CANADIAN FIRE SAFETY ASSOCIATION

CFSA news

Fire Safety is Everybody's Business

JANUARY 2007

FIRE PROTECTION SYSTEMS

1971 CFSA 2006

You'll be off the jobsite in no time.

That's because FireShield™ comes packaged with a simple configuration that offers a no-nonsense approach to installation. Presenting FireShield, the newest member of the EST control panel family.

With FireShield, the capability is big but the price is not, making it the ideal panel for your three, five and ten zone applications.

At the end of the day, there are few things better than saving time *and* money.

Consider these features:

- fully compliant with ULC S527-99
- allows precision synchronization with Genesis™ Signaling Devices
- available in three, five, and ten zone panels
- front panel programming
- one person test mode
- Class A or Class B circuits
- optional remote serial relays
- optional serial remote annunciator
- optional fully integrated DACT/Dialer
- optional city tie and reverse polarity modules

www.edwards.ca

EDWARDS

REGISTERED BY UL ISO 9001:2000, FILE NUMBER A1868

CFSA news
CANADIAN FIRE SAFETY ASSOCIATION
Fire Safety is Everybody's Business
JANUARY 2007

Inside this issue

Editor: Matteo Gilfillan

The CFSA News Magazine is published 4 times per year – Summer, Fall, Winter, Spring

Advertising Rates
Membership has its benefits, and advertising is a key advantage to getting your company and product information out to other members in the industry. The CFSA has decided to make advertising in the CFSA Newsletter a definite advantage for members. Pricing has been revised to include the following rates:

	Member Rate	Non-Member Rate
Back Cover	$250	$750
Full Page	$200	$600
1/2 Page	$100	$300
1/4 Page	$50	$150
Business Cards	$25	$75

Prices listed are for each issue and do not include GST. Corporate members receive a 10% discount.

For more information regarding advertising in the CFSA Newsletter, please contact Mary Lou Murray at (416) 492-9417 or maryloum@taylorenterprises.com.

Closing dates for submissions are as follows:
Issue #1 – May 20 Issue #3 – Nov. 19
Issue #2 – Aug. 19 Issue #4 – Feb. 17

All general enquiries and advertising materials should be directed to the CFSA office at:
2175 Sheppard Ave. E., Suite 310,
Toronto, Ontario M2J 1W8

Your comments, suggestions and articles are welcome. Please send them to the attention of:
The Editor
Canadian Fire Safety Association
2175 Sheppard Ave., E., Suite 310
Toronto, Ontario M2J 1W8

CFSA Chapters
Interested in forming a new chapter?
Call CFSA at (416) 492-9417

Janet O'Carroll

PRESIDENT'S message

January marks the end of the CFSA 35th Anniversary celebrations and the beginning of change to the Association in order to better serve our membership. No one likes change better than those of us in the technology sector and the Association is a reflection of this.

Last year we discussed partnering with associations such as NFPA in order to broaden the scope of information available to our membership through CFSA. I'm pleased to say this is now a reality; a 1-day Evacuation Planning Workshop will be held on February 6, 2006 in conjunction with NFPA. We are very excited for the opportunity to partner with NFPA.

The Association is also exploring the possibility of expanding the Annual Education Forum for 2008 into a two-day conference with a trade show. For those of you who have attended any of the previous Annual Education Forums, the day-long event provides excellent information on relevant topics, codes, standards and industry advancements. We would like to expand the number of seminars provided as well as to offer a venue for our members to obtain up to date information from manufacturers, service providers, etc., all at one event.

As the Association continues to grow and change to better serve our membership, we want to hear from you along the way. Please feel free to contact us by phone, fax, email or website to provide your thoughts, ideas, seminar topic considerations, articles for the CFSA News, website content or information on other upcoming industry events.

January 1, 2007 also marks the changes for Hotel fire safety requirements as prescribed in the Ontario Fire Code. Currently the Ontario Fire Marshal's Office is offering information sessions on the new regulation in two formats; overview (1 hour) and comprehensive session (full day). A section on OFM's website (www.ofm.gov.on.ca) is dedicated to information on the new regulation including important information, compliance schedule, changes to the Ontario Fire Code and a list of upcoming information sessions.

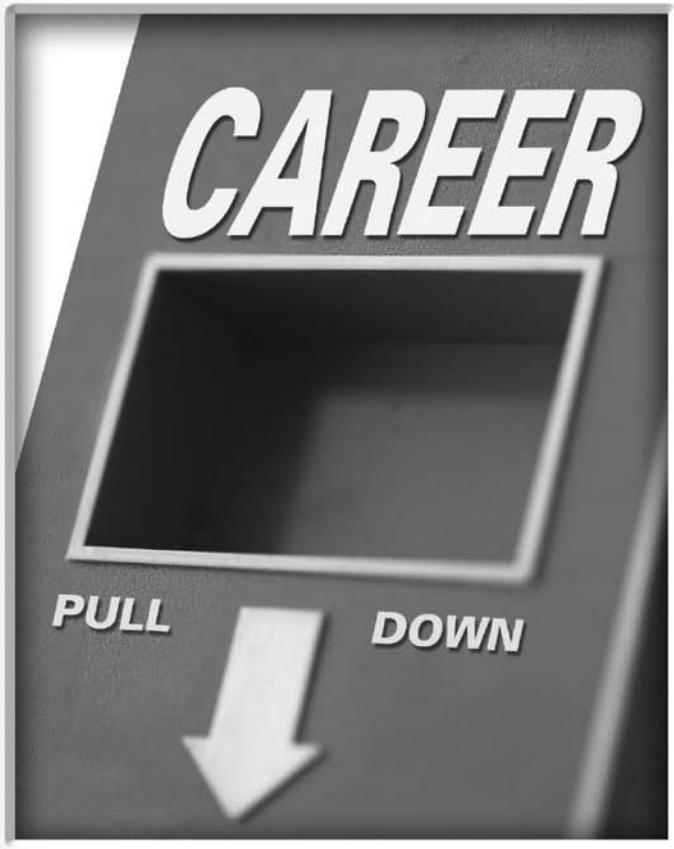
I would like to thank all of our members for your continued support and wish each of you and your families a very safe, healthy and prosperous New Year.

P.S. The CFSA would like to take a moment to wish Bernard Moyle all the best in his future endeavors. For the past sixteen years Mr. Moyle has served as the Fire Marshal of Ontario.

The CFSA would also like to congratulate Patrick Burke on his appointment as the new Fire Marshal of Ontario. Mr Burke is a former Windsor, Ontario fire fighter and recently held the position of Fire Chief in Niagara Falls.

Janet O'Carroll, C.E.T., CFPS
CFSA President

IT'S YOUR CAREER, BETTER SAFE THAN...



Don't take chances with your career; discover your true potential at SimplexGrinnell, a business unit of Tyco Fire & Security and the recognized North American leader in the fire and life-safety industry. We sell, install, and service state-of-the-art fire alarm, fire sprinkler, fire suppression, integrated security and sound and nurse call systems and services. With half a million customers and more than 200 years of history in the fire business, we offer our employees unequaled opportunities for career growth along with a unique array of benefits and purchase plans. So if you are tired of your current career situation, consider joining SimplexGrinnell and see how far your talents can take you.

SimplexGrinnell offers competitive pay and excellent benefits that go beyond just extended health & dental coverage. We offer an outstanding retirement savings plan in addition to Tyco employees stock purchase program, tuition reimbursement, vendor discounts and more.

To explore a career at SimplexGrinnell, visit www.simplexgrinnelltalenttrack.com

SimplexGrinnell is an Equal Employment Opportunity Employer.

talent track
WHERE TALENT MEETS OPPORTUNITY
www.simplexgrinnelltalenttrack.com

SimplexGrinnell
A business unit of Tyco Fire & Security
BE SAFE.

Matteo Gilfillan

EDITOR'S note

I can't believe it is 2007! This past year has just flown by. Looking back on the last year, we have seen many changes to the fire safety industry. Most notably is the introduction of the 2005 National Building Code of Canada and the 2006 Ontario Building Code, which provide an objective-based approach to achieving conformance with the Building Code. We have also known technological advancements in fire protection equipment and improvements in the methodology for achieving a high level of fire and life safety.

The theme for this edition of the *CFSA News* is topical issues surrounding fire protection systems. The most prevalent topic regarding fire protection systems over the past year would be the movement to require fire sprinklers in residential occupancies in Ontario. We bore witness to avocations for residential sprinklers in the form of regulatory bills (namely Bill 2, "Home Fire Sprinkler Act 2005" and Bill 120, "Fire Protection Statute Law Amendment Act 2006") as well as public awareness drives by organizations and associations (e.g., FireSAFE Ontario, Canadian Automatic Sprinkler Association, Home Fire Sprinkler Coalition). However, on the sidelines, other issues such as occupant response to fire alarm signals and fire extinguisher monitoring were also being discussed. The articles within this edition attempt to shed some light on these contentious issues.

Also featured in this edition of the *CFSA News* are articles on wood interior finishes and the Building Code, fire safety improvements to kitchen standards, regulatory amendments to the Ontario Fire Code (i.e., hotel fire safety), and many more.

The *CFSA News* journal committee is looking for articles and topics for articles from our membership. If you are interested in providing an article or would like to see a specific topic discussed in the *CFSA News*, please contact us.

Matteo Gilfillan, C.E.T., CFPS

Fire Monitoring Technologies International Inc. (FMTI)

When EVERY SECOND *Counts*

Who We Are:
Specialists in delivering third party electronic data directly into public safety Computer Aided Dispatch (CAD) environments.

What We Do:
Using a revolutionary technology called OPEN ACCESS™, we work with approved participating data providers to route different types of data to the appropriate public safety partner agency for dispatch of incidents or to provide additional incident information.

Example data types include; automatic fire alarms, automatic crash notifications, hazardous materials information and emergency weather notifications.

OPEN ACCESS™ has been used successfully by Fire Departments to drastically improve response times by an average of two full minutes (validated through independent study) and will layer over any existing alarm technology.

