Fire Department expressed concerns in 2009, that their ladders were not high enough to reach the top of the building. However, at the time, the fire chief had said it was not a concern as the building was not yet occupied.

### Current BC Building Code-changes

- The 2006-BC Building Code used to ~~allowed~~ wood-frame residential buildings of up to four storeys.
- In May 2008, the province announced changes to allow wood-frame residential buildings up to six-storeys. The change was effective in April 2009 and ~~supported supports~~ the Wood First policy.
- The ~~2012 edition to the current~~ code ~~will contain-contains the following~~ additional fire safety provisions for five and six storey residential wood-frame buildings:
  - Higher sprinkler standards (NFPA 13) established, which require sprinkler for concealed spaces such as attics and crawl spaces and balconies deeper than four feet.
  - Total building area maintained at 7200 square metres so maximum floor area remains the same as for four storey wood buildings.
  - Building height limited to 18 metres to the uppermost floor of the uppermost storey to ensure mezzanines are not used to achieve higher buildings than intended.
  - Fire resistance performance standards established for exterior cladding to prevent external fire spread.

### BC Housing Investment

- The 188-unit housing development is being built by Oris Development Corporation, and was scheduled for completion in December, and was to include:
  - 33 apartments for seniors and people with disabilities & 48 affordable apartments for low-to moderate-income families and singles - all managed by S.U.C.C.E.S.S.
  - 37 affordable-homeownership units for sale to qualified buyers
  - 70 private-market apartments
  - 50-60 space children's daycare
- The province provided a \$34 million construction loan to Oris - to date, \$18.5 million has been advanced. In addition, \$4.5 million in provincial and Federal funding was provided for

the 33 seniors apartments. Province also invested \$500 thousand for the daycare.

- Oris is planning to hold a media briefing near the site at 11:30 a.m. (May 4).

**Impact on Wood-Frame Construction in other jurisdictions:**

- BC has been in discussions with Ontario and other provinces regarding mid-rise six-storey and a demonstration project was recently announced in Beijing.
- The fire has created some uncertainty about higher wood-frame buildings in other jurisdictions contemplating a code change similar to BC's.
- Forest Innovation Investment (FII) reports that a Chinese official who had very recently toured the Remy has called to express his serious concern.

S13

Communications Contact: Maryann Anderson  
Program Area Contact: Fergus McCann  
File Location:

250 213.1493  
778 452.6445



**Nicol, John SG:EX**

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 4, 2011 11:48 AM  
**To:** Green, Tracy SG:EX  
**Cc:** Nicol, John SG:EX  
**Subject:** FW: HSG-IN Remy Fire-Six-Storey Wood Frame.docx

---

**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 11:29 AM  
**To:** Anderson, Maryann PAB:EX  
**Cc:** Rotgans, Trudy SG:EX; Vasey, Jeff SG:EX  
**Subject:** HSG-IN Remy Fire-Six-Storey Wood Frame.docx

Hi Maryann,  
Here are Jeff's approved changes.  
Roger



HSG-IN Remy  
ire-Six-Storey Wo.

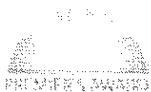
Not Responsive

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**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 11:40 AM  
**To:** Brewer, Gail P FLNR:EX  
**Subject:** RE: Estimates Note re REMY fire

Ken's note appears to contain some factually incorrect information. As I understand it, fire prevention systems had been installed, but were not yet operational.

**John Nicol**  
Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



Not Responsive

## Nicol, John SG:EX

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**From:** Green, Tracy SG:EX  
**Sent:** Wednesday, May 4, 2011 11:07 AM  
**To:** Nicol, John SG:EX  
**Subject:** FW: Richmond fire

I am assuming that she wants the total number of storeys but she may want info on the number of wood framed storeys in addition to the concrete base??

Not Responsive

**From:** Green, Tracy SG:EX  
**Sent:** Wednesday, May 4, 2011 10:24 AM  
**To:** Anderson, Maryann PAB:EX  
**Subject:** Richmond fire

Hi Maryann....Trudy has gone into a meeting...please copy me and John Nicol on the note you are preparing on this matter. Thanks

Tracy  
Manager, Safety Policy and Liaison  
Building and Safety Standards

**Nicol, John SG:EX**

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Not Responsive

**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 10:13 AM  
**To:** Brewer, Gail P FLNR:EX  
**Subject:** FW: HSG-IN Remy Fire-Six-Storey Wood Frame

Here's our current draft. If you have suggestions please route them through me.

Thanks,

*John*

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**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 10:04 AM  
**To:** Rotgans, Trudy SG:EX  
**Subject:** RE: HSG-IN Remy Fire-Six-Storey Wood Frame

I've made a couple of tweaks which you can forward if you choose.

*John*

---

**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 4, 2011 9:57 AM  
**To:** Nicol, John SG:EX  
**Subject:** FW: HSG-IN Remy Fire-Six-Storey Wood Frame

---

**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 9:56 AM  
**To:** Rotgans, Trudy SG:EX  
**Subject:** RE: HSG-IN Remy Fire-Six-Storey Wood Frame

Also, the second to last bullet is weak and seems to imply there is a problem with construction fire safety in the current code that will be addressed in the next edition

Not Responsive

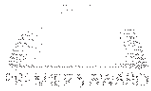
Not Responsive

**From:** Nicol, John SG:EX [mailto:John.Nicol@gov.bc.ca]  
**Sent:** May-04-11 10:41 AM  
**To:** Mary Tracey  
**Cc:** Brewer, Gail P FLNR:EX  
**Subject:** RE: PLEASE REVIEW: CWC Briefing letter - Remy Project in Richmond BC

Thanks for sharing this Mary. Note that it is the Office of the Fire Commissioner, **NOT** the Chief Building Official (we don't have one of those) who is investigating the fire along with the City of Richmond.

***John Nicol***

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



Not Responsive

Not Responsive

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**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 10:14 AM  
**To:** Brewer, Gail P FLNR:EX  
**Subject:** additional info

As you are aware, a building under construction does may not have many of its fire safety features in place (ie: fire separations, fire sprinklers), and is not representative of the level of fire safety of the completed building. During the construction process, fire safety is maintained using alternate means than in the completed building.

