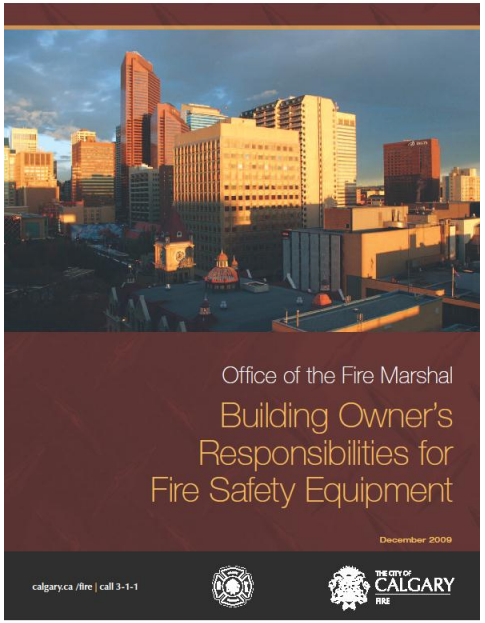
BOMA Calgary Luncheon

Thursday, October 11, 2012

Building Owners Responsibilities for Fire Safety Equipment (Fire Alarm)

Canadian Fire Alarm Association



BOMA CALGARY CORPORATE PARTNER

Presentation Overview

- The Codes
- Your responsibilities
- Preventative Maintenance Schedules (Fire Alarm Systems)
- Permit requirements for modifying an existing fire alarm system.

Fire & Life Safety Codes

"The Alberta Building & Alberta Fire Code each contains provisions that deal with the safety of persons in buildings in the event of a fire and the protection of buildings from the effects of fire".

The Safety Codes Act : Legislation which adopts the Codes.

Complimentary Codes

Alberta Building Code (ABC 2006) establishes minimum standard for buildings at time of original construction.

Also applies to the building when undergoing alteration, change of use, or being demolished.

Alberta Fire Code (AFC 2006) establishes minimum standard for the on-going maintenance and use of the fire safety and fire protection features incorporated in buildings.

Conduct of activities that might cause fire hazards
Limitations on hazardous contents
Fire Safety plans
Fire safety at construction and demolition sites

Complimentary Codes for safe environment.

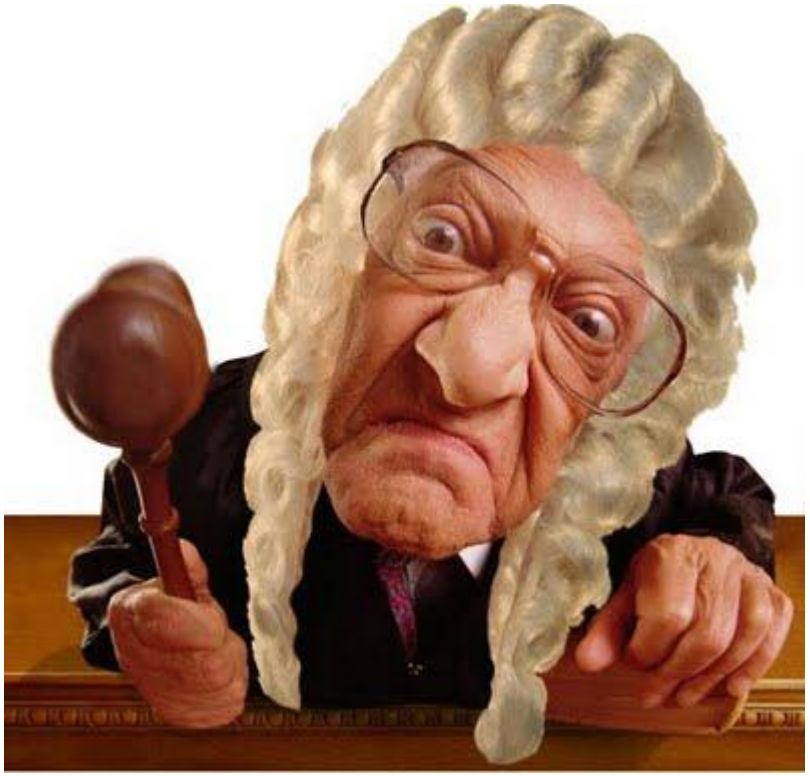
Objective Based Codes

- Alberta Fire Code 2006
- Three Divisions A, B and C
  - Division A: Compliance, Objectives and Functional Statements
  - Division B: Acceptable Solutions
  - Division C: Administration Provisions

Who is responsible?