OPEN ACCESS™
www.openaccess.ca
"Saving Time Saves Lives"

For more information visit our website **www.openaccess.ca**
or contact: **1-877-684-8970** email: **fminfo@fire-monitoring.com**

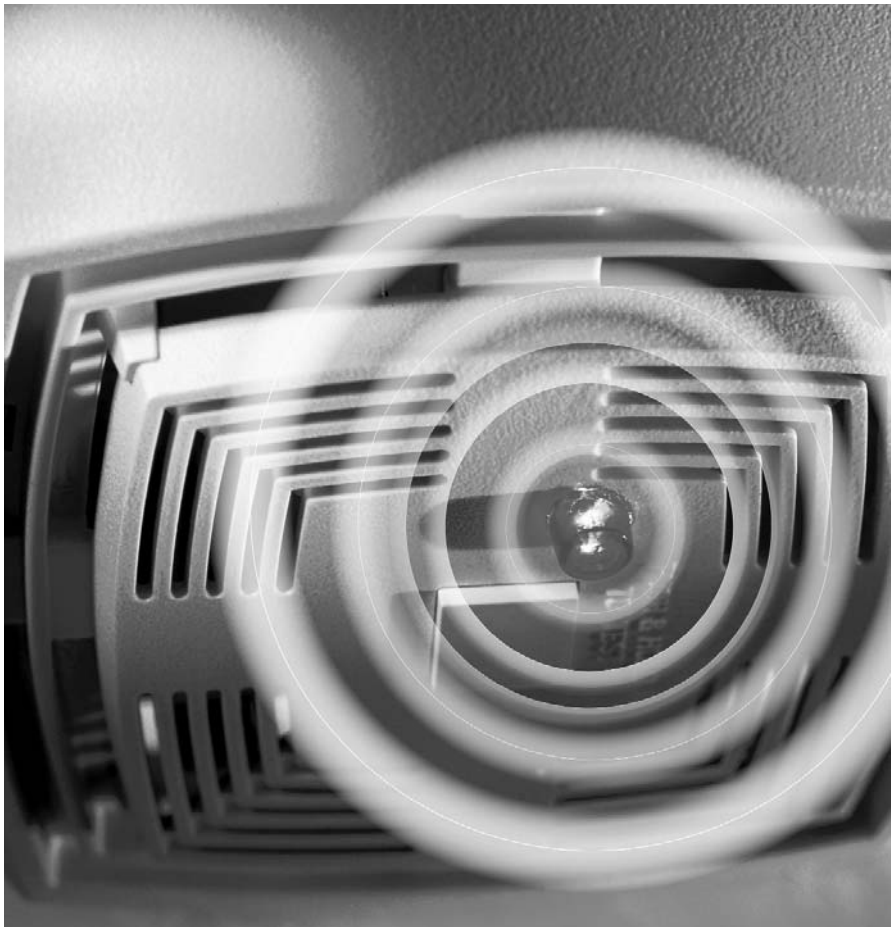
Why People Don't Respond to **Alarm Signals**

This essay was written by Mr. Norman E. Groner, Ph.D., an associate professor in the Department of Public Management at John Jay College of Criminal Justice, the City University of New York.

People often fail to respond quickly to fire alarm signals. A common example: In a hotel, a fire alarm sounds late at night. Only a handful of people actually dress and leave (often using the elevators). A few people call the front desk. Many people periodically poke their heads out their doors to see what's going on. But mostly, people simply wait for the alarm signal to stop. Eventually, the alarm either shuts off, or someone (hopefully) comes to tell them that there is a real emergency and they must leave.

This problem has aggravated and perplexed fire safety professionals over the years. Some denounce the public for their stupidity in failing to recognize the potential danger indicated by a fire alarm signal. Their concern is valid: in many fire emergencies, a rapid response is critical to survival. But attributing the problem to public stupidity is inaccurate and of no value in correcting the problem. In reality, people are simply exhibiting natural tendencies.

Why don't people respond to alarm systems? There are several reasons. In this essay, these reasons are divided into two main categories:



- Alarm signals as sources of information.
- Other reasons why people do and don't respond apart from the information-value of alarm signals.

Alarm Signals as a Source of Information

In order to understand why people fail to respond to alarm signals, we need to look at the information-value of alarm signals. By information-value, we mean the degree to which an alarm signal is useful in reducing uncertainty. Stated differently, how useful is an alarm signal in helping people achieve good situation awareness?

One problem is that people may fail to recognize that a signal indicates the need to immediately evacuate a building. Recent code revisions address this problem by mandating a "temporal code three" signal. Regardless of the notification device used to create the sound, building occupants hear a pattern of three sounds followed by a longer interval of silence. Because codes generally do not require the replacement of older alarm systems, many years will elapse before we can depend on hearing these coded signals. Standardizing an evacuation signal is a valuable step towards reducing the uncertainty associated with fire alarm signals, but there are many other aspects of the alarm signal information problem that a standardized coded signal does not address.

Limited information-value of a simple evacuation signal. Assuming that a building occupant recognizes a signal as indicating a request to evacuate, the signal, by itself, does little to reduce uncertainty from the building occupant's perspective. The signal does not indicate the location and severity of a fire, and, most importantly, whether an emergency even exists.

This information is important because most adults instinctually want to delay their response to a threatening situation until the danger is well understood.

Experiences with alarm signals that increase ambiguity. We ask people to take the alarm signal as an indication of real danger, but most people's experiences lead them to believe the opposite. People typically experience alarm signals that are associated with system tests, surprise drills and false and nuisance alarms, not real fires. The alarm signal that indicates a real fire is relatively rare. The alarm signal that indicates a truly dangerous situation is very rare indeed. How can the information-value of fire alarm signals be improved? The following is a list of ways to increase the information-value of alarm signals.

Use vocal alarm systems for greater information-value. Vocal alarm systems (also called "voice/alarm signaling service") broadcast messages to building occupants using a dedicated or prioritized public address system. Vocal alarm signals have been demonstrated to be much more effective in inducing building occupants to action, because their information-value is much greater. Used correctly, they can both (1) define the nature and location of a threat; and (2) recommend an effective coping response. But vocal alarm systems must be used carefully. When a vocal alarm system is used to provide inaccurate information, its effectiveness is compromised. Building occupants may learn that the information provided is unreliable. Most importantly, the danger to building occupants can be increased when the information is associated with an inaccurate awareness of the situation. As an example, building occupants can be instructed to evacuate using smoke-contaminated stairs when they would have been much safer remaining in their rooms.

Minimize system tests and false and nuisance alarms. This has been a major problem. Fortunately, new smoke detector technology is rapidly decreasing the incidence of nuisance and false alarms in newer installations.

Use alarm verification features, positive alarm sequences, and pre-signal alarm systems to minimize the impact of false and nuisance alarms. These are measures that require, to various degrees, the interaction of trained personnel with a fire alarm system for the purpose of avoiding false alarms. When used correctly, these measures can greatly decrease the likelihood of false and nuisance alarms, thereby improving the responses of building occupants when real fires are present. But when poorly planned or executed, these measures can increase the danger to building occupants by delaying a general alarm when real fires are present.

Minimize the use of surprise fire alarms drills. Surprise fire alarm drills are a useful way of evaluating preparedness, but they also reduce the building occupant's perception that alarm signals indicate real emergencies. For this reason, surprise drills can be counterproductive. Fire safety codes have been changed to allow greater use of announced drills in recognition of that they often just as effective for training purposes. In many settings, surprise drills are best reserved for those occasions when the overall emergency response must be evaluated.

Provide information about ALL alarm signals. Provide information about the origin of the alarm and management's efforts to avoid repeats. More often than not, building managers fail to offer any explanation at all. And when they do tell occupants that an alarm signal was false or a systems test, they don't tell building occupants whether measures are being undertaken to prevent recurrences of the same problem. Failing to provide this type of information encourages building occupants to believe (sometimes accurately) that the next alarm signal is likely to be a repeat of the same problem. Research on reducing false alarm effects has demonstrated that providing information about false alarm sources and corrections is effective in increasing appropriate responses to future alarms signals.

Supplement the low information-value of simple alarm signals with information from emergency team members. Good emergency planning has proven to be very effective in getting people to respond when onsite emergency response team members (e.g., floor wardens, fire brigade member) provide the information that is lacking from an alarm signal. Ideally, such persons should provide information about the nature of a threat ("there is a small fire in the basement"), the appropriate response ("the building manager has ordered all occupants to evacuate the building and wait in the parking lot"), and the reason ("because we can't be certain that the fire will be easily controlled").

Reasons for Evacuating Other than the Information-Value of Alarm Signals

The information-value of alarm signals is not the only factor in determining whether people respond to alarm signals. Here are some other important considerations.

Task persistence: People do not like to be interrupted. The remote possibility that there could be a fire is often not a good enough reason.

Denial and avoiding anxiety: People want to avoid the feelings of anxiety that the danger of a fire evoke. Therefore, they may tend to avoid interpreting an alarm signal as an indication of real danger.

Social roles: People often respond to fire alarm in the total absence of any sense of danger, because other people expect this behavior from them. A familiar example: young children can be easily taught to immediately evacuate in a school setting. But with adults in most settings, it is important to recognize that effectiveness of social roles depends on complicated cultural and organizational contexts. The willingness of building occupants to cooperate with fire drills typically depends on how effective building managers are in their roles. However, Even the best building manager will find it difficult to convince people that every alarm signal should indicate danger when occupants are frequently inconvenienced by systems tests, surprise drills and false alarms. It is also useful to remember that building managers' roles require them to retain tenants, so they will understandably reluctant to alienate tenants by intimidating them into conforming to fire safety regulations.

Risk perceptions: The greater the perceived risk when a fire alarm signal is detected, the more likely a person is to respond.

Mental models: Related to risk perceptions, people often have a faulty mental model about how quickly a minor fire can evolve into a life-threatening situation. ■

Home Fire Sprinklers

This article originally appeared in the September/October 2006 NFPA Journal (www.nfpa.org).

Properly installed and maintained, automatic fire sprinkler systems help save lives.

For example, what could have been tragic turned positive when a sprinkler doused a kitchen fire in California. According to the incident report, a single sprinkler extinguished a fire in the kitchen of a single-family home that began when food left cooking unattended ignited. The single storey, wood-frame house had both smoke alarms and a wet-pipe sprinkler system.