The BC Building Code references the BC Fire Code requirements for construction site fire safety. These are the current BCFC requirements for construction site fire safety, which we may want to co-ordinate with OFC:

- Course of construction fire safety is regulated primarily by the BC Fire Code
- Construction sites are required to have a fire safety plan in place
- Construction sites are required to maintain unobstructed access to fire hydrants, fire extinguishers and standpipes throughout the construction process
- Portable fire extinguishers are required where there is a high risk of fire (ie: where flammable liquids are stored)
- A standpipe system is required to be installed progressively, where required by the BC Building Code.
- Due to concerns raised during the Mid-Rise Wood Frame Construction project, the Office of the Fire Commissioner issued a bulletin to clarify construction site fire safety requirements:

<http://www.pssg.gov.bc.ca/firecom/info/pdf/firesafeplan.pdf>

The coming 2010 National Fire Code (2012 BC Fire Code) has proposed enhanced fire safety requirements for construction sites:

- As before, a standpipe system is required to be installed progressively, where required by the BC Building Code. The new fire code is explicit on how to progressively install the standpipe system so that it will be available for use if necessary.
- A new requirement to protect adjacent buildings from fire exposure during construction.

***John Nicol***

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473

<< OLE Object: Picture (Device Independent Bitmap) >>



**Nicol, John SG:EX**

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 4, 2011 9:57 AM  
**To:** Nicol, John SG:EX  
**Subject:** FW: HSG-IN Remy Fire-Six-Storey Wood Frame

---

**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 4, 2011 9:56 AM  
**To:** Lam, Roger SG:EX  
**Subject:** RE: HSG-IN Remy Fire-Six-Storey Wood Frame

I think the reference should be to the 2012 BC Fire Code. Juni is writing some notes about it.

Thanks,

Trudy

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**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 9:54 AM  
**To:** Rotgans, Trudy SG:EX  
**Subject:** RE: HSG-IN Remy Fire-Six-Storey Wood Frame

Hi Trudy,  
It looks like the reference to things to be brought in with the 2012 code are things that are already in place.  
Roger

---

Not Responsive

Page 42 redacted for the following reason:

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Not Responsive

Not Responsive

**Nicol, John SG:EX**

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 4, 2011 9:31 AM  
**To:** Anderson, Maryann PAB:EX  
**Cc:** Nicol, John SG:EX; Kuan, Steven Y SG:EX; Meuser, Teegan SG:EX  
**Subject:** RE: MEDIA REQUEST: Wood Frame Construction

#### Fire Safety

- **Higher sprinklering standards (NFPA 13) established**, which require sprinklering of concealed spaces such as attics and crawl spaces and balconies deeper than four feet
- **Total building area maintained at 7200 square metres** so maximum floor area remains the same as for four storey wood buildings
- **Building height limited** to 18 metres to the uppermost floor of the uppermost storey to ensure mezzanines are not used to achieve higher buildings than intended
- **Fire resistance performance standards established** for exterior cladding to prevent external fire spread

These requirements are greater than for current 4 storey buildings – in particular, the concealed spaces are also sprinklered (NFPA 13 rather than NFPA 13R) and the exterior cladding has fire resistance requirements

Not Responsive

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 4, 2011 9:11 AM  
**To:** Anderson, Maryann PAB:EX  
**Subject:** FW: MEDIA REQUEST: Wood Frame Construction

Height of ladders.....

---

**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 9:06 AM

**To:** Rotgans, Trudy SG:EX

**Subject:** RE: MEDIA REQUEST: Wood Frame Construction

Hi Trudy in the CBC – Deputy Chief Tim Wilkinson says that ladders are not an issue in this case.

<http://www.cbc.ca/news/canada/british-columbia/story/2011/05/04/bc-richmond-fire.html>

Even before construction started last year, Richmond's fire department warned its ladders weren't high enough to reach the top of the structure. But Wilkinson said its height was not a concern in this instance because the building was not inhabited.

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Not Responsive

**Nicol, John SG:EX**

Not Responsive

**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 8:59 AM  
**To:** Brewer, Gail P FLNR:EX  
**Subject:** RE: Remy 6 Storey fire last night

Could you give me a buzz when you're available Gail. Our DM wants some bullets for our Minister in the next half hour or so if possible.

**John Nicol**  
Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



Not Responsive

**Nicol, John SG:EX**

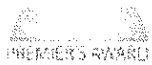
Not Responsive

**From:** Nicol, John SG:EX [<mailto:John.Nicol@gov.bc.ca>]  
**Sent:** May-04-11 8:43 AM  
**To:** Sukh Johal; Sukh Johal  
**Cc:** Mary Tracey; Green, Tracy SG:EX  
**Subject:** Re: Richmond Fire

Hi folks,

It seems likely our Ministry will be asked about the circumstances of this fire. Are you able to get us information?

**John Nicol**  
Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



## **Meuser, Teegan SG:EX**

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**From:** Kuan, Steven Y SG:EX  
**Sent:** Thursday, May 5, 2011 9:53 AM  
**To:** Nicol, John SG:EX; Meuser, Teegan SG:EX; Rotgans, Trudy SG:EX; Lam, Roger SG:EX; Green, Tracy SG:EX  
**Cc:** Henderson, Jeff SG:EX; Webb, Christine A SG:EX; Kuhnert, Lyle SG:EX; Anderson, Maryann GCPE:EX  
**Subject:** NEWS CLIPPING: 24HRS: Richmond blaze confirms fire fears

A short article, but note the quotes.

"I hope the government would see this as a wake-up call that these large six-storey, wood-frame buildings create a large risk in communities"

"It was a rushed consultation process."

<http://eedition.vancouver.24hrs.ca/epaper/viewer.aspx>

Go to page 5.

Steven

### **Steven Kuan**

Senior Seismic Engineer  
Building and Safety Standards Branch  
Ministry of Energy and Mines  
Tel: (604) 218-0296



Not Responsive

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**From:** Jensen, Jun'ichi SG:EX  
**Sent:** Wednesday, May 4, 2011 10:04 AM  
**To:** Jensen, Jun'ichi SG:EX; Nicol, John SG:EX; Watt, Stephen SG:EX; Ferguson, Dave SG:EX  
**Cc:** Kuhnert, Lyle SG:EX; Rotgans, Trudy SG:EX  
**Subject:** RE: Bullets in response to 6 storey construction fire

Sorry folks, a couple edits made so disregard the last and please use this version.

---

**From:** Jensen, Jun'ichi SG:EX  
**Sent:** Wednesday, May 4, 2011 9:59 AM  
**To:** Nicol, John SG:EX; Watt, Stephen SG:EX; Ferguson, Dave SG:EX  
**Cc:** Kuhnert, Lyle SG:EX; Rotgans, Trudy SG:EX  
**Subject:** Bullets in response to 6 storey construction fire

Hello,

Here are some bullets to aid this office in responding to inquiries related to the recent 6 storey construction fire. Please co-ordinate with John Nicol if you have any comments or concerns. I have included some OFC staff as they may wish to comment on the bullets related to the BC Fire Code.

