

April 17, 1973

Mr. John G. Degenkolb  
1720 Chevy Knoll Drive  
Glendale, California 91206

Subject: Jim Bihr's Letter of April 3  
Proposed Section 18 Addition to the Standard

Dear Gus:

I agree that the addition of Section 18 to the Standard is in order. If simply a reference to an "approved" fire alarm systems is made in Section 1807, the building official will look to the NFPA Standard 72A which has many conflicts with the intent of Section 1807.

Jim Bihr has done an excellent job of writing a very general standard. Minor comments are as follows:

1. Apparently my code is not up to date since I can not find a Section 1907. (Referred in Section 18.101).
2. Section 18.102 (b) and (f) "-- at any other location assigned by the fire department" and, in paragraph (f) "-- as well as any other locations designated by the fire department".

Suggest adding "or building official" after each of these sentences - Reason, plans are required to be submitted to the building official only - per Condition of Approval, page 4. Since the fire department should be involved before the building is built, perhaps high-rise plans should be approved both by the building official and the fire department.

3. Error in numbering - Section 18, page 2, Location and Installation should be Section 18.103. Section 18.104 should be Condition of Approval, 18.105 - Tests and 18.106 - Power Supply.

Page 2  
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4. Section 18.105 - Tests "upon completion of the installation, FUNCTIONAL tests demonstrating--- (all-caps indicate additions).

His present wording could be interpreted as requiring fire tests to demonstrate the system. It is not necessary to test an approved detector and could lead to some confusion and fire hazard.

5. Section 18.106 - Power Supply, second sentence - an approved standby power generation system WITH AUTOMATIC SWITCH-OVER conforming to the provisions ---

A SIGNAL AT THE CENTRAL CONTROL STATION SHALL INDICATE WHENEVER THE SECONDARY POWER SUPPLY IS IN USE.

That's all I can suggest - it is a very good draft.

Gus, I think an important change to the Standard would be to revise 43-6, entirely. Instead of repeating in detail the portions of UL Standard 168, I think a more general summary similar to what Jim Bihr just drafted for high-rise fire alarm systems would be in order. In otherwords outline approval of detectors as meeting the approval of a recognized test laboratory, making no reference to 168, 167 or any other "in-house" standard of one of those labs.

It also removes the confusion in terminology allowing UL, for instance, to refer to smoke detectors of either photo electric or ionization principle and yet leave the UBC Standard reference "products of combustion other than heat".

If you believe this is in order, I will draft a revised 43-6 and send it to you. Let me know what timing would be involved and we will get right on it.

Sincerely yours,

STATITROL

Duane D. Pearsall  
President

DDP:bc  
Enclosure

RECEIVED APR 11 1973

# International Conference of Building Officials

5360 SOUTH WORKMAN MILL ROAD • WHITTIER, CALIFORNIA 90601 • (213) 699-0541

April 3, 1973

*Duane:*  
*Any comments for me to make?*  
*How about on 167?*

*Gus*

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John G. Degenkolb  
1720 Chevy Knoll Drive  
Glendale, California 91206

Dear Gus:

Enclosed is a rough draft of some ideas with respect to the development of a fire alarm standard to go along with the high-rise provisions in Chapter 18 of the Uniform Building Code. Frankly, I don't see much need for a standard because it is difficult to develop one without going into all of the details and I would prefer to see Section 1807 drafted in such a manner that the fire alarm systems required would merely be "approved" types. In any event, I have made a stab in finalizing the requirements and I would appreciate your immediate comments since we are nearing that period in time when we should commit this to the printer.

Yours very truly,

INTERNATIONAL CONFERENCE  
OF BUILDING OFFICIALS

*James E. Bihr*  
James E. Bihr  
Managing Director

JEB:ks  
Enclosure

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3/30/73

PROPOSED ABC Standard to  
cover ABC code Sect 1807 (revised 10/72)

Sec. 18.101. Scope. This standard outlines requirements governing the installation of fire alarm systems in high-rise buildings where such systems are required by the provisions of Sections 1807 and 1907 of the Uniform Building Code.

Sec. 18.102. Operating Characteristics. (a) General. The fire alarm system shall be an approved, electrically supervised direct wire, radio or combination thereof consisting of an interior fire alarm and voice communication system.

(b) Visual Signals. The system's design shall be so arranged that the operation of any station or detector will identify its location at the central fire-command control station and at any other location assigned by the fire department. This identification signal shall be accompanied by means of a visual information display system which shall be manually resettable from the central control station.

(c) Audible Signal. Audible signal devices indicating operation of the fire alarm signal system shall also be provided at the central control station and at any other location designated by the fire department. Provisions shall be made for silencing the audible signal and transferring this signal to lamp indication.

