Canadian Concrete Masonry Producers Association Region 6 of the National Concrete Masonry Association



## BUILDING A STRONGER FUTURE FOR THE MASONRY INDUSTRY



### What's protecting you from a potential fire next door?

Statistics from the Council of Canadian Fire Marshals and Fire Commissioners indicate the three most common causes of residential fires are:

- 'Smokers Material and Open Flame'
- 'Cooking Equipment'
- 'Heating Equipment'

### Good walls make safe neighbours.

Protect your home from the risk of fire: Insist on adjoining walls built with concrete block. In industry-standard fire testing, no other construction material matches the durability and fire retardancy of concrete block.

- Concrete block doesn't burn.
- It doesn't spread fire to adjacent dwellings.
- It greatly reduces the chance of structural collapse.
- It doesn't produce toxic gas, smoke or fumes.
- It can help lower insurance premiums.

### And keep in mind the other good reasons to build with block:

- Block is competitively priced.
- It prevents heat loss—and it's about twice as energy-efficient as poured concrete.
- Block is quieter.
- · Block manages moisture and eliminates mould growth
- It is maintenance free
- Block is environmentally friendly
- Block lasts a lifetime.



For more information on residential construction using concrete block, contact CCMPA at 416-495-7497 or toll-free at 1-888-495-7497, or contact one of the producers or suppliers listed on www.ccmpa.ca.

# Masonry walls provide superior impact resistance!



The goalie has padded protection but having "impact resistance" in building construction means choosing materials that will resist repetitive contact or accidental impact without damage. Call it "slapshot insurance." Unlike masonry walls, exterior walls of steel, aluminum, vinyl siding, stucco or wood will seldom withstand impact without damage.

Building interiors are also subject to wear and tear from human traffic. Masonry resists abrasion far better than drywall finishes, particularly for institutions

such as schools and hospitals. For those of you who are involved in the design, construction or ongoing maintenance of buildings, impact

resistance should be an important consideration. For more information on the superior impact resistance and the other advantages of masonry walls, visit our

website at www.ccmpa.ca.



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What kind of construction makes more sense? Wood frame and drywall... Or concrete block?



BENEFITS:



### BENEFITS:

- · Block is competitively priced.
- Block prevents heat loss which makes it energy-efficient.
- Block is quieter.
- · Block manages moisture.
- · Block does not burn.
- Block prevents the spread of fire to adjacent dwellings.
- Block greatly reduces the chances of structural collapse.
- Block does not produce toxic gas, smoke or fumes.
- Block can help lower insurance premiums.
- Block costs less to maintain, with no periodic testing or inspection required.
- · Block eliminates mold growth.

# You decide.

When it comes to construction – residential, commercial, industrial – concrete block makes (dollars and) sense. Concrete block is stronger and safer than wood. It is a more effective sound barrier. It retains its value, yet is easy to maintain – and is environmentally friendly.

If you want it built to last, make sure it's built with Block.

www.ccmpa.ca information@ccmpa.ca 1-888-495-7497



### FOR IMMEDIATE RELEASE – April 7, 2009 Are current building codes doing enough to protect us against fire?

BY PAUL HARGEST

When the (fire)walls come tumbling down...

Experience shows that while wood frame and drywall receive acceptable 'fire resistance' ratings in industry testing, in real-life situations these materials burn. The tragic consequences of recent fires in Orillia, Ontario and Saguenay, Québec are all the more reason to re-think the status quo on codes and testing and look at mandating the use of noncombustible materials such as concrete block.

A building passes fire inspection — yet fire strikes and almost within minutes reduces the structure to charred rubble. People are dead. Others are left homeless. This was the case back in January 2009 when, within days of one another, two fires at separate retirement homes — one in Orillia, Ontario and the other in Saguenay, Québec — decimated the buildings and caused the deaths of several residents. In Saguenay, seniors in bare feet and pajamas, forced out into -32°C temperatures (-36°C with the wind chill), watched as flames engulfed their home. In the words of Saguenay Mayor Jean Tremblay: "The whole building burned. The walls fell in."

