

**ADDENDUM to EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
OFFICE OF THE STATE FIRE MARSHAL
REGARDING THE 2010 CALIFORNIA FIRE CODE
CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 9
2010 ANNUAL RULEMAKING CYCLE**

The Office of the State Fire Marshal (SFM) proposes to make necessary changes to the 2010 edition of the California Fire Code (CFC), based on the 2009 International Fire Code (IFC). The SFM further proposes to:

- Adopt necessary amendments to the model code;
 - Repeal amendments to the model code that are no longer necessary.
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Legend for Express Terms:

1. **Existing California regulation or amendment brought forward without modification:** *All such language appears in Italics.*
 2. **Existing California regulation or amendment brought forward with modification:** *All such language appears in Italics, modified language is underlined.*
 3. **IFC language with new California amendment:** California amendments to IFC text appear underlined and in italics.
 4. **New California regulation or amendment:** California language appears underlined and in Italics.
 5. **Repealed text:** Shown as ~~Strikeout~~.
 6. **New California amendments that remove text:** Shown as ~~Strikeout~~.
 7. **Notation:** Authority and Reference citations are provided at the end of each chapter.
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[Item No. 2. Antifreeze solutions in residential fire sprinkler systems – permanent emergency rulemaking]

**CHAPTER 47
REFERENCED STANDARDS**

NFPA National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02269-9101

| Standard reference number | Title | Referenced in code section number |
|---------------------------|---|---|
| 13—10 | Installation of Sprinkler Systems <i>as amended</i> *. | Table 903.3.1.1, 903.3.2, 903.3.5.1.1, 903.3.5.2, 904.11, 905.3.4, 907.7.3, 2301.1, 2304.2, Table 2306.2, 2306.9, 2307.2, 2307.2.1, 2308.2.2, 2308.2.2.1, 2308.4, 2310.1, 2501.1, 2804.1, 2806.5.7, 3404.3.3.9, Table 3404.3.6.3(7), 3404.3.7.5.1, 3404.3.8.4 |
| | <i>*NFPA 13, Amended Sections as follows:</i> | |
| | <i>Revise Section 7.6.2.2 as follows:</i> | |
| | 7.6.2.2 Glycerine water and propylene glycol water mixtures shown in Table 7.6.2.2 shall be considered suitable for use. Antifreeze solutions exceeding 50% by volume of glycerine water or 40% by volume of propylene glycol water mixtures shall not be permitted within dwelling unit portions of the sprinkler system. | |
| | <i>Revise Section 7.6.2.3 as follows:</i> | |
| | 7.6.2.3 If potable water is not connected to sprinklers, the commercially available materials indicated in Table 7.6.2.3 shall be permitted for use in antifreeze solutions. Antifreeze solutions of diethylene glycol water or ethylene glycol water mixtures shall not be permitted within dwelling unit portions of the sprinkler system. | |
| | <i>Add new Section 7.6.2.5.1 as follows:</i> | |
| | 7.6.2.5.1 Antifreeze solutions shall be factory premix solutions within dwelling unit portions of the sprinkler system. | |
| | <i>Add a new definition as 3.4.1.1 to read as follows:</i> | |
| | 3.4.1.1 Premixed Antifreeze Solution. A mixture of an antifreeze material with water that is prepared by the manufacturer with a quality control procedure in place that ensures that the antifreeze solution remains homogeneous. | |
| | <i>Revise 7.6.1.5 to read as follows:</i> | |
| | 7.6.1.5 A placard shall be placed on the antifreeze system main valve that indicates the manufacture type and brand of the antifreeze solution, the concentration by volume of the antifreeze solution used, and the volume of the antifreeze solution used in the system. | |
| | <i>Revise 7.6.2.1 to read as follows:</i> | |
| | 7.6.2.1* Antifreeze solutions shall be limited to premixed antifreeze solutions of glycerin (chemically pure or United States Pharmacopoeia 96.5%) at a maximum concentration of 50% by volume, or propylene glycol at a maximum concentration of 40% by volume. | |
| | <i>Add a new 7.6.2.1.1 to read:</i> | |

7.6.2.1.1 Premixed antifreeze solutions of propylene glycol exceeding 40% concentration by volume shall be permitted for use with ESFR sprinklers where the ESFR sprinklers are listed for such use in a specific application.