A water flow alarm alerted the home's occupant, who was outside, that the sprinkler had activated. By the time he reentered the house, the sprinkler had already extinguished the fire, so he turned off the electric stove and shut the water off at the street before calling the fire department business number at 6:39 p.m.

Firefighters arrived within five minutes to find water throughout the kitchen and a melted microwave oven above the burned stove. Before leaving, they removed the water with water vacuums, replaced the sprinkler, and put the sprinkler system back in service after advising the owner to have the system inspected.

The occupant said he began heating a pan of oil on the stove, then went outside and forgot about the pan.

According to NFPA statistics, when sprinklers are present, the chances of dying in a fire and the average property loss per fire are both cut by one-half to two-thirds, compared to where sprinklers are not present. While not the focus of Fire Prevention Week, NFPA notes that automatic fire sprinklers and smoke alarms together cut the risk of dying in a home fire by 82 percent when compared to having neither. ■

Sprinkler Protection of Multi-Family **Residential Buildings**

This article was provided by Mr. Cyril W. Hare, President of Cyril Hare & Associates Inc.

The 1995 edition of the National Building Code required that all residential buildings exceeding 3 storeys in building height be equipped with automatic sprinkler protection. The National Building Code is considered a model code and is used by the provinces and territories as the basis for their building codes. Ontario uses the National Building Code as a model for building construction; however Ontario through the Ministry of Housing, Buildings Branch, has chosen to modify the code. The 1997 edition of the Ontario Building Code is based upon the National Building Code 1995.

Some of the most significant differences between the Ontario Building Code and the National Building Code are the requirements for fire safety in residential buildings. The requirements for sprinkler protection in residential buildings have basically been deleted from the Ontario Building Code. Ontario is the only province that allows the construction of residential high rise and low rise buildings without sprinkler protection. Ontario has experienced fires in high buildings such as 2 Forest Lane and The Inn on the Park in Toronto where there have been multiple fire deaths due to fires. People continue to die in residential fires throughout Ontario. These deaths could have been averted with sprinkler protection.

There are over 280 jurisdictions in North America that have sprinkler requirements for single family residential properties. Some jurisdictions in Canada such as Vancouver have required all residential buildings including houses to be sprinklered. Since Vancouver adopted the requirements for sprinkler protection in residential buildings they not had a death due to fire in a sprinklered residential building. Scottsdale Arizona has had a

sprinkler ordinance for over 20 years and has had similar results.

There has been an erroneous belief in many circles that sprinkler protection is not necessary since the fire department can respond, extinguish the fire and remove victims before a flashover can occur. Flashover is the point in a fire when all of the contents of a room have been ignited by the heat of a fire.

A number of tests have shown that it is virtually impossible for a fire department to respond in time. Tests and demonstrations by the Office of the Fire Marshal have shown that flashover can occur in as little as 3 minutes. This data has been confirmed by tests conducted by other agencies such as the National Fire Protection Association.

In the case of high rise buildings the time for response is far greater than for a single family dwelling. The typical goal for fire department response for the first vehicle is 4 minutes travel time plus up to 2.5 minutes for dispatch and crew preparation time. The goal for assembly of the complete response is an additional 4 minutes. Once a fire vehicle arrives at a high rise building the fire fighters must get to the fire. If the fire is on the upper floor of the building they must carry their equipment into the building and up to the fire floor. Where fire fighters elevators are provided they must place the elevators in emergency control, load the equipment into the elevator and travel up to the staging area. The crews usually stage at least two floors below the fire and advance up the stairs. Then they must connect to the standpipe system and advance the hose to the fire. It is not unusual to take up to 20 minutes to get a hose into operation. By that time any occupants of the suite will have perished and the occupants of the suites on the fire floor and the floors above have been in serious danger. These types of fires usually result in the need for 2 or 3 alarms. Only the larger fire departments in Ontario have the resources to assemble the 30 plus personnel that are need to conduct fire operations, rescue, ventilation, salvage, incident command, accountability, rapid intervention, logistics and rehabilitation. In sprinkler protected buildings the fire is normally extinguished or under control when the fire department arrives. As a result the fire can be handled by a single alarm response, thereby reducing the demand for fire department resources.

The 2005 edition of the National Building Code contains the same requirements for sprinkler protection that were contained in the 1995 edition. Ontario will be introducing the new Building Code regulations at the beginning of 2007. This new Ontario Building Code again has deleted the sprinkler protection requirements for residential buildings. There are new residential buildings being planned in Ontario that will be up to 50 storeys without sprinkler protection. Ontario is the only jurisdiction in Canada where these buildings could be constructed without this vital life safety equipment. ■

Portable Fire Extinguishers 101

This article was provided by Mr. Matteo Gilfillan, C.E.T., CFPS, Assistant Project Manager at Randal Brown & Associates Ltd.

Fire Extinguisher Classifications and Ratings

Fire extinguishers are classified according to the type of fuel that is being consumed by the anticipated fire.

The ratings for fire extinguishers are identified via numbers that precede the Class letter (e.g., 3-A:10-B:C). The number placed before the A when multiplied by 1.25 provides the equivalent extinguishing capability in US gallons of water. The number placed before the B indicates the size of fire in square feet that an extinguisher should be able to extinguish. There is no numerical rating for class C, as it only indicates that the extinguishing agent will not conduct electricity.

Types of Fire Extinguishers

Dry Chemical: usually rated for multiple purpose use, dry chemical extinguishers contain a chemical extinguishing agent and use a compressed, non-flammable gas as a propellant. They are almost always red in color and have either a long narrow hose or no hose (just a short nozzle).

Halon: containing a gas that interrupts the chemical reaction that takes place when fuels burn, halon extinguishers types were often used to protect valuable electrical equipment since the gas does not leave a residue. When the Montreal Protocol was signed in 1987, many manufacturers opted to withdraw Halon 1211 (which is an ozone-depleting substance) extinguishers from their product lines. Today, many alternative "clean agents" to Halon are available, such as the 3M Novec 1230 and the FM-200 products.

Water: extinguishers which contain water under pressure and should only be used on Class A (ordinary combustibles) fires. Water extinguishers are usually silver (chrome-metal) in color, have a flat bottom, have a long narrow hose, and are quite large (2-1/2 gallons).

Carbon Dioxide: most effective on Class B and C (liquids and electrical) fires, CO2 extinguishers contain compressed carbon dioxide that, upon operation of the extinguisher, expands and cools the surrounding air. CO2 extinguishers are generally red (often yellow around aircraft or on military sites), have a large "tapered" nozzle (horn).

	CLASS A	Fires involving the combustion of ordinary materials such as wood, cloth, paper, plastics etc.
	CLASS B	Fires involving combustible or flammable liquids such as gasoline, kerosene and many chemical agents including gases.
	CLASS C	Fires involving energized electrical equipment such as electrical appliances, motors, computers etc.
	CLASS D	Fires involving combustible metals such as sodium, lithium, titanium, and magnesium.
	CLASS K	Fires involving cooking fats & oil in commercial cooking.

Operating a Fire Extinguisher

Fires have the ability to quickly get out of control and as such, portable extinguishers should only be used to fight a fire when the following conditions are met:

- you (the operator) are familiar with the use of a fire extinguisher,
- the extinguisher is readily available for immediate use and is in operating condition,
- the extinguisher is suitable for the fire hazard being protected,
- the fire is small enough to be controlled by the type of extinguisher present, and
- the fire is **not** between you and the exit.

If any of the above conditions cannot be achieved, evacuate the area immediately.

The easiest way to remember how to properly operate a portable fire extinguisher is to use the acronym **PASS**

P Pull the safety pin.

A aim the extinguisher nozzle at the base of the flames.

S squeeze the trigger while holding the extinguisher upright.

S sweep the extinguisher from side to side, covering the area of the fire with the extinguishing agent.

Make sure that there are extinguishers available in your work area and know their locations. When confirming that the extinguishers are suitable for the hazard, make sure that the safety pin is in place and attached by a plastic seal and that the extinguisher is full by checking that the pressure gauge is in the acceptable zone (typically indicated in green) indicated on the gauge. Note that CO2 extinguishers do not have gauges and must be weighed to determine the exact amount of extinguishing agent inside. ■

Changes to **NFPA 10**

This article originally appeared in the November/December 2006 edition of the NFPA Journal®.

NFPA 10, 2007 – WHAT'S NEW?

Portable fire extinguishers are an important piece of protecting an occupancy. The changes to NFPA 10 reflect industry trends.

Whenever we update one of our widely adopted standards, the questions are always "What's new?" or "What's different?"

There are four changes to NFPA 10®, Portable Fire Extinguishers, which are the buzz in the industry. The areas to look at in the 2007 edition are: classification of an occupancy, technician certification, electronic monitoring, obsolete extinguishers, and high-flow extinguishers.

Let's look at these one at a time.

Classify The Occupancy

The first step in selecting the right type and size of extinguisher is determining whether the occupancy is a light, ordinary, or extra-hazard occupancy. These terms are described differently in NFPA 10 than in NFPA 13®, *Installation of Sprinkler Systems*; or NFPA 101®, *Life Safety Code*.

Classification of Hazards is covered in sections 5.4.1.1, 5.4.1.2, 5.4.1.3, A.5.4.1.1, A.5.4.1.2, and A.5.4.1.3.

Examples of occupancy type are in the Annex and will be used for the Class A (paper, wood, and common furniture) hazards. The big change is with Class B (flammable or combustible liquids) hazards. The new text in NFPA 10 makes it quite clear that if you have flammable or combustible liquids (Class B hazards), you can apply light hazard to quantities of less than 1 gallon; 1 gallon to 5 gallons would be ordinary; and extra is more than 5 gallons.

It will still take some judgment on the part of the trained technician and the fire inspector to apply these concepts, but the decision when faced with liquids that burn has been made easier.

Technician certification

You will soon have to be certified if you plan to service fire extinguishers. The deadline for certification is August 17, 2008. With the anticipation of the new edition of NFPA 10, many organizations, such as trade associations, equipment manufacturers, and equipment suppliers are offering certification programs. Some offer a training seminar followed by a test, which is a good approach for a new technician. Others offer a test based on the requirements in NFPA 10.

Technician certification is covered by sections 3.3.4, 7.1.2, 7.1.2.1, 7.1.2.2, 7.1.2.3, and A.3.3.4.