As you are aware, a building under construction does may not have many of its fire safety features in place (ie: fire separations, fire sprinklers), and is not representative of the level of fire safety of the completed building. During the construction process, fire safety is maintained using alternate means than in the completed building.

The BC Building Code references the BC Fire Code requirements for construction site fire safety. These are the current BCFC requirements for construction site fire safety, which we may want to co-ordinate with OFC:

- Course of construction fire safety is regulated primarily by the BC Fire Code
- Construction sites are required to have a fire safety plan in place
- Construction sites are required to maintain unobstructed access to fire hydrants, fire extinguishers and standpipes throughout the construction process
- Portable fire extinguishers are required where there is a high risk of fire (ie: where flammable liquids are stored)
- A standpipe system is required to be installed progressively, where required by the BC Building Code.
- Due to concerns raised during the Mid-Rise Wood Frame Construction project, the Office of the Fire Commissioner issued a bulletin to clarify construction site fire safety requirements:

<http://www.pssg.gov.bc.ca/firecom/info/pdf/firesafeplan.pdf>

The coming 2010 National Fire Code (2012 BC Fire Code) has proposed enhanced fire safety requirements for construction sites:

- As before, a standpipe system is required to be installed progressively, where required by the BC Building Code. The new fire code is explicit on how to progressively install the standpipe system so that it will be available for use if necessary.
- A new requirement to protect adjacent buildings from fire exposure during construction.

Regards,

**Jun'ichi Jensen** | *Codes Administrator*

Building & Safety Standards

Province of British Columbia

**250 356 1928**

<http://www.housing.gov.bc.ca/building/>

## Meuser, Teegan SG:EX

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**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 9:20 AM  
**To:** Meuser, Teegan SG:EX  
**Subject:** FW: Construction Fire

**Importance:** High

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 4, 2011 9:18 AM  
**To:** Vasey, Jeff SG:EX; Lam, Roger SG:EX  
**Cc:** Anderson, Maryann PAB:EX; Nicol, John SG:EX; Green, Tracy SG:EX  
**Subject:** Construction Fire  
**Importance:** High

### Preliminary comments....

- The 2006 BC Building Code allowed wood-frame residential buildings of up to four storeys.
- In May 2008, the Premier announced that changes would be made to the Building Code to allow wood-frame residential buildings up to six storeys.
- A Minister's order for change to the Building Code was signed and deposited in January 2009 and became effective April 6, 2009.
- The 2009 amendment to the BC Building Code allowing construction of six-storey wood-frame residential buildings was in support of the *Wood First* policy.
- There have been previous incidents of "course of construction" fires. The OFC issued this bulletin in response.



OFC Apr 17-09 -  
Fire Safety Pl...

- The upcoming 2012 Fire Code will have some additional provisions to protect buildings during construction. Some bullets on this will be sent shortly.
- BC Housing is a funding partner for this particular building, Remy; it was to be the first 6 storey wood frame building to be completed under the new code provisions
- There are many more buildings that are on the drawing board or under construction
- The fire protection system, sprinklers, was not yet activated when the fire occurred; there will be an investigation of the cause of fire by OFC

## **ISSUE:**

The impact on public/stakeholder confidence in wood buildings of recent major fires on wood building construction sites.

## **BACKGROUND:**

Building and Safety Policy Branch (BSPB), Office of Housing and Construction Standards, are developing recommendations for the Minister on changes to the BC Building Code (BCBC) to allow six-storey wood frame residential construction in January 2009. A major issue of stakeholder concern evident at technical advisory group meetings and in correspondence with the branch has been the perceived extreme fire risk presented by wood buildings.

## **DISCUSSION:**

While statistics on course of construction fires in British Columbia are not readily available, many stakeholders and the public appear to perceive that wood buildings present an extreme danger to the public. Dramatic media coverage of several recent major construction fires in B.C. likely contributes to this perception. Even some industry professionals appear to transfer their anxiety to completed wood buildings that have all the required fire stopping and safety systems in place.

Alberta has also experienced a number of dramatic fires at wood building construction sites in recent years. The Alberta government initiated a task force to examine the issues and come up with recommendations. The conclusions of this task force are contained in the Alberta High Intensity Residential Fires Working Group Report released October 31 of last year. Recommendations from this report were discussed at a Six Storey Wood Technical Advisory (TAG) Meeting on October 2, 2008.

Alberta has better statistics, and if their experience is comparable to BC's, then a substantial majority of course of construction (CoC) fires where the cause has been determined are intentional. A further 20 percent are caused by careless construction activities – usually hot works. Ten per cent are caused by careless smoking on the job site.

The Fire Safety TAG arrived at the following general conclusions:

- There are measures that can improve site security and make sites less tempting (i.e. just-in-time delivery of combustible construction materials, storing lumber as far away as possible from the structure, etc) but a determined arsonist will almost invariably find a way to succeed.
- Measures to incrementally compartmentalize and protect buildings under construction with incremental fire systems (i.e. active standpipes to within a floor of the top) may marginally improve worker safety, but are unlikely to prevent the total loss of the building.
- A significant number of fires result from construction workers being unaware or uncooperative with safe construction practices. A combination of better worker education and some safety-oriented oversight could reduce the risk of unintentional fires.

The BSPB is taking steps to improve CoC fire safety – not because there are code-related issues, but because this issue has significant potential to undermine public confidence in the proposed mid-rise wood code changes, and there is an opportunity to build on the stakeholder involvement on this issue to develop a credible strategy to reduce the risks of intentional and unintentional CoC fires. The BSPB has invited a range of stakeholders to contribute ideas for the development of a CoC Fire Safety Strategy, and to meet in January to discuss a draft roll up of ideas and finalize a strategy by the end of January, 2009. Strategy elements would like include:

- A best-practices guide for developers/contractors
- A training program for builders and construction workers
- Collaboration with site inspectors (i.e. WCB inspector) to draw unsafe practices to the attention of workers, site supervisors and contractors.

## **ISSUES/RISKS IDENTIFIED – RESPONSE STRATEGY:**

- Stakeholder and public concerns inspired by recent CoC fires have the potential to undermine public confidence in wood buildings and support for the proposed six storey wood building code changes.