Add new 7.6.2.1.2 to read as follows:

7.6.2.1.2 Premixed antifreeze solutions other than those described in 7.6.2.1 that are listed for use in sprinkler systems shall be permitted to be used.

Add a new 7.6.2.1.3 to read as follows:

7.6.2.1.3 All premixed antifreeze solutions shall be provided with a certificate from the manufacturer indicating the type of antifreeze, concentration by volume, and freezing point.

Delete current Table 7.6.2.2 and replace it with the following table in the annex renumbered as Table A.7.6.2.1

A.7.6.2.1 See Table A.7.6.2.1.

Table A.7.6.2.1 Properties of Glycerin and Propylene Glycol

| <u>Material</u> | <u>Solution (by volume)</u> | <u>Specific Gravity at 77°F (25°C)</u> | <u>Freezing Point</u> | |
|--|-----------------------------|--|-----------------------|--------------|
| | | | <u>°F</u> | <u>°C</u> |
| <u>Glycerin (C.P. or U.S.P. grade)</u> | <u>0%</u> | <u>1.000</u> | <u>32</u> | <u>0</u> |
| | <u>5</u> | <u>1.014</u> | <u>31</u> | <u>-0.5</u> |
| | <u>10</u> | <u>1.029</u> | <u>28</u> | <u>-2.2</u> |
| | <u>15</u> | <u>1.043</u> | <u>25</u> | <u>-3.9</u> |
| | <u>20</u> | <u>1.059</u> | <u>20</u> | <u>-6.7</u> |
| | <u>25</u> | <u>1.071</u> | <u>16</u> | <u>-8.9</u> |
| | <u>30</u> | <u>1.087</u> | <u>10</u> | <u>-12</u> |
| | <u>35</u> | <u>1.100</u> | <u>4</u> | <u>-15.5</u> |
| | <u>40</u> | <u>1.114</u> | <u>-2</u> | <u>-19</u> |
| | <u>45</u> | <u>1.130</u> | <u>-11</u> | <u>-24</u> |
| | <u>50%</u> | <u>1.141</u> | <u>-19</u> | <u>-28</u> |
| <u>Propylene glycol</u> | <u>0</u> | <u>1.000</u> | <u>32</u> | <u>0</u> |
| | <u>5</u> | <u>1.004</u> | <u>26</u> | <u>-3</u> |
| | <u>10</u> | <u>1.008</u> | <u>25</u> | <u>-4</u> |
| | <u>15</u> | <u>1.012</u> | <u>22</u> | <u>-6</u> |
| | <u>20</u> | <u>1.016</u> | <u>19</u> | <u>-7</u> |
| | <u>25</u> | <u>1.020</u> | <u>15</u> | <u>-10</u> |
| | <u>30</u> | <u>1.024</u> | <u>11</u> | <u>-12</u> |
| | <u>35</u> | <u>1.028</u> | <u>2</u> | <u>-17</u> |
| | <u>40</u> | <u>1.032</u> | <u>-6</u> | <u>-21</u> |

C.P.: Chemically Pure; U.S.P.: United States Pharmacopoeia 96.5%.

Delete 7.6.2.3 and Table 7.6.2.3.

Revise 7.6.2.4 to read as follows:

7.6.2.4 A premix antifreeze solution with a freezing point below the expected minimum temperature for the locality shall be provided.

Delete existing 7.6.2.5 as well as the Figures 7.6.2.5(a), 7.6.2.5(b), and 7.6.2.5(c) and Annex A.7.6.2.5.

Delete 7.6.2.6.