Knowing what we know now about the fire safety of these two residences, how many of us would have had our parents live in them? It's worth noting this observation from a Globe and Mail reader in the paper's online Comment forum: These two tragic fires may have nothing in common except that it was seniors who died. But it's worth a look at the quality of the homes where our parents live and where we in our turn will live.

Are our building codes stringent enough? Should we be mandating the use of construction materials that are not merely fire resistant but are noncombustible?

Industry-standard testing allows materials such as wood frame and gypsum drywall to be rated fireresistant (the Gypsum Association in the U.S. cites fire-resistance ratings of up to four hours). After a certain amount of time, however — two-hours is a typical testing threshold — these materials will burn. Real-life experience shows they do, and typically much faster than in laboratory conditions.

Concrete block, however, is not merely fire-resistant; it's non-combustible. When subjected to the 1,800°F temperatures that other building materials are exposed to — and then put to the test of a fire hose gushing at a pressure of 30 pounds per square inch (PSI) — the concrete block remains intact. After exposure to fire for two hours, the drywall is penetrated by the hose in just over 30 seconds. Applied to fiber-reinforced gypsum panels, the hose blasts through in a mere 10 seconds. Here's a reallife comparison: In recent cases of suspected arson on some Toronto-area construction sites, fires all but flattened the wood-frame assemblies, in some instances leaving only the supporting masonry walls standing. So why don't we enforce the use of non-combustible material such as concrete masonry? Canada's transition in recent years to objective-based building codes may be part of the problem. Previously, the codes were prescriptive, in essence describing what had to be done. In Ontario's new Building Code Act, which came into force in January 2007, the objective-based format adds why to the equation, describing the desired outcome. The intent is to promote flexibility in design and construction through the use of what the Code refers to as 'acceptable solutions' — alternatives that achieve the same desired results. Unfortunately, these alternatives don't always achieve the same results where fire testing is concerned.

Ontario has further amended its Building Code Act with the addition of a regulation requiring fire sprinklers in multiple-unit residential dwellings over three storeys tall. The regulation, which came into effect in June 2008, will apply to building-permit applications filed after April 1st, 2010.

This is a good thing. Sprinklers will no doubt help improve the fire safety of taller buildings and increase the chances that their residents will get out alive. Sprinklers — or a lack thereof — were specifically cited as having contributed to the Muskoka Heights blaze in Orillia.

However, rather than simply take the reactionary approach of legislating sprinklers, why not implement building-code improvements more proactively — from the ground up? Why not legislate the use of materials that don't burn?

Asked for his thoughts on the matter, contractor and TV personality Mike Holmes says, "I believe it's possible to greatly improve the performance of materials in construction in terms of fire resistance. Why not make a house that's fire-resistant? That makes more sense to me than mandating fire sprinklers in residential construction."

This brings to mind the old adage, 'An ounce of prevention is worth a pound of cure'. The problem with applying it in this context is that often, once fire strikes, there is no cure. This only reinforces the need to focus on prevention. While sprinklers are a start, perhaps we also need to look at our fire-safety standards — then ask whether our current building codes are doing enough to help save lives.

### FOR IMMEDIATE RELEASE – April 28, 2009 Concrete block in buildings contributes to 'balanced design' that helps contain fires

When fire strikes, there can be any number of contributing factors, from human behaviour (an untended fry pan; a cigarette left burning) to the proximity of hazardous materials (half-empty paint tins stacked in a basement). Regardless of the cause, however, it's the structural composition of the building that will largely determine how well the blaze is contained. And while industry-standard fire testing deems materials such as gypsum drywall to be fire resistant, the fact is that they cannot offer the fire protection of masonry products such as concrete block.

Following two fatal fires that made headlines this past January at retirement homes in Orillia, Ontario and Saguenay, Québec, the Canadian Concrete Masonry Producers Association (CCMPA) distributed an article questioning the rigor of our building codes and whether or not they were doing enough to protect citizens from the risk and consequences of fire.