– BSPB working with stakeholders to develop a CoC Fire Safety Strategy.

**ISSUE:** Mid-Rise Wood-Frame Residential Construction—Risk Management

**QUESTION:** How did the government identify and manage the risks associated with raising the allowable height of wood-frame residential buildings to six storeys?

**KEY POINTS:**

- Changes to Code are based on sound building science and expert opinion
- Key areas of technical risk for new Code provisions on mid-rise construction were identified in initial research and confirmed in discussions with in-house Code experts:
  - Fire safety
  - Seismic and structural safety
  - Wood shrinkage and building envelope
- Areas of technical risk were thoroughly investigated and addressed during Code change development process through:
  - Peer-reviewed risk analysis by experts in these areas
  - Expert recommendations on Code changes that manage risks
  - Leading-edge seismic research
  - Extensive consultation with industry and academic experts in technical advisory groups
  - Review of lessons learned in comparable jurisdictions such as Washington and Oregon  
(see *Process note for more detail*)
- As with most other larger buildings, architects and engineers are required during design and construction
- Code has existing performance requirements for fire safety, seismic/structural safety and building envelope—mid-rise buildings will need to meet those requirements in new ways
- Majority of stakeholders show cautious support for Code changes
- See Appendix for details on specific measures to manage key technical risk areas

**Measures to manage key areas of technical risk include:**

- **Funding to develop technical guidance** for fire safety, seismic/structural and building envelope design techniques that meet Code performance requirements for higher mid-rise buildings (Association of Professional Engineers and Geoscientists of BC, Architectural Institute of BC and HPO)

**Fire Safety**

- **Higher sprinklering standards (NFPA 13) established**, which require sprinklering of concealed spaces such as attics and crawl spaces and balconies deeper than four feet
- **Total building area maintained at 7200 square metres** so maximum floor area remains the same as for four storey wood buildings
- **Building height limited** to 18 metres to the uppermost floor of the uppermost storey to ensure mezzanines are not used to achieve higher buildings than intended
- **Fire resistance performance standards established** for exterior cladding to prevent external fire spread

## Seismic and Structural Safety

- ***Partnership with external experts on computer modelling techniques*** to examine and compare seismic behaviour of low-rise and mid-rise wood-frame structures
- ***New Code requirement for shear wall regularity established***—completion of engineering guidelines and seismic testing may result in reassessment of this precautionary measure

## Wood Shrinkage and Building Envelope

- ***Building designers must account for wood shrinkage*** due to changes in moisture content, and must coordinate wood shrinkage calculations among designers of all building components such as elevator shafts, exterior cladding, etc.



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## INFORMATION BULLETIN

For Immediate Release  
release number  
April 17, 2009

Ministry of Public Safety and  
Solicitor General  
Office of the Fire Commissioner

### **Fire Safety Planning for Construction and Demolition Sites**

The purpose of this Information Bulletin is to provide the construction and demolition industry with an easy to follow checklist to assist them in meeting the fire safety requirements of British Columbia's Building and Fire Codes. The goal is to prevent fires in and around construction/demolition sites and reduce the fire risk to life and property.

This bulletin only covers provincial building and fire code requirements. Specifically:

- British Columbia Building Code 2006, Division B, Section 8.1 makes reference to the British Columbia Fire Code (BCFC) 2006, Division B, Section 5.6 which applies to buildings, parts of buildings, and associated areas undergoing construction or demolition operations, including renovations.
- BCFC, Division B, Section 5.6.1.2 (1) states: "**Prior to the commencement** of construction/demolition operations, a fire safety plan shall be prepared for the site."

The owner or owner's authorized agent is responsible for carrying out the provisions of the BCFC, which includes establishing a work site fire safety plan to ensure that:

- Fire hazards will be controlled.
- Emergency responders will be notified of a fire emergency.
- Emergency responders will not be delayed in carrying out their duties.
- Firefighting operations will be managed effectively, without unnecessary delays.
- Designated supervisory staff will be appointed and organized to respond to fire emergencies.
- Instructions including schematic diagrams describing the type, location and operation of building fire emergency systems will be established.
- Building facilities, systems, equipment and devices will be properly inspected and maintained.

The fire safety plan not only reflects the unique characteristics of building, operation and construction techniques (including the construction/demolition trades), but also considers the available firefighting infrastructure. For this reason, the fire safety plan must be prepared by the owner or owner's authorized agent in cooperation with the local fire department and other applicable regulatory authorities.

**Information Bulletin:**  
**Fire Safety Planning for Construction and Demolition Sites**

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Prior to commencing any work at a site, it's important for the owner or authorized agent of the owner to:

- ensure they are also in compliance with the laws, regulations and requirements of the BCBC, the BCFC, local government and other regulatory authorities; and
- contact the local fire department and other regulatory authorities such as the British Columbia Safety Authority and WorkSafeBC.

Fire safety planning and risk management assessments of the site done prior to, during and after building construction/demolition is completed, are essential to prepare for and manage fire hazards. Planning and assessment will identify and lead to methods and processes that will minimize or contain potential fire hazards. All site safety activities should be coordinated through the planning and assessment process.

BCFC provisions are included in the fire safety plan and are applied depending on the project's scope and conditions of the site, e.g. the size and type of the building and its proximity to adjacent buildings.

At a minimum, a fire safety plan should include the following information:

**1. Emergency procedures and information needed to plan for an emergency:**

- ☐ Who is the designate and backup person responsible to sound the fire alarm (horn)?
- ☐ Who is the designate and backup person responsible to notify the fire department (9-1-1)?
- ☐ Is instruction given to site personnel on the procedure to follow when an alarm is sounded?
- ☐ Are exit routes clearly visible within the site and on all floors?
- ☐ Is the muster point (or meeting place) known by all site personnel?
- ☐ Is there a list of on-site personnel, and is it updated and current? (Can everybody on-site be accounted for?)
- ☐ Are there assigned personnel to meet the fire department upon arrival and give information, such as the location of the fire or injury?
- ☐ Are there persons assigned as site fire wardens (ensuring various trades are represented)?
- ☐ Are there personnel directed and trained to confine or control the fire?

**2. Training of site personnel on evacuation procedures:**

- ☐ Is site orientation provided?
- ☐ Are regular site fire safety meetings a part of regular safety meetings?
- ☐ Are simulated fire drills conducted when applicable and warranted?