Add an asterisk to Section 7.6 and a new Annex A.7.6 to read as follows:

A.7.6 In cold climates and areas where the potential for freezing of pipes is a concern, options other than antifreeze are available. Such options include installing the pipe in warm spaces, tenting insulation over the piping (as illustrated in NFPA 13D), listed heat tracing, and the use of dry pipe systems and preaction systems.

In A.7.6.2, delete the second paragraph.

A.7.6.2 Listed CPVC sprinkler pipe and fittings should be protected from freezing with glycerine only. The use of diethylene, ethylene, or propylene glycols is specifically prohibited. Laboratory testing shows that glycol-based antifreeze solutions present a chemical environment detrimental to CPVC.

Delete existing A.7.6.2.4 and Figure A.7.6.2.4.

13D—10

Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes *as amended** 903.3.1.3, 903.3.5.1.1

**NFPA 13D, Amended Sections as follows:*

Revise Section 8.3.3.2.3 as follows:

~~8.3.3.2.3 Percent solution by volume of glycerine-water and propylene glycol-water mixtures shall be in accordance with Table 8.3.3.2.3, Figure 8.3.3.2.3(a), and Figure 8.3.3.2.3(b). Antifreeze solutions exceeding 50% by volume of glycerine-water or 40% by volume of propylene glycol-water mixtures shall not be permitted within dwelling unit portions of the sprinkler system.~~

Revise Section 8.3.3.2.5 as follows:

~~8.3.3.2.5 Percent solution by volume of diethylene glycol-water and ethylene glycol-water shall be in accordance with Table 8.3.3.2.5. Antifreeze solutions of diethylene glycol-water or ethylene glycol-water mixtures shall not be permitted within dwelling unit portions of the sprinkler system.~~

Add new Section 8.3.3.2.7 as follows:

~~8.3.3.2.7.1 Antifreeze solutions shall be factory premix solutions~~

Add a new definition as 3.3.9.1.1 and related annex note to read as follows:

3.3.9.1.1* Premixed Antifreeze Solution. A mixture of an antifreeze material with water that is prepared and factory-mixed by the manufacturer with a quality control procedure in place that ensures that the antifreeze solution remains homogeneous.

A.3.3.9.1.1 Where a tank is used as the water supply for the sprinkler system, the tank is not permitted to be filled with antifreeze.

Revise 4.1.4 and related annex note to read as follows:

4.1.4* Antifreeze Systems.

A.4.1.4 Sampling from the top and bottom of the system helps to determine if the solution has settled. Antifreeze solutions are heavier than water. If the antifreeze compound is separating from the water due to poor mixing, it will exhibit a higher concentration in the lower portion of the system than in the upper portions of the system. If the concentration is acceptable near the top, but too low near the water connection, it may mean that the system is becoming diluted near the water supply. If the concentration is either too high or too low in both the samples, it may mean that the wrong concentration was added to the system.

On an annual basis, test samples should be drawn from test valve B as shown in Figure 8.3.3.2.1(1), especially if the water portion of the system has been drained for maintenance or repairs. A small hydrometer can be used so that a small sample is sufficient. Where water appears at valve B, or where the sample indicates that the solution has become weakened, the entire system should be emptied and refilled with acceptable solution as previously described.

Where systems are drained in order to be refilled, it is not typically necessary to drain drops that are less than 36 inches in length. Most systems with drops have insufficient volume to cause a problem, even if slightly higher concentration solutions collect in the drops. For long drops with significant volume, consideration should be given to draining drops if there is evidence that unacceptably high concentrations of antifreeze have collected in these long drops.

When emptying and refilling antifreeze solutions, every attempt should be made to recycle the old solution with the antifreeze manufacturer rather than discarding it.

4.1.4.1 Annual Antifreeze Solution Test and Replacement Procedure.

4.1.4.1.1 Samples of antifreeze solution shall be collected by qualified individuals in accordance with 4.1.4.1.1.1 or 4.1.4.1.1.2 on an annual basis.

4.1.4.1.1.1 The system shall be drained to verify that (a) the solution is in compliance with 8.3.3, and (b) the solution provides the necessary freeze protection. Solution samples shall be taken near the beginning and near the end of the draining process.