A more recent incident at a residence at Waterloo, Ontario's Wilfrid Laurier University, also with tragic consequences, has again drawn our attention to the question of building codes. However, a significant differentiating factor in the case of WLU, specifically Waterloo College Hall, is that the fire was relatively well-contained and guickly extinguished compared with the fires at the Muskoka Heights Residence in Orillia and the Appartements Belles Generations in Saguenay. Again, while there are varying and location-specific factors that would have contributed to these blazes (a lack of sprinklers has been cited in the Muskoka Heights fire, for example), it's worth noting that in the construction of Waterloo College Hall, concrete block had been used not only in the separating walls between each two-bedroom unit but also in the shared bedroom walls within the units themselves.

According to Waterloo Fire Rescue, the block walls — in addition to the concrete slab flooring — was a critical factor in the containment of a fire that, while tragic, could have been even worse.

Waterloo College Hall is perhaps a good example of the 'balanced design' approach to fire safety in building construction. It's an approach that relies on three complementary

fire-safety systems:

- □ a detection system to warn occupants of a fire
- an automatic suppression system in highhazard areas to control the fire until it can be extinguished
- a containment system to limit the extent of fire and smoke

Detection, most notably in the form of mandatory smoke alarms, has been the most well-publicized and arguably the most effective means of reducing injury and death due to fire. According to Canada Mortgage and Housing Corporation (CMHC), by 1999, the fire-death rate per 100,000 one- and two-family houses was 75 percent lower than it had been in 1980 — a drop attributed mainly to the legislated use of smoke alarms in new building construction.

Suppression is also being legislated in our building codes: in 2008, Ontario became the last jurisdiction in North America to mandate the use of sprinklers in new high-rise apartments and condos higher than three storeys.

Wouldn't effective containment — or, as it's referred to technically, compartmentation — be the next logical step in the fire-safety equation? By containing a fire, you minimize its damage and essentially buy more time until it can be extinguished. Fire ratings obtained through lab testing offer an indication of that time. Using industry-standard two-hour tests involving exposure to 1800°C temperatures, a wall made of concrete block easily withstands the heat and the subsequent blast from a fire hose at 30 PSI (pounds of water per square inch). When the same testing is applied to fiber-reinforced gypsum panels, the hose penetrates the panels in about 10 seconds. Not surprisingly, while the testing allows for two test samples of any one material in order to achieve a pass — and gypsum needs two — concrete block only ever needs to be tested once.

In a laboratory, we have the luxury of duplicating tests and debating the merits of one material over

the other. Real life offers only one chance.

Which is why the concrete block industry will continue to fight for more rigorous and standardized testing. Concrete masonry can't prevent fire, but it is the best way we have to contain it and increase not only our odds of survival but those of our firefighters as well.

Paul Hargest owns Kitchener-based Boehmer's/ Hargest Block Ltd. and is the President of the Canadian Concrete Masonry Producers Association (CCMPA). Paul is also Vice President of Masonry-Worx (the marketing and government-relations body for the masonry industry); Chair, A165-04 Block Standard (CSA); Board Member, Canadian Masonry Contractors Association; Board Member, Ontario Masonry Contractors Association; and Executive Committee Board Member, National Concrete Masonry Association.

For more information or to arrange an interview with Paul Hargest, contact:

Marina de Souza Managing Director, CCMPA Toll Free: 1-888-495-7497 Phone: 416-495-7497 Fax: 416-495-8939 mdesouza@ccmpa.ca www.ccmpa.ca

If you're taking the LEED on building green you should know about the advantages of using concrete block.

Block delivers optimal energy performance—about twice content such as slag and ash as supplementary moisture resistance promotes drying and offering potential LEED credits related to pollution. And because block structures they minimize the risk of volatile organic

of the reasons why building green should



the R-value of poured concrete. It uses recycled cementing materials (SCMs). Its natural drainage. Most block is locally produced, transportation—less transport means less often require no coatings or finishes, compounds (VOCs). These are just a few start with block.