**3. Assigned site personnel must be responsible to install and maintain fire safety duties such as:**

- ☐ Controlling combustibles on the site and around the buildings.
- ☐ General site housekeeping.
- ☐ Removing excess pallets, garbage/waste material and other combustibles on a regular basis.
- ☐ Maintaining separation of combustibles from open flame devices.



**Information Bulletin:****Fire Safety Planning for Construction and Demolition Sites**

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- ☐ Maintaining clear unobstructed access route(s) for fire department apparatus and to fire hydrants.
- ☐ Designating and maintaining at least one exit from every floor.
- ☐ Separating access routes from materials stored on-site, combustibles, etc.
- ☐ Parking of vehicles or delivery trucks should not obstruct fire department access to the site, and
- ☐ adjacent buildings (off-site parking and storage may be considered).

**4. Firefighting Services – Hydrant, Siamese Connection, Sprinkler, Access Route:**

- ☐ Are they installed, tested and activated at the start of construction?
- ☐ Are firefighter access route(s) to the building provided?
- ☐ Are firefighting services (standpipes, hydrants) maintained and accessible?
- ☐ Do drawings provided to the fire department show the location of firefighting systems as they become operational?
- ☐ Is the site address sign visible and legible to emergency crews from the street? (if they must be provided according to bylaw)

**5. Fire Extinguishers:**

- ☐ Is there sufficient quantity and type on-site? Such as:
  - 2-A:10-B:C on movable equipment?
  - 4-A:40-B:C in all other locations?
- ☐ Is the servicing up-to-date (within the last year)?
- ☐ Are they provided at or near fuel operated equipment?
- ☐ Are they mounted with proper signage at exit locations within the required travel distance?
- ☐ Are they adjacent to any hot works operations (e.g. cutting torch, welding, torching, etc)?

**6. Hot Works Operations:**

- ☐ Is the area clear of flammable and combustible materials?
- ☐ Is a fire watch assigned during a hot works operation and for 60 minutes after its completion?
- ☐ Is there a final inspection of the hot works area 4 hours after completion?
- ☐ Are the hot works in the proximity of combustible or flammable materials?
- ☐ Have provisions been made for protection of such materials by non-combustible materials, thermal barrier or other means?
- ☐ Is the work being performed by trained or certified personnel?
- ☐ Is a fire extinguisher present at all times? Such as:
  - 2-A:10-B:C on movable equipment?
  - 4-A:40-B:C in all other locations?
- ☐ Is proper ventilation provided as required?
- ☐ Are the hot tar pots on-site complete with fire extinguishers, trained personnel, and located away from combustible materials?

**Information Bulletin:**  
**Fire Safety Planning for Construction and Demolition Sites**

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**7. Flammable and Combustible Storage:**

- ☐ Are flammable and combustible liquids properly stored, handled and used in and around the building?
- ☐ Are non-petroleum based compressed gases properly stored, handled and used in and around the building?
- ☐ Is the storage area separated from combustible material by 3 metres?
- ☐ Is the storage area locked and vented?
- ☐ Is the storage area protected from vehicular/ industrial motorized traffic?
- ☐ Do containers and/or storage areas have proper signage/placards in place?
- ☐ Is there a current or updated list of dangerous goods on-site such as material safety data sheets (MSDS), as per the Workplace Hazardous Materials Information System (WHMIS)?
- ☐ Are portable extinguishers provided in close proximity to storage and work areas such as:
  - 2-A:10-B:C on movable equipment?
  - 4-A:40-B:C in all other locations?
- ☐ Is the storage area away from egress and access routes to the site?

**8. Electrical Installations and Petroleum Gases:**

- ☐ Do the electrical installations, storage and use of petroleum gases comply with the requirements of the Safety Standards Act and pursuant regulation? (contact the British Columbia Safety Authority 1-866-566-7233)

**9. Security:**

- ☐ What type of on-site security is provided: e.g. locked gate, monitored alarm and/or CCTV, 24 hour or nightly walk around?
- ☐ Do security personnel have knowledge of and understand their role in the site's fire safety plan?
- ☐ Can the fire department effectively communicate with the security personnel during an emergency?
- ☐ Do security personnel have access (keys) to locked areas?

**10. Contact Personnel:**

- ☐ Is there a list of names and telephone numbers of persons to be contacted during and after normal operating hours or in the event of an emergency?
- ☐ Are the contact personnel able to respond in a timely fashion?
- ☐ What is their estimated response time?

**11. Building Diagrams:**

- ☐ Are diagrams available on-site? These diagrams should indicate:
  - Plans of each floor area;
  - Muster point(s);
  - Location of nearest hydrant(s);
  - Location of fire protection equipment;
  - Exit paths; and,
  - Service rooms.

**Information Bulletin:**  
**Fire Safety Planning for Construction and Demolition Sites**

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The fire safety plan must be reviewed and updated as construction/demolition progresses and then periodically afterwards to provide the greatest value. The plan that is developed for a building construction site should evolve into the plan that will be used to maintain and protect the building and its occupants after completion. It's very important that all supervisory staff remain familiar with the plan throughout the process so they are familiar with how it pertains to their responsibilities.

It may be beneficial to owners to obtain the services of a consultant who specializes in fire safety planning. This consultant would oversee the fire safety plan's development and implementation. This is especially useful to owners who have neither the time nor the expertise to develop their own plan as well as when a fire department isn't available to them.

Contact: Stephen Watt  
Codes and Standards Coordinator  
1-888-988-9488

**Meuser, Teegan SG:EX**

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**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 9:03 AM  
**To:** Vasey, Jeff SG:EX  
**Subject:** FW: MEDIA REQUEST: Wood Frame Construction

FYI

Not Responsive

## Meuser, Teegan SG:EX

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**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 9:42 AM  
**To:** Meuser, Teegan SG:EX  
**Subject:** FW: MEDIA REQUEST: Wood Frame Construction

FYI

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**From:** Nicol, John SG:EX  
**Sent:** Wednesday, May 4, 2011 9:40 AM  
**To:** Rotgans, Trudy SG:EX; Green, Tracy SG:EX; Anderson, Maryann PAB:EX  
**Cc:** Lam, Roger SG:EX  
**Subject:** RE: MEDIA REQUEST: Wood Frame Construction

I just got off the phone with Gail Brewer, Mary Tracey and Suhk Johal (BC Woodworks). Canadian Wood Council will share some response bullets they've prepared within a few moments but there are few facts available yet.