(d) Manual Station Operation. Operation of a manual station alarm shall automatically cause the fire alarm signal system to sound continuously throughout the floor where activated. The fire alarm signal may be sounded over loud speakers so located that their operation will be heard

2.

clearly above any ambient noise, and shall be controlled from the central control station in such a manner that the fire alarm signal can be sounded on the individual floors or throughout the building.

(e) Automatic Fire Alarm Operation. Automatic fire alarm systems shall be operable by the actuation of approved fire and/or smoke detecting equipment located upon the ceiling <sup>OR IN CERTAIN AIR DUCTS</sup> ~~(or on the walls near the ceiling)~~ and spaced in accordance with the terms of their approval.

(f) Detector Interconnection. The activation of fire detectors installed in the mechanical equipment room and in the return air portion of air conditioning and mechanical ventilation systems in accordance with Section 1807 (d) of the Uniform Building Code shall cause the fire alarm signal system to sound continuously throughout the floor where activated, and at the central control station, ~~as well as any other locations designated by the fire department.~~ Such activation shall also operate the visual information display in the central control station. <sup>OR BLDG. OFFICIAL?</sup>

(g) Equipment. All equipment for a fire alarm system shall be approved for that particular purpose.

<sup>103</sup>  
Sec. 18.102. Location and Installation. (a) General. A fire alarm ~~station~~ <sup>SENDING</sup> station shall be located adjacent to each exit door into a stairway shaft ~~and~~, at each elevator lobby <sup>& AS REQUIRED PER NFPA CHAPTER 72A</sup> ~~where manual fire alarms are used.~~ <sup>& AT EACH BUILDING EXIT.</sup> Additional stations shall be installed so that no point on any floor shall be more than 200 feet (measured in the line of travel) from the nearest station.

3.

(b) Identification. Doors of manual ~~fire~~<sup>SENDING</sup> stations shall be painted red and lettered "FIRE EMERGENCY-OPEN DOOR TO OPERATE" or words to this effect. Instructions for operating the station shall be permanently affixed or be an integral part of the station. Instruction cards shall be provided at each station protected by glass or plastic. Designation number of station shall be prominently displayed on instruction card or on cover of station.

All pull-lever type stations shall be constructed with a door or other approved means to protect the "pull level" against accidental injury. The wording "IN CASE OF FIRE OPEN DOOR AND PULL DOWN LEVER" in raised letters or equivalent instructions, shall appear on the door.

For systems using break-glass or break-rod type stations, at least one extra glass rod or glass pane for each station in the system shall be kept in the building. Break glass stations shall have the glass rod or pane mounted on the surface of the station covers or mounted internally in such a manner that the glass must be broken to actuate the sending station. Suitable hammers on chains attached to the station or other approved means of breaking the glass, shall be provided. Stations accomplishing the "break glass" principle using other approved means shall not be required to provide hammers or spare glasses.

(c) Testing. Provisions shall be made for a silent test of manual sending station mechanisms without operating the signaling devices.

Such test devices shall be designed to prevent any person, except those in authority, from operating the same and to prevent the possibility of the box being left inoperative after the test.

(d) Alarm Sounding Devices. Approved speakers shall be provided as the sounding devices. The alarm sound shall be a generated gong, bell, horn, whistle or other acceptable signal. The speakers shall be located not more than 10 feet from the entrance to each required exit to insure proper alarm signal reproduction. Speakers shall not be mounted more than 20 feet above floor.

(e) Wiring. All wiring for fire alarm systems shall be installed in an approved manner in conformance with approved nationally recognized standards for fire alarm systems. It shall be properly identified or marked and protected to avoid interruption of service.

<sup>104</sup>  
Sec. 18.103. Condition of Approval. Prior to the installation of any equipment or wiring for a fire alarm system, complete plans, details, design data and other information shall be submitted to and approved by the building official.

<sup>105</sup>  
Sec. 18.104. Tests. Upon completion of the installation, <sup>FUNCTIONAL SYSTEM</sup> tests demonstrating adequate performance of the system shall be made a requirement by the building official. ~~THIS STANDARD DOES NOT REQUIRE NOR RECOMMEND TEST FIRES FOR SYSTEM APPROVAL.~~

<sup>106</sup>  
Sec. 18.105. Power Supply. The fire alarm system shall have at least two sources of power supply. The primary supply shall be a commercial or municipal power and light service. The secondary power supply shall be an approved standby power generation system <sup>WITH AUTOMATIC SWITCHOVER</sup> conforming to the provisions set forth in Section 1807 (j) of the Uniform Building Code. ~~ADAPTABLE~~

~~WHENEVER THE SECONDARY POWER SUPPLY IS IN USE, AN~~  
~~ADAPTABLE~~ A SIGNAL AT THE CENTRAL CONTROL STATION SHALL INDICATE WHEN ~~SE~~ THE SECONDARY POWER SUPPLY IS IN USE.