For information or a list of producers, contact the Canadian Concrete Masonry Producers Association www.ccmpa.ca 1-888-459-7497

### Build it strong. Build it green. Build it with Block.

Builders today have a lot of ground to cover when it comes to meeting demands for strength, safety, environmental friendliness and energy efficiency. No product helps you meet those needs better than concrete block. Concrete block lasts: In ASTME119 fire tests, block is the only material to meet all three criteria for heat transfer and durability. Concrete block has twice the R-value of poured concrete. It absorbs sound. It inhibits mould. It's built locally, using recycled or supplementary cementing materials (SCMs). And it often requires no coatings or finishes, reducing the risk of volatile organic compounds (VOCs). All of which helps you earn valuable LEED credits:

EA #1 – Optimize Energy Performance MR #1 – Building Reuse MR #2 – Construction Waste Management MR #4 – Recycled Content MR #5 – Local/Regional Materials MR #8 – Durable Building

When you build with concrete block, you're building smart. To learn more or locate a supplier, contact the Canadian Concrete Masonry Producers Association. www.ccmpa.ca info@ccmpa.ca 1-888-495-7497



### **Commitments by CCMPA**

	CSA Standards input, review and major	
	Industry support, resource centre.	(two staff
	Expansion of research and educat	tion at the
<b>-</b>	Liniversity level more than	
	McMaster University	φ1,300,000
	Liniversity of Manitoba	
	Liniversity of New Brunswick	
	Dalhousie University	
	Liniversity of Saskatchewan	
	University of Calgary	
	University of Alberta	
	University of British Columbia	
	Bill McEwen & BCMI	
	NRC Fire Study	\$100.000
	NRC Fire Test	\$25,000
	Seismic Design Guide	\$35,000
	Industry leading software investment	
	- staff resources plus	\$200,000
	Foundation research and design.	
	(Growing Masonry market share)	
	Masonry Training	\$675,000
	Major contributor to Conestoga	
	College Training Building.	
	Masonry Apprenticeship Training	
	Textbook	\$25,000
	Materials for Masonry Apprentices	hip
	Training & Research (annually)	\$50,000
	Block Machine for McMaster	
	University	\$250,000
	Masonry Awareness campaign,	
	commercials, ads, articles	
	and billboards.	
	NBC participant	
	NEC participant	
	Key partner with MasonryWorx	

industry lobbying efforts.

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# PRODUCER MEMBERS

### **BRITISH COLUMBIA PRODUCERS**

CCI Coast CCI Interior

### ALBERTA PRODUCERS

CCI CMS CCI Edcon Expocrete Concrete Products Ltd. (Calgary) Expocrete Concrete Products Ltd. (Edmonton) H.O. Concrete Supplies Ltd. Lafarge Canada Inc. (Calgary) Lafarge Canada Inc. (Lethbridge)

### SASKATCHEWAN PRODUCERS

Cindercrete Products Ltd. Weldon's Concrete Products Ltd.

### MANITOBA PRODUCERS

**CCI** Tallcrete

### **ONTARIO PRODUCERS**

Atlas Block Company Ltd. (Brockville) Atlas Block Company Ltd. (Midland) Atlas Block Company Ltd. (Orillia) **Boehmers** Brown's Concrete Products Ltd. Canal Block Century Concrete Products Ltd Day & Campbell Limited Doughty Masonry Center Ltd. Newcastle Block Ltd. Newtonbrook Block Niagara Block Inc. Permacon (Bolton) Permacon (London) Permacon (Milton) Permacon (Oshawa) Permacon (Ottawa South) Permacon (Ottawa West) Richvale York Block Inc. (Kingston) Richvale-York Block Inc. (Gormley) Richvale-York Block Inc. (London) Santerra Stonecraft Shouldice Designer Stone Simcoe Block

### **NOVA SCOTIA PRODUCERS**

Shaw Brick

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Building Strength