- There appears to have been no loss of life.
- It appears the fire started in the 2<sup>nd</sup> phase that was under construction. The first phase/structure was complete and buttoned up. However the sprinklers may not have been hooked up or charged yet – which may related to problems getting the city's approval for activation.
- Embers fell on a neighbouring home but were extinguished.
- The project was operated to be a model of site safety (consistent with the OFC's Course of Construction checklist).

We are all going to share info as we get it and update regularly.

### *John Nicol*

Ministry of Energy & Mines  
Building and Safety Standards Branch  
Senior Policy Analyst  
6th floor - 614 Humbolt Street  
Victoria, BC  
Phone: 250-387-1473



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**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 4, 2011 9:23 AM  
**To:** Nicol, John SG:EX; Green, Tracy SG:EX  
**Subject:** FW: MEDIA REQUEST: Wood Frame Construction

Background on Remy project

Pages 62 through 70 redacted for the following reasons:

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Not Responsive



## Meuser, Teegan SG:EX

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**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 10:09 AM  
**To:** Vasey, Jeff SG:EX  
**Subject:** FW: Bullets in response to 6 storey construction fire

FYI

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 4, 2011 10:06 AM  
**To:** Lam, Roger SG:EX; Anderson, Maryann PAB:EX  
**Subject:** FW: Bullets in response to 6 storey construction fire

For your reference

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**From:** Jensen, Jun'ichi SG:EX  
**Sent:** Wednesday, May 4, 2011 9:59 AM  
**To:** Nicol, John SG:EX; Watt, Stephen SG:EX; Ferguson, Dave SG:EX  
**Cc:** Kuhnert, Lyle SG:EX; Rotgans, Trudy SG:EX  
**Subject:** Bullets in response to 6 storey construction fire

Hello,

Here are some bullets to aid this office in responding to inquiries related to the recent 6 storey construction fire. Please co-ordinate with John Nicol if you have any comments or concerns. I have included some OFC staff as they may wish to comment on the bullets related to the BC Fire Code.

As you are aware, a building under construction does may not have many of its fire safety features in place (ie: fire separations, fire sprinklers), and is not representative of the level of fire safety of the completed building. During the construction process, fire safety is maintained using alternate means than in the completed building.

The BC Building Code references the BC Fire Code requirements for construction site fire safety. These are the current BCFC requirements for construction site fire safety, which we may want to co-ordinate with OFC:

- Course of construction fire safety is regulated primarily by the BC Fire Code
- Construction sites are required to have a fire safety plan in place
- Construction sites are required to maintain unobstructed access to fire hydrants, fire extinguishers and standpipes throughout the construction process
- Portable fire extinguishers are required where there is a high risk of fire (ie: where flammable liquids are stored)
- A standpipe system is required to be installed progressively, where required by the BC Building Code.
- Due to concerns raised during the Mid-Rise Wood Frame Construction project, the Office of the Fire Commissioner issued a bulletin to clarify construction site fire safety requirements:

<http://www.pssg.gov.bc.ca/firecom/info/pdf/firesafeplan.pdf>

The coming 2010 National Fire Code (2012 BC Fire Code) has proposed enhanced fire safety requirements for construction sites:

- As before, a standpipe system is required to be installed progressively, where required by the BC Building Code. The new fire code is explicit on how to progressively install the standpipe system so that it will be available for use if necessary.
- A new requirement to protect adjacent buildings from fire exposure during construction.

Regards,

**Jun'ichi Jensen** | *Codes Administrator*

Building & Safety Standards

Province of British Columbia

**250 356 1928**

<http://www.housing.gov.bc.ca/building/>



**Meuser, Teegan SG:EX**

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**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 11:29 AM  
**To:** Anderson, Maryann GCPE:EX  
**Cc:** Rotgans, Trudy SG:EX; Vasey, Jeff SG:EX  
**Subject:** HSG-IN Remy Fire-Six-Storey Wood Frame.docx

Hi Maryann,  
Here are Jeff's approved changes.  
Roger



HSG-IN Remy  
ire-Six-Storey Wo.

## ADVICE TO MINISTER

### CONFIDENTIAL ISSUES NOTE

Ministry of Energy and Mines  
and Minister Responsible for Housing  
Date: May 4, 2011

Minister Responsible: Hon. Rich Coleman

### Fire at Remy development Seniors Housing and first 6 storey wood-frame construction

#### KEY FACTS REGARDING THE ISSUE:

**UPDATE May 4 9:40 a.m.:** It appears the fire started in the 2nd phase that was under construction. The first phase/structure was almost complete and buttoned up, however the sprinklers may not have been hooked up or charged yet. Embers fell on a neighbouring home but were extinguished.

- A fire destroyed two buildings under construction in Richmond. The Remy projects were the first six storey wood frame buildings being built under new B.C. building-code provisions that allowed for mid-rise wood frame construction (six-storey wood buildings).
- The fire broke out around 10:30 p.m. PT at the site located at 9388 Cambie near the intersection of Stolberg Road. The building was still under construction and not occupied.
- Richmond Fire Department expressed concerns in 2009, that their ladders were not high enough to reach the top of the building. However, at the time, the fire chief had said it was not a concern as the building was not yet occupied.

#### Current BC Building Code changes

- The 2006-BC Building Code used to allowed wood-frame residential buildings of up to four storeys.
- In May 2008, the province announced changes to allow wood-frame residential buildings up to six-storeys. The change was effective in April 2009 and supported supports the Wood First policy.
- The 2012 edition to the current code will contain contains the following additional fire safety provisions for five and six storey residential wood-frame buildings:
  - Higher sprinkler standards (NFPA 13) established, which require sprinkler for concealed spaces such as attics and crawl spaces and balconies deeper than four feet.
  - Total building area maintained at 7200 square metres so maximum floor area remains the same as for four storey wood buildings.
  - Building height limited to 18 metres to the uppermost floor of the uppermost storey to ensure mezzanines are not used to achieve higher buildings than intended.
  - Fire resistance performance standards established for exterior cladding to prevent external fire spread.

#### BC Housing Investment

- The 188-unit housing development is being built by Oris Development Corporation, and was scheduled for completion in December, and was to include:
  - 33 apartments for seniors and people with disabilities & 48 affordable apartments for low-to moderate-income families and singles - all managed by S.U.C.C.E.S.S.
  - 37 affordable-homeownership units for sale to qualified buyers
  - 70 private-market apartments
  - 50-60 space children's daycare
- The province provided a \$34 million construction loan to Oris - to date, \$18.5 million has been advanced. In addition, \$4.5 million in provincial and Federal funding was provided for

the 33 seniors apartments. Province also invested \$500 thousand for the daycare.