4.1.4.1.1.2* Solution samples shall be taken at the highest practical elevation and the lowest practical elevation of the system.

A.4.1.4.1.1.2 If not already present, test connections (valves) for collection of solution samples should be installed at the highest and lowest practical locations of the system or portion of the system containing antifreeze solution.

4.1.4.1.2 The two samples collected in accordance with the procedures specified in 4.1.4.1.1.1 or 4.1.4.1.1.2 shall be tested to verify that the specific gravity of both samples is similar and that the solution is in compliance with 8.3.3. The specific gravity of each solution shall be checked using a hydrometer with a suitable scale or a refractometer having a scale calibrated for the antifreeze solution.

4.1.4.1.3* If concentrations of the two samples collected in accordance with the procedures above are similar and in compliance with 8.3.3, then (a) the solution drained in accordance with 4.1.4.1.1.1 can be used to refill the system, or (b) the existing undrained solution tested in accordance with 4.1.4.1.1.2 shall be permitted to continue to be used. If the two samples are not similar and not in compliance with 8.3.3, then a solution in compliance with 8.3.3 shall be used to refill the system.

A.4.1.4.1.3 In the past, for some existing systems subject to extremely low temperatures, antifreeze solutions with concentrations greater than what is now permitted by NFPA 13D were used. Such high concentrations of antifreeze are no longer permitted. In situations where extremely low temperatures are anticipated, refilling the fire sprinkler system with a concentration of antifreeze solution currently permitted by the standard might not provide sufficient freeze protection without additional measures. Such measures might include converting the antifreeze system to another type of sprinkler

system.

4.1.4.1.4 A tag shall be attached to the riser indicating the date the antifreeze solution was tested. The tag shall also indicate the type and concentration of antifreeze solution (by volume) with which the system is filled, the date the antifreeze was replaced (if applicable), the name of the contractor that tested and/or replaced the antifreeze solution, the contractor's license number, a statement indicating if the entire system was drained and replaced with antifreeze, and a warning to test the concentration of the antifreeze solutions at yearly intervals per NFPA 13D.

Add an asterisk to 8.3.3 and add a new A.8.3.3 to read as follows:

8.3.3* Antifreeze Systems.

A.8.3.3 Where protection of pipes from freezing is a concern, options other than antifreeze are available. Such alternatives include running the piping in warm spaces, tenting insulation over pipe, dry-pipe systems, and preaction systems.

Revise 8.3.3.2.1 to read as follows:

8.3.3.2.1* Unless permitted by 8.3.3.2.1.1, antifreeze solutions shall be limited to premixed antifreeze solutions of glycerine (chemically pure or United States Pharmacopoeia 96.5%) at a maximum concentration of 50% by volume, propylene glycol at a maximum concentration of 40% by volume, or other solutions listed specifically for use in fire protection systems.

Add a new 8.3.3.2.1.1 to read as follows:

8.3.3.2.1.1. For existing systems, antifreeze solutions shall be limited to premixed antifreeze solutions of glycerine (chemically pure or United States Pharmacopoeia 96.5%) at a maximum concentration of 50% by volume, propylene glycol at a maximum concentration of 40% by volume, or other solutions listed specifically for use in fire protection systems.

Delete 8.3.3.2.2 and 8.3.3.2.3 and related Annex material A.8.3.3.2.3.

Move Table 8.3.3.2.3 to the annex and renumber as Table A.8.3.3.2.1 while deleting the rows in the table dealing with glycerine and 40% water, glycerine and 30% water, propylene glycol and 50% water and propylene glycol and 40% water. Add an annex note so that the annex and Table would appear as follows:

A.8.3.3.2.1 See Table A.8.3.3.2.1.