Select a certification program carefully and make sure the program is recognized by the local authorities. Organizations will use their trade name and company-specific materials and over time, all of the programs will create their own reputations in the field. Don't wait to sign up for certification, as the programs are likely to be full as we approach the 2008 deadline.

Electronic monitoring

Although electronic monitoring of extinguishers was recognized in the 2002 edition of NFPA 10, it is now clearly an option for the 30-day monthly inspection. Before the introduction of this technology, someone had to physically check all of the extinguishers in the building and conduct a manual inspection. Now there are systems available where the extinguisher is connected to a control panel by an electrical cable. If the extinguisher is removed from its bracket, an electronic signal is received at a monitoring station.

The system also gives you a reading on whether the extinguisher it is still pressurized to the correct level and if someone has placed obstructions in front of the extinguisher. Although there will still be reliance on people doing the inspections manually, these systems will be installed in college dorms where there have been vandalism problems and large facilities where there will be a gradual economic benefit. Organizations that have neglected the inspections in the past will consider installing a monitoring system and see this as an opportunity to increase the chances that the extinguishers will be usable when they are needed.

Obsolete extinguishers

Going along the lines of having extinguishers that are "usable when needed" is the expansion of the obsolete extinguisher list. In the previous edition of NFPA 10, there was a list of eight obsolete extinguishers. The list has been expanded to 13 plus a couple of paragraphs on this topic, so in essence there are 15 things to look when deciding whether old equipment is obsolete.

Obsolete extinguishers are addressed in sections 4.4, 4.4.1, and 4.4.2

The objective is to have reliable extinguishers. Although some people will argue

that "old" is "still good", the technical committee decided some of the older extinguishers could be problematic or difficult to use and should be removed from service and replaced with new reliable extinguishers. Table 1 provides a list of obsolete extinguishers.

High-flow extinguishers

Although the new criteria for placement of extinguishers for burning liquid fires applies to most applications, there are hazards where additional consideration is needed.

These hazards tend to be in industrial applications where you could have a pressurized flammable liquid fire; a three-dimensional fire (flowing or cascading) or obstacles in spill fire. Larger extinguishers with more agent and higher flow rates of one lb/sec (0.45 kg/sec) are often needed. The new standard gives clear requirements for these hazards. High flow extinguishers are addressed in sections 5.5.1.1, 5.5.1.1.1, 5.5.1.1.2, 5.5.2, 5.5.4, A5.5.1.1, and 5.5.1.1.2.

Don't forget training

Proper extinguisher selection and placement gets the right extinguisher into the right place. Employers should take the extra step and offer extinguisher training to employees. When a fire occurs there isn't time to learn how to use an extinguisher. If a fire occurs, a person could waste valuable time reading the instructions while the fire is growing and spreading. It is therefore essential that proper training be provided in buildings where the extinguishers are installed. Extinguishers placed throughout a building are intended to be used for manual fire fighting by trained employees.

Extinguisher use is addressed in Annex D as well as the many NFPA videos, books and brochures on the topic.■

Editor's Note: NFPA 10 is referenced by the 1997 Ontario Fire Code (OFC, O.Reg. 388/97 as amended) for the maintenance and testing of portable fire extinguishers.

Wood Interior Finish **Requirements**

This article was provided by Mr. Matteo Gilfillan, C.E.T., CFPS, Assistant Project Manager at Randal Brown & Associates Ltd.

Interior Finish Requirements Demystified

An interior finish is essentially any exposed material that forms part of the building interior (floor, wall or ceiling). This includes interior claddings, flooring, carpeting, doors, trim, windows, and lighting elements. Where no cladding is installed on a wall, floor or ceiling assembly, the interior surface of the assembly is considered to be the interior finish (i.e., unfinished post and beam construction, unfinished exposed deck).

In an effort to mitigate room fire growth, the model National Building Code (NBC) provides regulations to govern the types and combustibility of interior finishes to control the spread of flames and slow the time of the flash over point. The requirements of the NBC revolve around the flame-spread rating (FSR) of the interior finish, which is based on testing a minimum of three samples of the product in accordance with the applicable Standard:

- CAN/ULC-S102-M, "Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies" (if the material can support itself in position, or can be supported, it is mounted on the ceiling),
- CAN/ULC-S102.2-M, "Standard Method of Test for Surface-Burning Characteristics of Flooring, Floor Covering, and Miscellaneous Materials and Assemblies" (if the material is a floor covering, or cannot be tested when mounted on the ceiling because it melts and drips or otherwise cannot support its own weight), or
- CAN/ULC-S102.3-M,"Standard Method of Fire Test of Light Diffusers and Lenses".

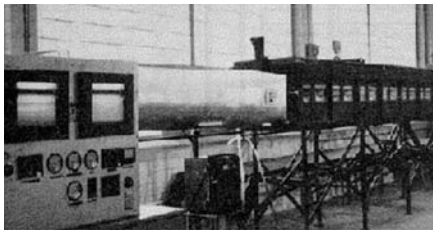
In the NBC, flame-spread rating requirements address two types of flame-spread categories:
(1) a "surface" flame-spread, and
(2) a "through" flame-spread.

Surface flame spread refers specifically to the exposed surface, whereas a "through" flame-spread also addresses any surface that would be exposed by cutting through the material in any direction. This subtle nuance is the source of much consternation for Code users, since it is possible to have a finish which meets the criteria of the NBC on the surface but which does not conform to the "through" flame-spread rating requirements.

Test Method for Flame-Spread Ratings

Interior finishes are tested using the Steiner Tunnel test. The test apparatus consists of a horizontal tunnel 7.6 m long, 450 mm wide, and 300 mm deep. One wall has observation windows along its length.

The tunnel test apparatus



Flames from two burners at one end are forced down the tunnel directly onto the test specimen, which is mounted either on the floor or on the ceiling of the tunnel. The flame exposure is intended to recreate an exposure similar in intensity to that which occurs when a small piece of furniture leaning against a wall is set on fire. At the end of the tunnel is a thermocouple for determining heat released during the test (detectors are also provided to measure smoke development).

To determine the Flame Spread Classification (FSC) of a material, the burners are ignited and the spread of the flame along the test specimen is recorded for a ten minute duration. The FSC values for all other products are determined in comparison with the FSC of the following:

- a noncombustible inorganic board being zero, and
- that of red oak being 100.

Unlike the United States, the flame-spread ratings of products are not broken down into classes. As well, the Flame Spread Classification of a product tested in conformance with CAN/ULC-S102-M (ceiling mounted) can be different than that from the American standard tunnel test, ASTM E-84, as the formulas used to calculate FSC differ. As per studies conducted by the National Research Council[(1)], for most building materials, the ASTM formula yields an FSC value about 8% lower than that established from the Canadian formula.

(1): Mehaffy, J.R., Flammability of Building Materials and Fire Growth, Building Science Insight 87', National Research Council.

The Performance of Wood as an Interior Finish

Wood is an ever popular interior finish in the building construction industry. It is commonly used for doors, trim, wall paneling, ceiling coffers, and other such architectural features.

However, subject to the required type of building construction (i.e., combustible or noncombustible) and the room/area in which the finish is being applied, wood interior finish may not satisfy the requirements of the Building Code. For example, in areas that require a "through" flame spread rating of less than 150 (e.g., exits are required to have a "through" flame spread rating of 25), general lumber or wood as an interior finish are not permitted to be used.

The flame-spread rating and smoke developed classification of various species of wood are identified in Appendix D of the 2005 National Building Code of Canada (see Table 1). It is noted that information is only provided for generic materials for which extensive fire test data is available. However, products such as medium density fiberboard (MDF), which are not addressed by the NBC, are required to be reviewed on a per product basis.

In general, the flame-spread rating of solid wood decreases with increasing thickness. It is noted that for buildings required to be of noncombustible construction as per the NBC, combustible finishes are required to have a maximum thickness of 25 mm.

Wood Interior Finish Treatment Types

There are various types of treatments available on the market to reduce the inherent flame-spread rating of wood. The two most prevalent treatments are as follows:

Impregnation: This involves placing the wood in a chamber, where the flame retardant chemicals are forced into the timber using pressurizing equipment. This treatment method is usually conducted during the manufacturing stage of the wood product and therefore, is not useful for conditions requiring on-site upgrading.

Intumescent Surface Coatings: These coatings are supplied directly to the site and are applied as you would paints/varnishes/coatings. The intumescent substance under flame will expand to form a physical barrier between the finish and the flame. It is important to follow the manufacturer's instructions, as in many cases, the product requires multiple base coats and a specific finish coat.

While surface coatings are advantageous in that they can be applied on-site using relatively economical methods, surface treatments cannot be used to increase the "through" flame spread rating of a product. ■

Table 1: Assigned flame-spread ratings and smoke developed classifications[1]

Materials	Applicable Standard	Minimum Thickness mm	Unfinished Thick, Cellulosic		Paint or Varnish not More than 1.3 mm Thick, Cellulosic Wallpaper not more than 1 Layer[2,3]	
			FSR	SDC	FSR	SDC
Asbestos, cement board	CAN/CGSB-34.16-M	None	0	0	5	50
Brick , concrete, tile	None	None	0	0	25	50
Steel, copper, aluminum	None	0.33	0	0	25	50
Gypsum plaster	CSA A82.22-M	None	0	0	25	50
Gypsum wallboard	CSA A82.27-M ASTM C 36/C 36M ASTM C 442/C 442M ASTM C 588/C 588M ASTM C 630/C 630M ASTM C 931/C 931M	9.5	25	50	25	50
Lumber	None	16	150	300	150	300
Douglas Fir plywood[4]	CSA O121-M	11	150	100	150	300
Poplar plywood[4]	CSA O153-M	11	150	100	150	300
Plywood with Spruce face veneer[4]	CSA O151-M	11	150	100	150	300
Douglas Fir plywood[4]	CSA O121-M	6	150	100	150	100
Fiberboard low density	CAN/ULC-S706	11	X	100	150	100
Hardboard, Type 1	CGSB-11.3-M	9	150	X	[2]	[2]
Hardboard, Standard	CGSB-11.3-M	6	150	300	150	300
Particleboard	CAN3-O188.1-M	12.7	150	300	[5]	[5]
Waferboard	CAN3-O437-M	-	[5]	[5]	[5]	[5]

Notes:
1. See D-1.1.1.(5) for standards used to assign flame-spread ratings and smoke developed classifications.
2. Flame-spread ratings and smoke developed classifications for paints and varnish are not applicable to shellac and lacquer.
3. Flame-spread ratings and smoke developed classifications for paints apply only to alkyd and latex paints.
4. The flame-spread ratings and smoke developed classifications shown are for those plywoods without a cellulose resin overlay.
5. Insufficient test information available.