- Oris is planning to hold a media briefing near the site at 11:30 a.m. (May 4).

**Impact on Wood-Frame Construction in other jurisdictions:**

- BC has been in discussions with Ontario and other provinces regarding mid-rise six-storey and a demonstration project was recently announced in Beijing.
- The fire has created some uncertainty about higher wood-frame buildings in other jurisdictions contemplating a code change similar to BC's.
- Forest Innovation Investment (FII) reports that a Chinese official who had very recently toured the Remy has called to express his serious concern.

S13

Communications Contact: Maryann Anderson  
Program Area Contact: Fergus McCann  
File Location:

250 213.1493  
778 452.6445

**Meuser, Teegan SG:EX**

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**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 2:16 PM  
**To:** Green, Tracy SG:EX  
**Cc:** Rotgans, Trudy SG:EX  
**Subject:** FW: Richmond Fire

Can you please proof this wording as a correction to the wording below.

The Province amended the BC Building Code to allow for six-storey wood-frame residential construction. The BC Building Code applies to all local government jurisdictions in the Province with the exception of the City of Vancouver which has its own building bylaw. Local governments can use their land use powers to zone for the types of development and buildings appropriate for their community. While the BC Building Code allows for a particular type of building, the local government bylaw often determines whether and where the type of building or use is permitted. Land use decisions are typically based on considerations of available services such as water, sewer, and fire protection.

Not Responsive

Not Responsive



**Meuser, Teegan SG:EX**

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**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 4, 2011 2:58 PM  
**To:** Rotgans, Trudy SG:EX; Green, Tracy SG:EX; Kuhnert, Lyle SG:EX  
**Subject:** RE: Richmond Fire

Looks great! If there are no further comments I will forward to Lori

---

**From:** Rotgans, Trudy SG:EX  
**Sent:** Wednesday, May 4, 2011 2:57 PM  
**To:** Lam, Roger SG:EX; Green, Tracy SG:EX; Kuhnert, Lyle SG:EX  
**Subject:** RE: Richmond Fire

Further comments?

The Province amended the BC Building Code to allow for six-storey wood-frame residential construction. Previously, wood frame residential construction was limited to four storeys. The BC Building Code applies to all local government jurisdictions in the Province, with the exception of the City of Vancouver which has its own building bylaw.

Local governments can apply land use powers to zone for the use and height of developments appropriate for their community. However, if a jurisdiction allows 6 storey buildings, it could be constructed of steel, concrete, wood or a combination of materials, as long as it is conformance with the BC Building Code.

Land use decisions about type and height of developments are typically based on considerations of available services such as water, sewer, and fire protection as well as the form and character of the community.

Not Responsive

Not Responsive

**Meuser, Teegan SG:EX**

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**From:** Lam, Roger SG:EX  
**Sent:** Thursday, May 5, 2011 10:46 AM  
**To:** Rotgans, Trudy SG:EX  
**Subject:** RE: Coleman voicing confidence in wood first policy despite Richmond condo fire

Thanks Trudy.

---

**From:** Rotgans, Trudy SG:EX  
**Sent:** Thursday, May 5, 2011 9:46 AM  
**To:** Lam, Roger SG:EX  
**Subject:** FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

Hi Roger, It's largely accurate. Minister Coleman refers to other 6 storey buildings and the Kamloops building. The Kamloops building was built prior to this mid rise code change under an alternate solution and it is actually 5 storeys of wood on top of one storey of non-combustible construction. We have heard that there are other buildings like that in BC that were built under an alternate solution. So, technically, this is the first completely wood six storey building built under the new code provisions. Many others are in the planning/design stage.

Note a reference to Part 9 that is erroneous.

Thanks,

Trudy

---

**From:** Lam, Roger SG:EX  
**Sent:** Thursday, May 5, 2011 9:08 AM  
**To:** Rotgans, Trudy SG:EX  
**Subject:** FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

Hi Trudy,  
Jeff asked whether you could verify the fact of what is being said in this scrum.  
Roger

---

Not Responsive



## Meuser, Teegan SG:EX

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**From:** Lam, Roger SG:EX  
**Sent:** Thursday, May 5, 2011 10:46 AM  
**To:** Vasey, Jeff SG:EX  
**Subject:** FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

FYI

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Thursday, May 5, 2011 9:50 AM  
**To:** Lam, Roger SG:EX  
**Subject:** FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

Another point that may be inaccurate according to WorkSafe rules.

Thanks,

Trudy

---

**From:** Nicol, John SG:EX  
**Sent:** Thursday, May 5, 2011 9:49 AM  
**To:** Rotgans, Trudy SG:EX  
**Cc:** Lam, Roger SG:EX  
**Subject:** RE: Coleman voicing confidence in wood first policy despite Richmond condo fire

Interesting that the minister seemed to think open-flame heaters were okay in buildings under construction. My understanding is that they are explicitly banned for use inside buildings – even with the windows open, but that they are commonly used anyway and the insurers turn a blind eye.

*John*

---

**From:** Rotgans, Trudy SG:EX  
**Sent:** Thursday, May 5, 2011 9:40 AM  
**To:** Nicol, John SG:EX  
**Subject:** FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

FYI – I'm reviewing it.

Trudy

---

**From:** Lam, Roger SG:EX  
**Sent:** Thursday, May 5, 2011 9:08 AM  
**To:** Rotgans, Trudy SG:EX  
**Subject:** FW: Coleman voicing confidence in wood first policy despite Richmond condo fire

Hi Trudy,  
Jeff asked whether you could verify the fact of what is being said in this scrum.  
Roger

Not Responsive

## Meuser, Teegan SG:EX

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**From:** Lam, Roger SG:EX  
**Sent:** Thursday, May 5, 2011 11:28 AM  
**To:** Meuser, Teegan SG:EX  
**Subject:** FW: Richmond Fire

Not Responsive

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**From:** Lam, Roger SG:EX  
**Sent:** Wednesday, May 04, 2011 3:04 PM  
**To:** Wanamaker, Lori SG:EX  
**Cc:** Vasey, Jeff SG:EX  
**Subject:** RE: Richmond Fire

Hi Lori,  
Here is some clearer language.  
Roger

The Province amended the BC Building Code to allow for six-storey wood-frame residential construction. Previously, wood frame residential construction was limited to four storeys. The BC Building Code applies to all local government jurisdictions in the Province, with the exception of the City of Vancouver which has its own building code.