AFC 2006 Division C;
Sentence 2.2.1.1.(1)

“Unless otherwise specified, the owner or the owners authorized agent shall be responsible for carrying out the Provisions of this Code”



Who is an owner?

- AFC 2006 Division A; Article 1.4.1.2.
- Owner:

Means a lessee, a person in charge, a person who has care and control and a person who holds out that the person has the powers and authority of ownership or who for the time being exercises the powers and authority of ownership”

Alberta Fire Code 2006
Division B

Part 1 - General

Part 2 - **Building & Occupant Fire Safety**

Part 3 - Indoor & Outdoor Storage

Part 4 - Flammable & Combustible Liquids

Part 5 - Hazardous Processes & Operations

Part 6 - **Fire Protection Equipment**

Part 7 - Fire Emergency Systems in High Buildings

Part 6 Fire Protection Equipment

6.1. – General

6.2. – Portable Extinguishers

6.3. – Fire Alarm and Voice Communication Systems

6.4. – Water-Based Fire Protection Systems

6.5. – Emergency Power Systems and Unit Equipment for Emergency Lighting

6.6. – Special Fire Suppression Systems

6.7. – Smoke Alarms and Carbon Monoxide Detectors

6.8. – Hose for Firefighting

6.9. – Lightning Protection Systems

6.10.–Objectives and Functional Statements

Maintenance Requirements

AFC 2006 Div B, Article 6.3.1.3. Inspection and Testing

- Fire Alarm systems shall be inspected and tested in conformance with CAN/ULC-S536, “Inspection and Testing of Fire Alarm Systems”

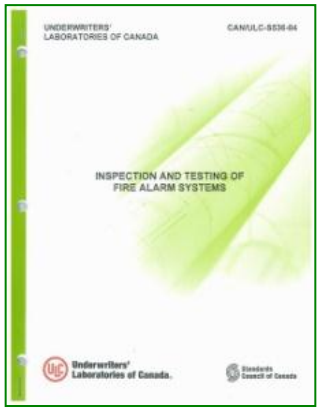
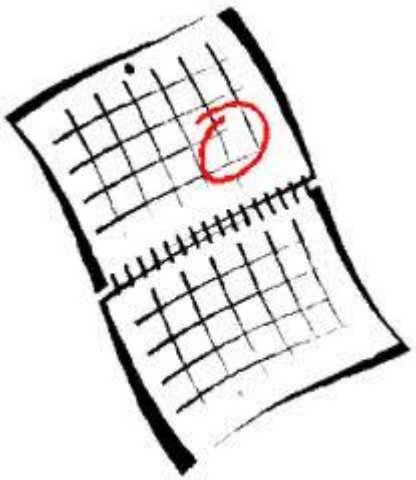


Table 1.3.1.2. references the 2004 Edition.

Maintenance Schedules



CAN/ULC-S536-04

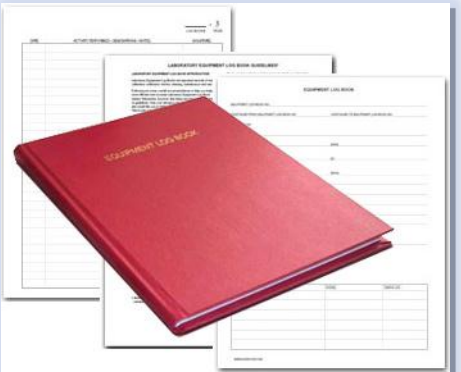
Daily:

- Check Trouble indicator
- Check AC power “On” Indicator

Monthly Fire Alarm Schedule

Monthly: (whilst on emergency power)

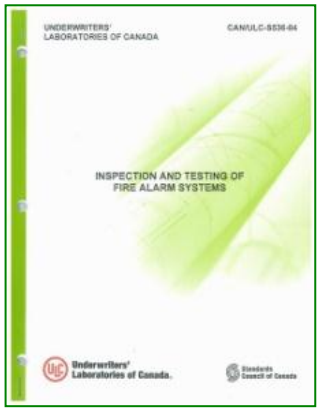
- Operate one initiating field device or manual station (rotational basis).
- Confirm alert/alarm signals in at least one zone (rotational basis), or per fire safety plan.
- Check annunciator for correct annunciation.
- Test common audible & Visual Indicators.
- Check batteries are clean and terminals are tight.
- Operate one emergency telephone (rotational basis).
- Test Voice paging to one zone (rotational basis)