Table A.8.3.3.2.1 Properties of Glycerine and Propylene Glycol

| <u>Material</u> | <u>Solution (by volume)</u> | <u>Specific Gravity at 60°F (15.6°C)</u> | <u>Freezing Point</u> | |
|---|-----------------------------|--|-----------------------|--------------|
| | | | <u>°F</u> | <u>°C</u> |
| <u>Glycerine (C.P. or U.S.P. grade)</u> | <u>50% water</u> | <u>1.145</u> | <u>-20.9</u> | <u>-29.4</u> |
| <u>Hydrometer scale 1.000 to 1.200</u> | | | | |
| <u>Propylene glycol</u> | <u>60% water</u> | <u>1.034</u> | <u>-6</u> | <u>-21.1</u> |
| <u>Hydrometer scale 1.000 to 1.200 (subdivisions 0.002)</u> | | | | |

C.P.: Chemically Pure; U.S.P.: United States Pharmacopoeia 96.5%.

Renumber 8.3.3.2.3.1 to 8.3.3.2.2.

8.3.3.2.2 The concentration of antifreeze solutions shall be limited to the minimum necessary for the anticipated minimum temperature.

Delete 8.3.3.2.4, 8.3.3.2.5 and Table 8.3.3.2.5.

Renumber 8.3.3.2.6 as 8.3.3.2.3 and renumber A.8.3.3.2.6 as A.8.3.3.2.3. Also renumber Figure A.8.3.3.2.6 as Figure A.8.3.3.2.3.

8.3.3.2.3* An antifreeze solution with a freezing point below the expected minimum temperature for the locality shall be installed.

A.8.3.3.2.3 Beyond certain limits, an increased proportion of antifreeze does not lower the freezing point of the solution (see Figure A.8.3.3.2.3). Glycerine, diethylene glycol, ethylene glycol, and propylene glycol never should be used without mixing with water in the proper proportions, because these materials tend to thicken near 32°F (0°C).

Renumber 8.3.3.2.7 as 8.3.3.2.4 and revise to read as follows:

8.3.3.2.4 The specific gravity of the antifreeze shall be checked by a hydrometer with a scale having 0.002 subdivisions in accordance with Figure 8.3.3.2.4(a) and 8.3.3.2.4(b).

Renumber Figure 8.3.3.2.3(a) as Figure 8.3.3.2.4(a) and delete the 50% curve.

Renumber Figure 8.3.3.2.3(b) as Figure 8.3.3.2.4(b) and delete the 60% and 70% curves.

13R—10

Installation of Sprinkler Systems in Residential Occupancies up
to and Including Four Stories in Height as amended* 903.3.1.2, 903.3.5.1.1, 903.3.5.1.2, 903.4

*NFPA 13R, Amended Sections as follows:

Add new Section 5.4.2.1 as follows:

5.4.2.1 Antifreeze solutions exceeding 50% by volume of glycerine-water or 40% by volume of propylene glycol-water mixtures shall not be permitted within dwelling unit portions of the sprinkler system.

Add new Section 5.4.2.2 as follows:

5.4.2.2 Antifreeze solutions of diethylene glycol-water or ethylene glycol-water mixtures shall not be permitted within dwelling unit portions of the sprinkler system.

Notation:

Authority: Health and Safety Code Sections 13100.1, 13108, 13143, 13210, 13211, 17921(b), 18928(a), 18949.2(b) and (c)

References: 13108, 13113, 13211, 17921(b) 18949.2(b) and (c)

[Item No. 3. Amendments for further clarification, correction and consistency with other SFM regulations]

**CHAPTER 47
REFERENCED STANDARDS**

NFPA National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02269-9101

| | |
|----------|------------|
| Standard | Referenced |
|----------|------------|

| reference number | Title | in code section number |
|---------------------|---|---|
| 25—0806 | <u>California NFPA 25 Edition (Based on the 2002 Edition)</u> Inspection, Testing and Maintenance of Water-based Fire Protection Systems | .507.5.3, Table 901.6.1, 904.7.1, 912.6, 913.5, I101.1 |

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.65, 13108, 13115, 13143, 13143.9, 13146, 13210, 13211, 17921, 18949.2

References: Health and Safety Code Sections 13143, 13211, 18949.2

[Item No. 4. Modifications that have no change in regulatory effect or repeal of amendments that are no longer necessary]

**CHAPTER 9
FIRE PROTECTION SYSTEMS**

907.2.11.4 Power source. In new construction ~~construction~~ and in newly classified Group R-3.1 occupancies, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery back-up shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exception: Smoke alarms are not required to be equipped with battery backup where they are connected to an emergency electrical system.

