

BALCONY SAFETY BULLETIN

In June 2008, a balcony collapsed in Ottawa seriously injuring two young people. The Eastern Ontario Landlord Organization (EOLO) made inquiries of structural engineers to ascertain whether there are warning signs or particular areas of concern. EOLO then issued a Bulletin to its members, and the following is a generic version of the memo.

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BALCONY SAFETY BULLETIN

To: Residential Landlords
Date: July, 2008
Re: 1. Balcony Safety
2. Building Cladding

This is to provide information to assist you in ensuring the safety of your buildings for occupants and the public.

Background

In June, 2008, a second story balcony in Ottawa suffered a catastrophic failure, when the steel support collapsed without warning. Of the six young people on the balcony at the time, two suffered life threatening injuries. Fortunately, they are recovering.

Your obligations

As a landlord it is your duty to keep your buildings in a good state of repair and fit for habitation. Besides responding to tenant request for maintenance, you are required to take reasonable steps to inspect building systems on a proactive basis. Failure to do so can result in your being sued, or even in a criminal prosecution (for negligence causing injury or death).

This memo attempts to provide information about when you need to inspect balconies and building cladding.

Building condition surveys

For larger buildings (usually built of concrete), lenders usually require a building condition survey (or "building audit"). It is desirable to have such a survey every four or five years. Such a building audit by a structural engineer will provide a "road map" of advisable repairs and re-inspections.

For smaller buildings (usually wood frame), it is desirable to have a home inspector examine the building every four or five years.

If you have a building condition report, it would be a good idea to review the report to check what it says about your building balconies and building cladding.

In the absence of a building condition report

If you do not have a building condition report, then it would be a good idea to get one made in due course (e.g. over the next 3 to 6 months).

However, you should act immediately (e.g. within weeks) to have your balconies inspected by a professional if

- Your balconies depend on steel support beams.¹
- Your balcony decks are wood and enclosed with a vinyl or metal soffit.²
- Your balconies are pre-cast concrete.³
- You do not know what your balcony construction is.⁴
- You are aware of water penetration at or around any balconies.⁵
- You are aware of excess moisture inside a suite with a balcony or below a balcony.⁶

With or without a building condition report

In addition, landlords should periodically (and best at least once a year):

- Perform a visual inspection of concrete balconies looking for loose concrete.⁷
- Perform a visual inspection of wood balcony decks and wood supports looking for cracks or rot.

¹ Steel support beams cantilevered from the building are the structure that failed in June. The construction often lacks redundancy, and if it fails, it may fail catastrophically (unlike wood beams which tend to give way partially).

² While more aesthetically pleasing than an open deck system, enclosing a deck has two physical drawbacks: a) it increases the risk of moisture being trapped, and b) it prevents visual inspection of the deck or supports.

³ Pre-cast concrete is a concrete deck attached to a building by metal fasteners. That fastening system is subject to failure, and that failure is potentially catastrophic. The other type of concrete construction is cast-in-place concrete, where the balcony forms an integral part of the floor of the suite. Since cast-in-place concrete is joined to the building along its whole length it is less susceptible to failure than a pre-cast construction.

⁴ If you do not know the balcony construction, it may be pre-cast concrete or involve steel supports.

⁵ Water is the enemy of metal or wood supports. Water also causes accelerated deterioration in concrete.

⁶ Such excess moisture can be from a tenant running a humidifier or failing to clear steam from a bathroom.

⁷ The danger of loose concrete is that it can fall, injuring people below. That risk applies to both cast-in-place and pre-cast balcony constructions.

- Remove deck enclosures (at least on a sampling basis) to examine the wood decks and supports from the underside.
- Perform a visual inspection of all balcony railings looking for the solidness of the fastening to the balcony.

Besides potential failures, the railing systems of older balconies in some cities may not meet the current building code requirements for heights or construction.

Building cladding

Occasionally a section of brick cladding will give way from an apartment building. A building condition survey may give guidance on the risk of a building cladding failure. However, these are also sometimes visual clues. Landlords should:

- Perform a periodic visual inspection of building cladding looking for bulging or shifting of the cladding
- Act immediately (within an hour not a day) upon any sign of the cladding bulging or shifting
- Use binoculars for proper visual examination of buildings of any significant height
- Inspect more frequently during the summer months (when heat fluctuations can trigger a failure).

Footnote:

CAA Member Randy Smith, P. Eng., LEED A.P., Senior Building Sciences Engineer, A.D. Williams Engineering Inc., reviewed the content of this article and offered the following additional comments for your consideration:

“Inspections must be conducted by a “qualified” inspector. For highrise buildings, I would suggest at least a professional engineer as the liability is very high. For lowrise wood frame, an engineer would also be the choice, but a good qualified home inspector should be able to pick up on a problem. I would also do these 3 - 5 years rather than 4 - 5 years. A lot depends on the exposure and construction method.”