Example Form: Appendix D

Suggestion: Log books

Annual Documentation



CAN/ULC-S536-04

5.1. **DOCUMENTATION**
5.1.1. The inspections and tests required by this Standard shall be documented in a report similar to that shown in appendix E, Annual Fire Alarm System Test and Inspection Records

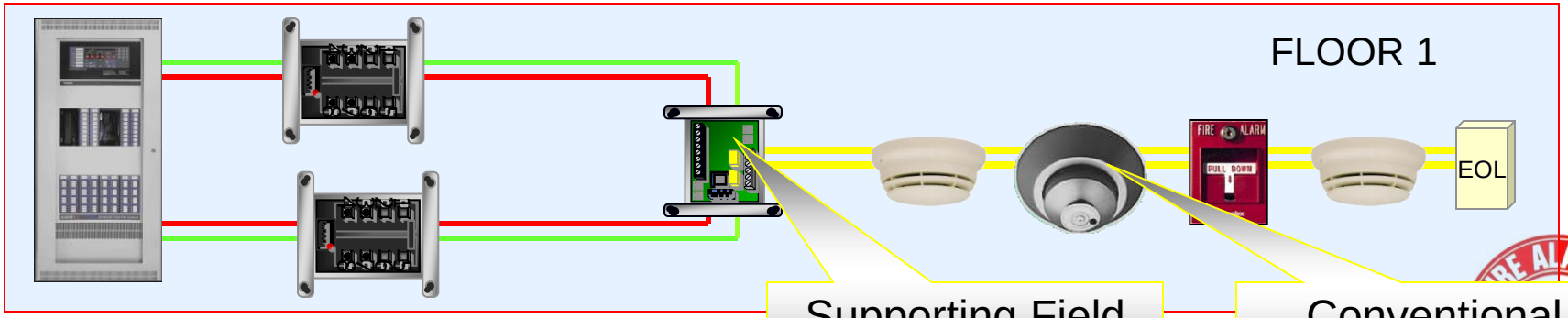
DOCUMENT…DOCUMENT…DOCUMENT

Provide Full and Complete Report

E3.2 INDIVIDUAL DEVICE RECORD

Building XYZ
First Floor

Location	Device Type	Correct Install	Alarm Oper	Annunciation	Circuit #	Sensitivity	Flow Delay	*Notes*
Electrical Closet 1A	SFD							Supports 1st FLR Fire Devices
Corr. Adj. Room 1A	S							
Janitor's Closet 1C	HT							
Adj. East Stair	M							
Corr. Adj. Room 123	S							
Adj. Fire Panel	SFD							Isolates 1st FLR Fire Devices



Permit Requirements

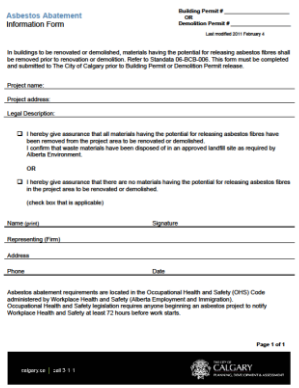
ALBERTA
REGULATION
204/2007
Safety Codes Act
PERMIT REGULATION

“Renovation or Addition”

Building Permit

- Everything other than “Maintenance”.
- Changes to the existing design

The City of Calgary:
Development & Building Approvals
http://www.calgary.ca/



- Application form
- Asbestos Abatement form

Electrical Permit

In addition to a Building Permit, if you intend to “**install or modify**” electrical wiring, you will also require a separate Electrical Permit.

Your licensed electrical contractor is responsible for obtaining this permit.

CONTRACTOR'S
ELECTRICAL PERMIT APPLICATION

Fire Alarm - Requires BP #

MODIFICATIONS TO EXISTING SYSTEMS

- Standata FCI-08-06 (March 2008)
- Buildings constructed prior to 1997
  - Maintenance: No professional engineering involvement required.