Source: Appendix D, 2005 NBCC

Fire Code Changes for Hotels **An Overview**

This article was provided by Mr. Rocky Mino of The Markham Fire and Emergency Services.

On September 20, 2006, Mr. Kim Bailey of the Office of the Fire Marshal gave a presentation outlining the upcoming changes to the Ontario Fire Code (OFC) regarding hotels. The changes have resulted in amendments to Parts 1 to 6, and the addition of the new retrofit section 9.9. The changes will come into effect on January 1, 2007, revoking article 1.1.6.2. Hotels will no longer be exempt from the requirements of the OFC. Hotels in existence prior to Sept 1, 1971 will also be required to comply with the provisions of the OFC. The changes include:

- New defined terms
- New requirements (Parts 2 and 6)
- Retrofit requirements for existing hotels (9.9)
- Compliance dates specific to hotels (9.1)

The purpose of the new section 9.9 is much the same as the remainder of Part 9; to upgrade existing buildings to meet a minimum level of fire and life safety. This section will apply to every hotel establishment that has at least one building that contains 4 or more guest suites and is more that one storey in building height or larger that 300 m2 in building area. This will include all hotel buildings located at the facility.

The following is a list of exceptions that are included within Section 9.9. Section 9.9 does not apply to:

- Buildings (or parts thereof) that satisfy that requirements of the Building Code as it read on or after July 1, 1993,
- Buildings (or parts thereof) regulated by OFC Section 9.2, 9.3, 9.5 or 9.6 on December 31, 2006.
- A major occupancy in a hotel building that is not under the control of the hotel operator (except where the life safety of hotel occupants is affected).

Section 9.9 requirements for major occupancy separations and smoke control measures are still applicable to hotel portions that are otherwise regulated by OFC Section 9.2, 9.3, 9.5 or 9.6, as well as major occupancies in hotel buildings not under control of the hotel operator.

Finally, there is an exception for Smoke Alarms, which indicates that the requirement for smoke alarms within guest suites applies to all hotels regardless of whether the remainder of Section 9.9 is applicable.

The application of Section 9.9 revolves

around the term "existing", which means "in existence" on January 1, 2007. It applies to systems, materials and construction (i.e. walls and floors), but does not limit the application of Section 9.9 to buildings in existence on this date (i.e. could be applied to hotels constructed after that date, if need be). Some examples of "existing" conditions:

- Walls, floors and support assemblies or reinforced concrete, masonry or clay tile will be deemed equivalent to a 2-hr rating.
- Closures protecting openings in a 1-hr fire separation can consist of wired glass in fixed steel frames.
- Emergency power supply for a fire alarm system is deemed acceptable if it can provide supervisory power for 24 hours and follow-up full load power for 5 minutes.

Compliance with the Hotel requirements can be achieved by either satisfying the requirements within the specified compliance periods, or by implementing an approved life safety study. Part 9 allows alternative materials, equipment or systems if they provide a similar level of life safety protection and if they are approved by the Chief Fire Official (CFO).

Within Section 9.9, there are a few different compliance schedules for various fire and life safety items. Most requirements of 9.9 must be complied with by January 1, 2007. The following is a list of compliance dates that must be met:

Compliance by January 1, 2008

Prepare and retain an audit of existing building fire safety features including:

- Fire containment/control
- Fire detection
- Fire suppression
- Egress

Compliance by July 1, 2008

- Provide sufficient combustion air for rooms with fuel-fired appliances.
- Install smoke alarms in each guest suite.

Compliance by January 1, 2010

- Fire Separate corridors serving guest suites.
- Provide self-closing devices on interior guest suite entry doors.
- Sprinklers in linen and refuse chutes.
- At least two exits on each floor area.
- Minimum distance between exits.
- Fire detectors at top of elevator shafts and exit stairs.
- Sprinklers in lieu of required fire detectors.

Compliance by January 1, 2012

- Rated fire separation between major occupancies.
- Fire dampers in ducts at fire separations, except in existing non-combustible ducts.
- Fire separation of vertical service spaces.
- Smoke control measures in high buildings.
- Restrictions on use of dead-end corridors.
- Voice communication system in high buildings.
- Access routes for fire fighting.
- Firefighters' elevator
- Emergency power supply to be standardized.

Hotels built prior to Sept 1, 1971 are also subject to additional requirements within Section 9.9. They are as follows:

Compliance by January 1, 2010

- Separate hotel building from connected adjacent buildings.
- Fire separate each guest suite from adjacent areas on the same floor.
- Subdivide floor area with rated fire separation (for reduced minimum distance between exits).
- Limit maximum travel distance to an exit.
- Exit stairway to lead to safe outside area.
- Requirements for an exit through lobby.
- Restrict use of exterior exit stairways and fire escapes above the 6th storey.

Compliance by January 1, 2012

- Install smoke detectors in corridors serving guest suites (in 4 storey or higher combustible buildings).
- Sprinkler combustible buildings (if building is 5 storeys or higher).
- Requirements for interconnected floor spaces.
- Limits on lengths of dead-end corridors.
- Standpipe and hose system in buildings over 3 storeys.

Along with the addition of Section 9.9 to the OFC, there have also been revisions made to the existing parts of the code. The following are a few examples of the revisions being made to the OFC:

2.4.1.2. – Furniture is permitted in corridors serving guest rooms if the egress is not obstructed and furniture is non-combustible, solid wood or approved.

2.8.2.2. – Sufficient supervisory staff shall be available to carry out fire safety plan duties in hotels. Supervisory staff shall be on duty whenever the building is occupied if it is higher than 3 storeys or has a total area of more than 3000m2.

2.8.2.5. – Emergency procedures, location of exits and fire safety rules shall be posted on the inside of each guest suite door.

6.6.3.6. – Minimum monthly testing and inspections of fire pumps are to be carried out in buildings containing a hotel.

One of the most important elements to the new Section 9.9 of the OFC is the requirement for hotels to provide a building audit. The hotel owner must prepare and retain an audit of existing building fire safety features pertaining to fire containment and construction, fire detection, fire suppression and egress. The OFM is currently developing an audit guideline for use by hotel owners. This will assist owners in conducting a step by step evaluation of their hotel and will provide an acceptable record of the audit if completed and saved. The audit will be provided on the hotel web page accessed from the OFM website (www.ofm.gov.on.ca).

From the presentation given by Mr. Kim Bailey, we can see that the changes to the OFC, including the addition of Section 9.9., will require a lot of attention from the hotel and fire protection industry. However, the final product, once compliance has been complete, will provide a much safer hotel environment for work and play. The CFSA would like to thank Mr. Bailey for his very informative seminar. ■

The 2006 **Building Code**

This article was provided by Mr. David Brezer, Director of the Building and Development Branch at the Ministry of Municipal Affairs and Housing (www.obc.mah.gov.on.ca).

The Province released the 2006 Building Code on June 28, 2006, with the filing of Ontario Regulation 350/06. The new Code comes on the 30th Anniversary of the original Building Code.

The development of the 2006 Building Code has been assisted by the invaluable involvement of designers, building and fire officials, manufacturers and the public in public consultations and on Building Code technical advisory committees.

The 2006 Building Code is the first to be written in an objective-based format, which means that in addition to including prescriptive and performance-based technical requirements known as "acceptable solutions", the new code contains objectives explaining the rationale behind the technical requirements. This provides a more comprehensive framework for evaluating alternative designs, systems and building materials and will increase consistency in Code interpretations and promote innovation in design and construction.

The new Code also includes over 700 technical changes, and represents a much needed update to the current version of the Building Code, which dates from 1997. Many of the changes increase the level of harmonization between Ontario's Code and the 2005 model National Building Code. Other changes support Ontario's policy priorities such as energy efficiency, environmental integrity and barrier-free accessibility.

Most of the changes set out in the next edition of the Building Code come into force on December 31, 2006, although certain energy efficiency changes will be phased in through the end of 2011.

Objective-based Format

The adoption of an objective-based format will help facilitate innovation in building design and competitiveness in the construction sector and will also allow for more flexibility in terms of compliance with building regulations. This is because it will create a framework for evaluating alternatives to current Code provisions by clarifying the intent behind the technical requirements of the Code. In adopting an objective-based code, Ontario will be keeping pace with other provincial, national and international jurisdictions that are moving to objective-based codes.

Existing Codes are generally prescriptive - they describe "what" you have to do. The objective-based format explains the desired result or the "why" behind technical requirements. Every requirement is linked to an objective. For continuity, the objective-based Code continues to contain technical requirements known as "acceptable solutions" which are linked to the "objectives" of the Code and are used to benchmark "alternative solutions". Each objective of the Code (e.g. Safety) has a sub-objective (e.g. Fire Safety).

Examples of New Fire Safety Requirements

The 2006 Building Code is based on the model National Building Code and contains several new fire safety requirements. For example, the new Code permits materials other than concrete or block to be used in a fire wall, provided certain conditions are met. In addition, changes have been made to the fire alarm requirements to permit automatic silencing of in-suite fire alarm signals.

The 2006 Building Code has also been amended to reflect Ontario's specific policy objectives. For example, Ontario's Code allows the use of window sprinklers to protect glazed wall assemblies in a fire separation (Article 3.1.8.18.).

Energy Efficiency Requirements

The 2006 Building Code includes significant changes related to the energy efficiency of buildings. These changes reflect the Government's commitment to reducing the demand for electricity, reducing green house gas emissions and creating a culture of conservation in Ontario. The changes balance energy efficiency with concerns around technical feasibility, enforceability and the impact on stakeholders. Up-front cost concerns are largely addressed through increased affordability in the operation of buildings.