Local governments can apply land use powers to zone for the use and height of developments appropriate for their community. However, if a jurisdiction allows 6 storey residential buildings, it could be constructed of steel, concrete, wood or a combination of materials, as long as it is conformance with the BC Building Code.

Land use decisions about use and height of developments are typically based on considerations of available services such as water, sewer, and fire protection as well as the form and character of the community.

Not Responsive

Not Responsive

**Meuser. Teeagan SG:EX**

Not Responsive

**From:** Rotgans, Trudy SG:EX  
**Sent:** Friday, May 06, 2011 04:38 PM  
**To:** Vasey, Jeff SG:EX; Anderson, Maryann PAB:EX  
**Subject:** RE: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

Note yellow highlighted areas.

Otherwise, it looks good.

Thanks,

Trudy

---

**From:** Rotgans, Trudy SG:EX  
**Sent:** Friday, May 6, 2011 4:37 PM  
**To:** Anderson, Maryann PAB:EX  
**Subject:** RE: URGENT APPROVAL REQd, ASAP....MEDIA REQUEST: Vancouver Sun, Mid-Rise Wood Frame Construction

Not Responsive

## Meuser, Teegan SG:EX

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**From:** Thompson, Bob R SG:EX  
**Sent:** Monday, May 16, 2011 9:54 AM  
**To:** Rotgans, Trudy SG:EX  
**Subject:** FW: cwc oped draft 1.docx

**Importance:** High

Just a few edits.

Bob Thompson  
Senior Codes Administrator

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**From:** Rotgans, Trudy SG:EX  
**Sent:** Monday, May 16, 2011 9:03 AM  
**To:** Thompson, Bob R SG:EX  
**Subject:** cwc oped draft 1.docx  
**Importance:** High



cwc oped draft  
1.docx

Bob, could you please comment/edit this article where it talks about code issues, with particular attention to highlighted area? Thanks.

Trudy

## Wood and Fire Resistance

By Michael Giroux  
President, Canadian Wood Council

Comment [m1]: We need a better header than this

Comment [BT2]: How about "The Fire Resistance of Wood"?

Let's get something straight – wood is a safe, durable building material. In Canada, we've been living in wood-frame houses, townhouses and multi-storey apartment buildings for a long time.

Wood mid-rise construction was the norm in the early 1900s, and some of these buildings in Vancouver are still in use today. More than 90 per cent of Canadian homes are built with wood.

It makes no sense to suggest that the outcome of the May 5 fire at the Remy project in Richmond would have been any different if the developer had chosen another building material.

The fire safety of a building involves a lot more than its structural composition. It needs to consider the whole system, including contents and uses. Research shows the biggest fire risk is related to the contents of a building and the living habits of its occupants.

Canada's model National Building Code and the Provincial and Territorial regulations based upon it makes sure buildings, regardless of what they are made of, are designed to minimize the risk by containing the fire, limiting its effect on the supporting structure, and controlling the spread of smoke and gases.

Wood-frame walls, floors and roofs must be designed to provide fire resistance ratings up to two hours, a level of safety that matches that required for non-combustible building materials. This gives occupants time to escape, and firefighters have a chance to reach the source of the fire safely.

### Minimize Risk

Building codes in Canada require the use of noncombustible materials to provide this two-hour fire resistance window. The firewalls in the Remy project were made of steel and two layers of one-inch-thick gypsum liner panels – with gypsum-clad wood-frame walls to protect them from day-to-day wear, as required by the British Columbia Building Code.

Comment [m3]: Is this right? Original just said Code.

No structure can ever be completely fireproof, and some building materials give a false sense of security. Concrete and steel may not burn, but they certainly can crumble or fail if they get hot enough – and that could lead to a dramatic structure failure. When heavy timber burns, a layer of char is created, which helps to maintain the strength and structural integrity of the wood inside.

The Remy fire occurred while the building was under construction, which meant safety features such as sprinklers and fire doors had not been installed. Even firewalls built with concrete or concrete block would not have slowed the fire under these circumstances.

Wood is an excellent choice for any residential, commercial, industrial or public building – it has a low environmental impact, is safe, durable and attractive. Wood-frame structures are flexible and stand up better than other major building products under extreme conditions such as earthquakes and hurricanes. Canadian wood-frame construction technology is being adopted in both emerging and developed economies throughout the world that want the same level of comfort and safety we have enjoyed for decades.

At the Canadian Wood Council, our experts work with engineering experts, fire services, local government, builders and designers to find ways to make wood performance even better. You will find more information on our website [www.cwc.ca/DesignWithWood/FireSafety/?Language=EN](http://www.cwc.ca/DesignWithWood/FireSafety/?Language=EN).

-30-

## Meuser, Teegan SG:EX

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**From:** Thompson, Bob R SG:EX  
**Sent:** Wednesday, May 4, 2011 1:51 PM  
**To:** 'Al Karimabadi'; 'Bill Ozeroff'; 'Patrick Shek'; XT:Sohi, Manjit; Business Licence Inspector; City of Langley; CITZ:IN; 'Doug Vance'; 'Gary Deans'; 'Perry Halabuza'; 'Kerry Skulsky'; 'Robert Cesaretti'; 'Liz Holitzki'; 'Stephen Cote-Rolvink'; 'Beverly Endersby'; 'Frank Durante'; 'Brett Dwyer'; 'Brian Bydwell'; 'John de Ruiter'; 'Percy Melville'; 'Dave Bruce'; 'Tim Arthur'; 'Jim Weber'; 'Gavin Woo'; 'James Blake'; 'Mehran Nazeman'; 'Nick Marach'; 'Edmond Lin'; 'Ron Dyck'; 'Will Johnston'; 'Randy Maki'; 'Richard Wilson'; 'Garrett Schipper\*'; 'Mo Bayat\*'; 'Peter Longhi\*'; Butt, Stephen CSCD:EX; 'Ron North\*'; Rotgans, Trudy SG:EX  
**Subject:** RE: Fire destroys Richmond six storey

Al,

If by "occupied" you mean construction workers, I suspect the outcome would have been much different. With workers on site to see the fire they would likely have initiated fire fighting and called the fire department who could have stopped the fire in its early stages. If buy "occupied" you mean the building was completed with people living it I would virtually guarantee the fire would have been contained to the room of origin and controlled by the sprinkler system.

Bob Thompson  
Senior Codes Administrator  
Building & Safety Standards  
Ministry of Energy & Mines  
Province of British Columbia  
250 356-8903

Not Responsive