2. REPAIR

- Applies to FA systems constructed prior to ABC 1997
- Fire alarm systems Installed prior to 1978
  - Should Meet Minimum ABC1981; ULC-S524-M1980

- Piece for peace replacement
- Can incorporate newer technologies
  - 3 wire system replaced with new addressable control panel.
  - Bells replaced with new audible devices
    - mixed signals
    - dBA Sound levels

DANGER

- "Principle of a repair is to have the system meet and function to the original requirements of the Code and Standards applicable at the time of construction".

- Professional involvement as required by ABC
- May include Little as a scope of Work letter and Verification

3.UPGRADE

- Applies to FA systems constructed prior to ABC 1997
- Fire alarm systems Installed prior to 1978
  - Should Meet Minimum ABC1990; CAN/ULC-S524-M86

- Changes to the design
  - New devices
  - Components
  - Panels
  - Zones, etc
  - Incorporate barrier free requirements (such as Visual appliances)

- Professional involvement as required by ABC
- May include Little as a scope of Work letter and Verification

4. REPLACEMENT

- Applies to Buildings that undergo complete or extensive modernization involving the “gutting out” of basic building services and equipment. It is intended to make an old building into a new building.
- May be initiated by the owner usually as a result of changing occupancy or use of the building.

- **USE ABC 2006**

ANALYSIS PROCEDURE

- Is the alarm system in a safe and operable working condition?
- What year was the building constructed?
- What regulations or Code originally applied to the building?
- Are upgrading guidelines being applied to the building?
- Have changes to the building affected the design or safety of the original system?
- Determining the extent of new Code requiremnts applicable in providing an acceptable degree of safety.

ABC 2006 DIVISION A PART 1 COMPLIANCE

Section 1.1 General

1.1.1.1. Application of this Code

Code applies to:

- The correction of an unsafe condition in or about any building or property
- the installation, replacement, or alteration of equipment regulated by this Code

1.1.1.2 Application to Existing Buildings

- Level of life safety and building performance shall not be decreased

Professional Involvement

ABC 2006 DIV C
Section 2.4 Professional Design and Review

- Design the system
- Perform field reviews
- Perform Verification

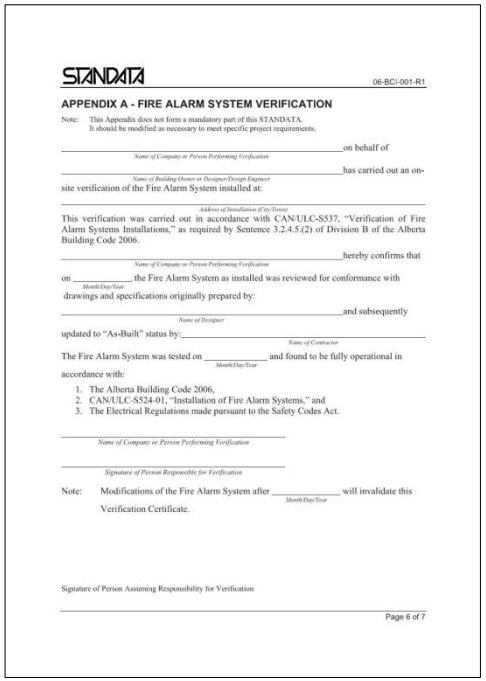
SCHEDULES A,B,C

APEGGA
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

CANADIAN FIRE ALARM ASSOCIATION CFAA

FIRE ALARM AND FIRE SUPPRESSION SYSTEM VERIFICATION AND TESTING CERTIFICATES

- Standata 06BCI001-R1:
  - ✓Design engineer will be “Involved” in the VI
  - ✓Verification Certificate



STANDATA 06-BCI-001-R1

APPENDIX A - FIRE ALARM SYSTEM VERIFICATION

Note: This Appendix does not form a mandatory part of this STANDATA. It should be modified as necessary to meet specific project requirements.

_____ on behalf of
Name of Company or Person Performing Verification

_____ has carried out an on-site verification of the Fire Alarm System installed at:
Name of Building Owner or Designer/Design Engineer

_____
Address of Installation (City/Town)

This verification was carried out in accordance with CAN/ULC-S537, “Verification of Fire Alarm Systems Installations,” as required by Sentence 3.2.4.5.(2) of Division B of the Alberta Building Code 2006.