Energy changes for Ontario that come into force on December 31, 2006 include the following:

- Increased insulation levels of ceilings, walls, foundation walls and more energy efficient windows in houses;
- All gas and propane-fired furnaces in houses will need to have a high-efficiency rating; and
- Design of non-residential buildings and larger residential buildings will comply with either the requirements of the model National Energy Code for Buildings, 1997 with appropriate modifications to increase energy efficiency or with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE 90.1 – 2004) standard, modified to meet Ontario's higher efficiency requirements and to accommodate Ontario's climate.

Further Code changes related to energy efficiency will be phased in. Effective December 31, 2008, the Code will require that new houses be constructed with near-full-height basement insulation. In addition, as of December 31, 2011, the Building Code will require new houses to meet standards that are substantially in accordance with EnerGuide 80 and also require that new non-residential and

larger residential buildings meet standards that are substantially in accordance with energy efficiency levels that are 25% higher than the Model National Energy Code for Buildings.

Other changes promote the use of "green" technologies, including solar collector systems and greywater reuse. These changes first came into force on June 28, 2006 under the 1997 Building Code.

Accessibility Requirements

The 2006 Building Code sets new standards for accessibility for people with disabilities, supporting Ontario's goal to be a leader in accessibility. For example:

- Public corridors will be built to accommodate modern wheelchairs;
- New tactile signs will make it easier for the visually impaired to navigate through buildings; and
- Ten per cent of the units in a new apartment building or hotel will have to include accessibility features.

Under a process set out in the Accessibility for Ontarians with *Disabilities Act, 2005,* the Province will continue to work to achieve even higher accessibility standards to be implemented in phases through 2025. It is possible that the Building Code may be considered as the vehicle for new standards developed relating to buildings.

Small Care Homes

The new Code also encourages the construction of small care homes by increasing flexibility in the design of such facilities. These changes, which were included in the transition regulation that came into force on June 28, 2006, will make it easier and more cost- effective to build a new small care home or to create one by converting an existing building.

The changes to B3 care occupancies that contain sleeping accommodation for not more than 10 persons and not more than 6 that require assistance in evacuation during an emergency include:

- Waiving the requirement to install certain fire dampers;
- Allowing the use of residential-type fire sprinkler systems;
- Waiving the requirement for certain fire resistance requirements for corridors and sleeping rooms;
- Exempting small B-3 occupancies from the requirements for an institution-width corridor;
- Exempting small B-3 occupancies from the requirements for certain exit signs; and
- Recognizing lower structural floor loading requirements for some corridors.

Small Building Construction

The 2006 Building Code also makes it easier to design, construct and inspect houses and other small buildings by including new prescriptive requirements that recognize larger and more complex house layouts. These requirements are unique to the new Ontario code. For example, the new Code includes tables that include requirements for lintels over two-car garages, and double-height stud walls.

Transition period

Most of the requirements in the next edition of the Building Code will come into force on December 31, 2006. This is six months after the release of the 2006 Building Code in June 2006 and this gave building officials, builders, designers and product manufacturers time to become familiar with the objective-based format and the new technical provisions.

In addition, the Building Code contains a transition provision that allows the use of the 1997 Code for construction under on permits issued before December 31, 2006, or under permits applied for before March 31, 2007 where working drawings, plans and specifications were substantially completed before December 31, 2006. The construction must, however, commence within six months after the permit is issued.

Code Publication

The Ministry of Municipal Affairs and Housing 2006 Building Code Compendium, including a fully formatted and indexed edition of O. Reg. 350/06, supplementary standards, appendices and related materials, may be ordered from Publications Ontario at:

www.publications.gov.on.ca
(416) 326-5300
(416) 325-3408 TTY
1-800-668-9938 Toll-free
1-800-268-7095 TTY Toll-free
(416) 325-3407 Fax

Information Sessions and Training

As part of the release of the 2006 Building Code, the Ministry held over 20 information sessions across the province. The slides presented at these sessions are available on the Building Code website at www.ontario.ca/buildingcode

Supportive training in key areas is being prepared and will be available at various points in 2007. In particular, the Ministry is preparing objective-based codes transition training to help building officials, designers, builders and other Code users become familiar with the administration and use of the new code structure. New technical courses include: plumbing, building structural, and energy conservation. Other courses, including the Fire Protection and Building Services courses, will be updated in 2007. This training will be developed in consultation with the building community and is expected to be delivered through the Ministry's existing network of licensed training organizations.

No immediate requirement for the updating of qualifications of building practitioners, including designers and building officials, is foreseen. However, the Ministry will be consulting with stakeholders on the best way to ensure that the currency of Code knowledge is maintained. The Ministry's very aware of the significant efforts that practitioners have put into demonstrating a high level of Code knowledge over the past 3 years, and will work with stakeholders to explore the best ways to maintain this level.

Further Information

For more information on the 2006 Building Code and related matters, please visit the Building Code website at: www.ontario.ca/buildingcode. You may also sign up for *CodeNews* to receive e-mail newsletters with updates and information related to the Building Code. ■

A Suite of Kitchen Standards – **Improvements for Fire Safety**

This article was provided by Mr. Jack Robertson, Regulatory Services Manager for Underwriters Laboratories of Canada (ULC) (www.ulc.ca).

Restaurants pose unique risks by engaging in cooking activities that, by their very nature, create potential fire hazards. Not surprisingly, most restaurant fires occur in the kitchen.

Underwriters Laboratories' of Canada (ULC) recently updated their suite of standards that protect commercial and institutional kitchen cooking equipment to better address problems encountered in the field. These standards contain many significant changes based on top-level industry knowledge and expertise.

ULC's proven leadership in fire protection testing, coupled with the extensive scope of this new suite of standards, will ensure a consistent and comprehensive approach to fire safety. This will help maintain harmony in the installation and operation of commercial and institutional installations. The requirements in these interrelated standards are also consistent with one another, thereby reducing the potential for conflicting requirements. These ULC standards offer a distinct advantage to designers and operators who require up-to-date systems for protecting cooking equipment in today's commercial and institutional kitchens.

These standards, which are of interest to regulatory authorities, designers and operators of commercial and institutional kitchens, are:

ULC-S646-06 – Standard for Exhaust Hoods and Related Controls for Commercial and Institutional Kitchens

This Standard covers exhaust hoods for commercial and institutional kitchens intended for placement over restaurant type cooking equipment, such as ranges, broilers, deep-fat fryers, grills, etc. Exhaust hoods covered by these requirements are intended for installation in accordance with the National Building Code of Canada and the respective provincial or territorial equivalents. These requirements cover equipment rated not over 600 volts, and are intended for installation under the requirements of the Canadian Electrical Code, Part I.

The major change to the new edition of ULC-S646 concerns the grease dispensation rate. In order to more accurately represent restaurant cooking conditions, the grease rate has been reduced. Since the percentage of grease removed is the basis for acceptance of a filtration device, a finer mist, with smaller particle size, is judged to represent a more severe condition.

ULC-S647-05 – Standard for Exhaust Cleaning and Recirculation Assemblies for Commercial and Institutional Kitchen

This Standard applies to exhaust cleaning assemblies intended primarily for use with exhaust systems for commercial- and institutional- type cooking equipment, such as ranges, broilers, deep-fat fryers, grills, etc., that are gas-fueled and/or electronically fueled. This Standard also applies to exhaust recirculation units that are for connection to the outlet from air-cleaning assemblies, and are intended to temper makeup air by recycling up to 80 percent of the clean exhaust air to the kitchen area.

The Amendment to ULC-S647 is the same as the grease dispensation rate described above in the new edition of ULC-S646-06.

ULC-S649-06 – Standard for Grease Filters for Commercial and Institutional Kitchen Exhaust Systems

This Standard covers grease filter installation in collection hoods of commercial kitchen exhaust systems for conformance with the National Building Code of Canada and the respective provincial or territorial equivalents.

The major change to the new edition of ULC-S649 also relates to the grease dispensation rate described above in the new edition of ULC-S646-06.

ULC-S650-01 – Standard for the Installation and Performance of Ventilation and Fire Suppression Systems for Commercial and Institutional Cooking Equipment

Putting these all together, from the collection hood to the exhaust fan, this Standard covers the minimum requirements for the installation and operating performance of ventilation and fire suppression systems for commercial, industrial, institutional or similar cooking applications. The Standard integrates the requirements for the equipment and systems covered in the "600" Series of ULC standards on cooking operations.

For more information on these standards, contact Jennifer Jimenez in Ottawa, Ontario, by phone at +1-613- 755-2729, ext. 6222; or by e-mail at Jennifer.Jimenez@ca.ul.com. For more information on issues that face the fire and security community in Canada, contact Jack Robertson in Victoria, British Columbia, by phone at +1-250-598-1286; or by e-mail at Jack.Robertson@ca.ul.com. ■

Certified Fire Protection Specialist(CFPS) **Program Receives Accreditation**

This article originally appeared on the NFPA website (www.nfpa.org).

The National Fire Protection Association (NFPA) announced that the Certified Fire Protection Specialist (CFPS) program which they administer has received accreditation from the American National Standards Institute (ANSI) Personnel Certification Accreditation Committee. The vote to accredit came at the accreditation committee's September 19, 2006 meeting. "The ISO 17024 accreditation is an important milestone for CFPS and for the fire protection field of practice," said Dr. Robert S. Fleming, CFPS Board Chair. "Employers in the private and public sectors can be confident that fire protection specialists holding the CFPS designation possess the necessary skills and experience to effectively implement fire protection policies and strategies."

Accreditation by ANSI signifies that CFPS procedures meet ANSI's essential requirements for openness, balance, consensus and due process in accordance with the ISO 17024 standard. In order to maintain accreditation, CFPS is required to consistently adhere to a rigorous set of requirements or procedures. The accreditation is both an international and U.S. accreditation.

A mark of accreditation that has been awarded by a fair, impartial, and globally recognized third party such as ANSI is widely recognized as a valid measurement of the credibility and competency of the certification body. The accreditation enhances the integrity of the certification process, and improves consumer and public confidence in the personnel who hold the credential.

Since 1998, NFPA has administered the CFPS program. More than 2,000 professionals have acquired a level of expertise and professionalism through applied work experiences, related educational opportunities, and through successful completion of the CFPS examination.

NFPA has been a worldwide leader in providing fire, electrical, building, and life safety to the public since 1896. The mission of the international nonprofit organization is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training and education. Visit the NFPA Web site for more information (www.nfpa.org).■

Limited Licence Leads to New Job for **Certified Engineering Technologist**

This article was first published in the November/December 2006 edition of The Ontario Technologist magazine.

Kelly Schmid, C.E.T., attributes her new job as head of the Traffic Section with the Ministry of Transportation of Ontario in Thunder Bay to having earned her limited licence.

A graduate of Mohawk College in the transportation engineering technology program, Schmid received her limited licence from the Professional Engineers Ontario (PEO) in the spring of 2005. She had met the academic and experience requirements in Nov. 2004 and wrote the PEO professional practice exam in Dec. 2004.

She applied for the limited licence because of her interest in continuing her education and learning experiences and this was an excellent chance to do that. "It also allowed me to apply for some professional engineering positions within the MTO," she says. "Because of my limited licence, I was able to apply and be the successful candidate for my new job as head of the Traffic Section in Thunder Bay."

Licensed Engineering Technologist (LET) designation

The Ontario Association of Certified Engineering Technicians and Technologists (OACETT) and Professional Engineers Ontario (PEO) have been developing an implementation plan for the Licensed Engineering Technologist designation (LET). The designation was established through recommendations made by a PEO task group on licensing qualified engineering technologists to practise a limited scope of engineering in Ontario.

The new designation will be made available as a special class of limited licence for certified engineering technologist (C.E.T.) members of OACETT, subject to regulation changes. Under the new scenario, all LETs would be able to apply for a PEO Certificate of Authorization, which would authorize them to offer or provide professional engineering services within their defined scopes of practice to the public.

As the process to implement the LET continues, certified engineering technologists may apply for and obtain a limited licence, which allows them to accept responsibility for professional engineering within the defined limits of their licence. When the LET becomes available, existing OACETT limited licence holders will be able to make the move to the LET.

OACETT has established a Gold Card approach for members to streamline their application for a limited licence to practise engineering. The association has a committee to help members through the application process, including support to formulate a scope of practice. As a result, a number of members are en route to applying to receiving their limited licence.

Although the limited licence is available to non-OACETT members, only OACETT members with a limited licence will receive the additional title of Licenced Engineering Technologist once it becomes available.

Qualifications/requirements

The applicant for a limited licence must have a three-year diploma in engineering technology or the equivalent and 13 years of engineering experience (including education) acceptable to PEO Council. The applicant must have worked for one year under the supervision of a Canadian P.Eng. and have at least two years (the last two) of engineering experience in the scope of practice.

The applicant for the LET must have a three-year diploma in engineering technology or the equivalent, plus 11 years of engineering experience (including education) six years of which are relevant to the scope of practice and four years of which must be under P.Eng supervision within the scope of practice.

For more information about the limited licence and LET, please contact OACETT's registrar Sam DiGiandomenico at: sdigiando@oacett.org, and for an information package, please contact Barbara Chappell at: bchappell@oacett.org. For more information about joining OACETT, visit www.oacett.org. ■

TSSA Director's Order for Common Firefighters' Emergency Operation Key

Pursuant to clause 36.(3)(a) of the Technical Standards and Safety Act, 2000, the Technical Standards and Safety Authority (TSSA) has issued a Director's Order regarding elevators and a common firefighters' emergency operation key. The order requires that, for newly installed elevators with firefighters' emergency operation, the elevator emergency power selector switch, the three-position fire recall switch and the three-position fire operation switch be operable by a common key. The order also requires that, for elevators where firefighters' emergency operation was altered or installed, a common firefighters' emergency operation key be able to operate the fire recall switch and the fire operation switch. These requirements become effective on January 1, 2007.

The Director's Order can be found on the TSSA Web site at www.tssa.org/regulated/elevating/elevatingSafety.asp.

Enquiries about the Director's Order should be directed to the Elevating Devices Safety Program, TSSA at (416) 734-3300. ■

2006 Ontario Building Code Now Available

The 2006 Building Code Compendium has recently been released in binder, softcover and CD-ROM formats. It is projected that the 2006 Building Code Compendium will be shipping in January of 2007. Included in the 2006 Building Code Compendium will be the following:

- The Building Code Act, 1992
- A fully formatted and indexed edition of O.Reg. 350/06 as amended
- Supplementary standards, including Objective Attribution Tables
- Appendix notes
- Imperial equivalents
- Guide to the use of the code
- Highlights of major technical code changes to the new code
- History of code amendments

The 2006 Ontario Building Code comes into effect after December 31, 2006. Prepare for compliance to the new regulation. To order the compendium, please contact Publications Ontario at 1-800-668-9938 or visit their website at http://www.publications.gov.on.ca. ■

Welcome to the following **New Members**

BASIC CORPORATE

Fire Alert Mobile Extinguishers
City of Vaughan – Vaughan Fire & Rescue

INDIVIDUAL

Dave Manners
Dave Speed

CFSA SCHEDULED EVENTS

NEW DINNER MEETING FACILITIES:

Le Parc Conference and Banquet Facilities
8432 Leslie St., Markham, ON (southwest corner of Leslie and Hwy. 7)

DINNER MEETINGS

March 2007, TBA

TECHNICAL SESSIONS

February, 2007 TBA
March, 2007 TBA
April, 2007 TBA

CFSA/NFPA TRAINING SESSIONS

February 6, 2007
Evacuation Planning Workshop
Time: 8:00 a.m.
Location: LeParc Conference & Banquet Centre
Guest Speaker: Craig Schroll, Firecon Inc.

OTHER EVENTS

February 5, 2007
Construction Specifications Canada – Toronto Chapter
Toronto, ON

April 15 – 17, 2007
CASA Annual General Meeting
Miami, Florida

May 23 – 26, 2007
Construction Specifications Canada
Vancouver, B.C.

June 3 – 7, 2007
NFPA World Safety Conference
Boston, MA

June 3 – 7, 2007
Fire Chiefs Association of British Columbia
Annual Conference and Tradeshow
Kelowna, B.C.

CFSA News in **Electronic Format**

Since the introduction of the "Members Section" on the CFSA website, the CFSA journal has been made available to all members in a downloadable electronic format.

Now all members who have registered an email address with CFSA will be receiving an electronic copy (PDF format) of the CFSA news instead of a printed copy on a quarterly basis. Those members who have not registered an email address with the CFSA will continue to receive a printed copy of the CFSA News.

For those members who still wish to receive a printed copy of the journal, please fax the form below to (416) 491-1670 attention Mary Lou Murray.

Members who have yet to register an email address with the CFSA can do so by emailing us at cfsa@taylorenterprises.com.

☐ I wish to receive a printed copy of the CFSA News.

Name _____

Company Name _____

Address _____

Tel: _____

Fax: _____

Email: _____

Membership Application Form

Why Corporate Membership?

Corporate Membership is cost effective because it allows any number of individuals from your organization to participate in the many functions provided by CFSA throughout the year. Any number of persons can attend our monthly dinner meetings/ technical sessions or our annual conference at the preferred member's rate. Your advertisement in the CFSA journal is circulated to CFSA's membership of over 250 professionals in the Fire Safety Industry.

Basic Corporate

Includes 3 individual memberships; Company recognition in each of the four issues of the CFSA journal.

Class 4 Corporate

Same as Basic Corporate as well as a Business Card advertisement in each of the four issues of the CFSA journal.

Class 3 Corporate

Same as Basic Corporate as well as a 1/4 page advertisement in each of the four issues of the CFSA journal.

Class 2 Corporate

Same as Basic Corporate as well as a 1/2 page advertisement in each of the four issues of the CFSA journal.

Class 1 Corporate

Same as Basic Corporate as well as a full page advertisement in each of the four issues of the CFSA journal.

Individual Member: Includes four issues of the CFSA journal, CFSA news and discounted rates at Association functions.

Student Member: Includes four issues of the CFSA journal and discounted rates at Association functions.

Associate Member: For individuals and companies located beyond a radius of 500 km from the Greater Toronto Area. Includes four issues of the CFSA journal and discounted rates at Association functions.

Provincial/Territorial Chapter: For groups of members within a province or territory. Includes 4 individual memberships; member rate for all staff at dinner meetings, technical seminars and Annual Education Forum; Recognition in each of the four issues of the CFSA journal. Contributes articles in CFSA journal.

2006 Membership Fees

	Fee	+6% GST	Total
○ Class 4 Corporate	$650.00	$39.00	$689.00
○ Class 3 Corporate	$ 750.00	$45.00	$795.00
○ Class 2 Corporate	$ 925.00	$55.50	$980.50
○ Class 1 Corporate	$ 1,250.00	$75.00	$1,325.00
○ Basic Corporate	$ 375.00	$22.50	$397.50
○ Individual	$75.00	$4.50	$79.50
○ Student	$25.00	$ 1.50	$26.50
○ Associate	$50.00	$ 3.00$	53.00
○ Provincial/Territorial Chapter	$200.00	$ 12.00	$212.00

CFSA Application for Membership

Name _____

Company/Affiliation _____

Address _____

_____

City _____

Prov. _____ Postal Code _____

Business Phone _____

Business Fax _____

E-mail _____

Please indicate how you first heard about CFSA: _____

_____

Please indicate in the appropriate box the category that best describes your vocation:

- ○ Architect
- ○ Building Official
- ○ Insurance Industry
- ○ Fire Protection Manufacturer/Supplier
- ○ Building Owner/Developer/Manager
- ○ Other (please specify)

_____

- ○ Engineer
- ○ Fire Service
- ○ Fire Consultant

Method of Payment:

❑ Cheque Enclosed $ _____

❑ VISA ❑ MasterCard ❑ AMEX

Account # _____

Expiry Date _____

Signature _____

Please return this completed form with membership fees to:

Canadian Fire Safety Association
2175 Sheppard Avenue East, Suite 310, Toronto, Ontario M2J 1W8
Telephone: (416) 492-9417 • Fax: (416) 491-1670
E-mail: cfsa@taylorenterprises.com • www.canadianfiresafety.com

CFSA Policy Statement

The Federal Government has introduced new privacy legislation effective January 1, 2004. CFSA respects your privacy and has included their privacy statement on the CFSA website at www.canadianfiresafety.com for your review.