_____ hereby confirms that
Name of Company or Person Performing Verification

on _____, the Fire Alarm System as installed was reviewed for conformance with
Month/Day/Year

drawings and specifications originally prepared by:

_____ and subsequently
Name of Designer

updated to “As-Built” status by: _____
Name of Contractor

The Fire Alarm System was tested on _____ and found to be fully operational in
Month/Day/Year

accordance with:

1. The Alberta Building Code 2006,
2. CAN/ULC-S524-01, “Installation of Fire Alarm Systems,” and
3. The Electrical Regulations made pursuant to the Safety Codes Act.

_____
Name of Company or Person Performing Verification

_____
Signature of Person Responsible for Verification

Note: Modifications of the Fire Alarm System after _____ will invalidate this Verification Certificate.
Month/Day/Year

Signature of Person Assuming Responsibility for Verification

_____

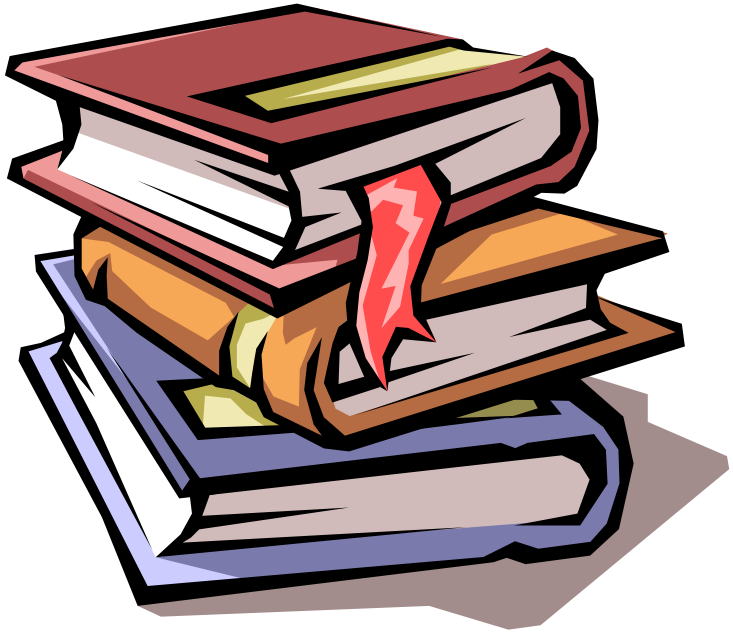
Page 6 of 7

A VI Certificate is Not a Complete Report

Must be in conformance with CAN/ULC-S537-04 “Verification of Fire Alarm Systems”

Fire Alarm Industry

Is governed by Codes and Standards
Continuous training and improvement is essential



Why Comply?

Safety!

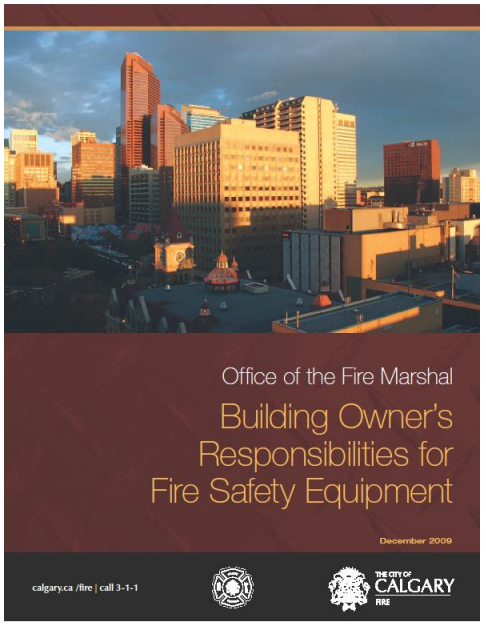
Stay Informed

- STANDATA: http://www.municipalaffairs.alberta.ca/am_list_subscription_services.cfm

- CFAA Technical Seminar:

Oct 17, 2012

Marriot River Cree Resort
300 East Lapotac Blvd., Edmonton,
Alberta T7X 3Y3



BOMA/CFAA Advantage

- BOMA - BOMA Calgary demonstrates commitment to building excellence in the commercial real estate sector through advocacy, education and professional relationships.
- CFAA-To maximize the effectiveness and use of Fire Alarm Systems in the Protection of Life and Property in Canada.

The Canadian Fire Alarm Association is pleased to be here

Thank You

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CFAA- Alberta Chapter

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