CFSA does not share your information with any other organization. Paying your membership renewal with CFSA indicates that you wish to continue receiving Association information.

CORPORATE Members

A/D FIRE PROTECTION SYSTEMS
TORONTO, ON (416) 292-2361
Don Falconer
Stevo Miljatovich
Sander Trestain

ATLANTIC PACKAGING PRODUCTS
TORONTO, ON (416) 297-2261
Gordon Varey

BONPET FIRESAFETY SYSTEMS
RICHMOND HILL, ON (905) 251-4090
Tom Gilbert
Tony Fernando
Cezary Cender

BRAMPTON FIRE & EMERGENCY SERVICES
BRAMPTON, ON (905) 874-2741
Chantelle Cosgrove
Terry Irwin
Brian Maltby

CAFCO INDUSTRIES INC.
TORONTO, ON (416) 679-2830
Brad Hart
Hugh Lim

CARLON FIRE EQUIPMENT
MARKHAM, ON (905) 477-3265
Paul Jewett
Michael Phillips

CDN. AUTOMATIC SPRINKLER ASSC.
MARKHAM, ON (905) 477-2270
John Galt
Matthew Osborn

CGI INSURANCE BUSINESS SERVICE
MARKHAM, ON (905) 474-0003
Mike McKenna
John Trozzo
Kenneth Steger

CITY OF TORONTO – UDS BLDG DIV
TORONTO, ON (416) 397-4446
Irene Moore

CITY OF VAUGHAN, FIRE & RESCUE SERVICE
VAUGHAN, ON (905) 832-8585
Andrew Wong
Leo Grellette

DURABOND PRODUCTS LTD.
TORONTO, ON (416) 759-4474
Guido Rapone

FCS FIRE CONSULTING SERVICES
INNISFIL, ON (800) 281-8863
Michelle Farley
Stephen Church
Sandra Fleet

FIRE ALERT MOBILE EXTINGUISHERS
ROKLAND, ON (613) 761-8328
Yvan Joule

FIRE DETECTION DEVICES LTD.
MARKHAM, ON (905) 479-7116
David Duggan

FIRE MONITORING OF CANADA INC.
ST. CATHERINES, ON (800) 263-2534
Jim Asselstine
Holly Barkwell-Holland
Norm Cheesman

FIRE SAFETY TECHNOLOGY INC.
MISSISSAUGA, ON (905) 564-6691
Leo Avdeev
George Perlin

GE SECURITY CANADA
OWEN SOUND, ON (519) 376-2430
Flavian Quiquero
Tony Mezenberg

GREATER TORONTO AIRPORT AUTH.
TORONTO, ON (416) 776-4515
Michael Figliola

HALSALL ASSOCIATES LTD.
TORONTO, ON (416) 487-5256
Jay Leedale, P.Eng.
Daniel Templeton, P.Eng.
Michael Van Dusen, P.Eng.

HARDING FIRE PROTECTION
TORONTO, ON (416) 292-0599
Paul Adams
Paul Harding
Fred Lutz

HILTI CANADA
ON (905) 483-4146
Paul Spain

HRSDC LABOUR PROGRAM – FIRE PROTECTION SERVICES
TORONTO, ON (416) 954-2876
Randy De Launay
Raymond Fung
Mark Kohli

INDEPENDENT PLUMBING & HEATING CONTRACTORS ASSOCIATION
TORONTO, ON (416) 248-6213
Mauro Angeloni

INGERSOLL-RAND ARCHITECTURAL
MISSISSAUGA, ON (905) 403-1800
David Golych

LEBER/RUBES INC.
TORONTO, ON (416) 515-9331
Fred Leber
Rick Mori
Jon Winton

MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING
TORONTO, ON (416) 585-7133
David Brezler
Cengiz Kahramanoglu
Alek Antoniuk

MORRISON HERSHFIELD
OTTAWA, ON (613) 739-2910
Judy Jeske
David Sylvester
David F. Hribar

NADINE INTERNATIONAL INC.
MISSISSAUGA, ON (905) 602-1850
Ajwad Gebara
Allison McLean
Nahla Ali

NATIONAL FIRE PROTECTION ASSOC.
QUINCY, MA (617) 770-3000
James M. Shannon

NATIONAL RESEARCH COUNCIL
OTTAWA, ON (613) 993-40
Philip Rizcallah

OFFICE OF THE FIRE MARSHAL
TORONTO, ON (416) 325-3100
Doug Crawford
Bev Gilbert
Susan Clarke

OFS FIRE PREVENTION
BARRIE, ON (705) 728-5289
Peter Ironside
Jeff Ough

ONTARIO POWER GENERATION INC.
PICKERING, ON (905) 914-0506
Scott Cameron
Tom Bell
Bruce Percival

ONTARIO PROFESSIONAL FIREFIGHTERS ASSOCIATION
BURLINGTON, ON (905) 681-7111
Jeff Braun-Jackson

ONYX-FIRE PROTECTION SERVICES
TORONTO, ON (416) 674-5633
Mark Freeman

PETERBOROUGH FIRE DEPARTMENT
PETERBOROUGH, ON (705) 745-3281
Eric Chant
Lee E. Grant
Greg Simmons

PRESURE STEAM ONTARIO LIMITED
TORONTO, ON (416) 590-7711
Gilbert Caubang

PRO-FIRESTOP
TORONTO, ON (416) 293-0993
John Sharpe

PROTOCOM LIMITED
RICHMOND HILL, ON (905) 773-0424
Roy Armstrong

PYRENE CORPORATION
MARKHAM, ON (905) 940-8080
Joe Di Filippo
Andrew Xu

RANDAL BROWN & ASSOCIATES LTD.
TORONTO, ON (416) 492-5886
Randal Brown
Matteo Gilfillan
David Johnson

ROYAL QUICKSTOP FIRE PROTECTION
WOODBRIDGE, ON (905) 856-7550
Brian Didone
Walter Milani, P.Eng.

SARGENT OF CANADA LTD.
MARKHAM, ON (905) 940-2040
Murray Lewin

SENECA COLLEGE OF APPLIED ARTS
TORONTO, ON (416) 491-5050
Stu Evans
John Glass
Anthony van Odyk

SIEMENS-FIRE SAFETY DIVISION
BRAMPTON, ON (905) 799-9937
Don Boynowski
Al Hess
John Drimmel

SIMPLEX GRINNELL
MISSISSAUGA, ON (905) 212-4400
Frank Detlor
Steve Dickie
Michael Hugh

THERMOFIRE SYSTEMS INC.
OAKVILLE, ON (905) 469-0063
Mike McClure

TORONTO COMMUNITY HOUSING CORPORATION
TORONTO, ON (416) 981-4400
Rainer Soegtrop

TORONTO FIRE SERVICES
TORONTO, ON (416) 338-9319
Terry Boyko
Jack Collins, Division Chief
Bill Stewart, Fire Chief

TORONTO TRANSIT COMMISSION
TORONTO, ON (416) 393-3020
Nick Pallotta
Willie Sturm

TOWN OF MARKHAM, BLDG. DEPT.
MARKHAM, ON (905) 477-7000
Chris Bird
Tony Boyko
John Wright

TOWN OF RICHMOND HILL
RICHMOND HILL, ON (905) 771-8800
Morris Luchetta
Michael Janotta
John DeVries

TROW CONSULTING ENGINEERS LTD.
BRAMPTON, ON (416) 793-9800
Michael Chan
Khurshid Mirza
Lui Tai

TYCO THERMAL CONTROLS
TORONTO, ON (416) 241-3524
Rick Florio
Barry O'Connell
Brian Bishop

UNDERWRITERS' LABORATORIES OF CANADA
TORONTO, ON (416) 757-3611
Sandy Leva
Paul Muia
Rae Dulmage

VIPOND FIRE PROTECTION INC.
MISSISSAUGA, ON (905) 564-7060
Larry Keeping

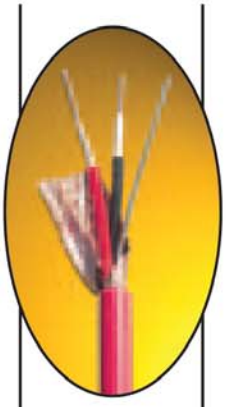
Fire safety is more than a matter of code.

It's a matter of conscience.

Now satisfy both with cost-effective, easy-to-install PyroCiC™ 2-hour fire-rated cable. The 2002 NFPA 72 is clear. When emergency notification circuits are used for partial evacuation or relocation of occupants, the wiring must be fire-survivable. Ignore the code, and you could be facing heavy consequences — not just the financial cost of penalties, but the devastating cost of human life.

Fortunately, compliance is easier and less costly than you think. Because new PyroCiC 2-hour fire-rated cable from Pyrotenax was specially designed to meet the survivability and installation requirements of NFPA 70 and NFPA 72.

Triple barrier. Triple protection. High-quality PyroCiC features an exclusive triple-barrier design — mica glass tape, silicone rubber insulation and a copper foil shield, all contained in a low-smoke, zero-halogen jacket. When installed in 3/4-inch EMT, it provides the 2-hour protection that shields critical fire alarm circuits from fire.



PyroCiC™ 2-hour fire-rated cable. Triple-barrier PyroCiC fire alarm cable meets the revised NFPA 72 survivability requirements, and makes installation and retrofit easy and economical.

Tremendous cost savings. Forget high-dollar renovations. PyroCiC allows both the initial run and the return loop to be installed in the same shaft. That means the cost of meeting the code — in new installations or retrofits — is a fraction of the cost of construction alternatives.

Quick, easy installation. Unlike cables with pressure-extruded jacketing, PyroCiC features a "tubed" jacket for fast, simple removal without damage to the insulation. Just score, break and remove. Color-coded — not merely labeled — wires help speed installation, too.

Don't wait. Don't risk the costs of noncompliance. Find out more about PyroCiC cable by calling 1-800-234-6501, e-mailing info@tycothermal.com or visiting www.tycothermal.com. It's a matter of code. It's a matter of conscience. It's a matter of time.

Pyrotenax®

tyco / Flow Control / Tyco Thermal Controls