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.65, 13108, 13143, 13143.9, 13146, 13210, 13211, 17921, 18949.2

References: Health and Safety Code Sections 13143, 13211, 18949.2

[Item No. 5. Statutory modification and/or correction of existing regulation]

**CHAPTER 46
CONSTRUCTION REQUIREMENTS FOR EXISTING BUILDINGS**

4603.7.2 Interconnection. Where more than one smoke alarm is required to be installed within an individual *dwelling* or *sleeping unit*, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

Exceptions:

1. Interconnection is not required in buildings that are not undergoing *alterations*, repairs or construction of any kind.
2. Smoke alarms in existing areas are not required to be interconnected where *alterations* or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or *basement* available which could provide access for interconnection without the removal of interior finishes.
3. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.
4. Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.

4603.7.3 Power source. Single-station smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. Smoke alarms are permitted to be solely battery operated in existing buildings where no construction is taking place.
2. Smoke alarms are permitted to be solely battery operated in buildings that are not served from a commercial power source.
3. Smoke alarms are permitted to be solely battery operated in existing areas of buildings undergoing *alterations* or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or *basement* available which could provide access for building wiring without the removal of interior finishes.
4. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.
5. Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.

4603.7.5 Additional provisions for existing Group ~~R-3R~~ occupancies.

4603.7.5.1 Existing Buildings housing Group ~~R-3R~~ Occupancies established prior to the effective date of these regulations may have their use continued if they conform or are made to conform to provisions of these regulations to the extent that reasonable and adequate life safety against the hazards of fire, panic and explosion is substantially provided. Additional means of egress, the installation of automatic sprinkler systems, automatic fire alarm system or other life safety measures, may be required to provide reasonable and adequate safety.

Note: It is the intent of this sections that every existing occupancy need not mandatorily conform with the requirements for new construction. Reasonable judgment in the application of requirements must be exercised by the enforcing agency.

**APPENDIX CHAPTER 4
SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY**

425.3.2 Limitations six or less clients. Group R-3.1 occupancies where nonambulatory clients are housed above the first story, having more than two stories in height or having more than 3,000 square feet (279 m²) of floor area above the first story shall not be of less than one-hour fire-resistance-rated construction throughout.

In Group R-3.1 occupancies housing a bedridden client, the client sleeping room shall not be located above or below the first story.

Exception: *Clients who become bedridden as a result of a temporary illness as defined in Health and Safety Code Sections 1566.45, 1568.0832 and 1569.72. A temporary illness is an illness, which persists for 14 days or less. A bedridden client may be retained in excess of the 14 days upon approval by the Department of Social Services and may continue to be housed on any story in a Group R-3.1 occupancy classified as a licensed residential facility.*

Every licensee admitting or retaining a bedridden resident shall, within 48 hours of the resident's admission or retention in the facility, notify the local fire authority with jurisdiction of the estimated length of time the resident will retain his or her bedridden status in the facility.

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.65, 13108, 13143, 13143.9, 13146, 13210, 13211, 17921, 18949.2

References: Health and Safety Code Sections 13143, 13211, 18949.2

[Item No. 6. Modifications for elevator standards and correlation with CCR, Title 8, Division 1, DOSH Elevator Safety Orders]

**CHAPTER 6
BUILDING SERVICES AND SYSTEMS**

~~**607.5 Shunt trip.** *Where elevator hoistways or elevator machine rooms containing elevator control equipment are protected with automatic sprinklers, a means installed in accordance with NFPA 72, Section 6.4.2.1.4, Elevator Shutdown, shall be provided to disconnect automatically the main line power supply to the affected elevator prior to the application of water. This means shall not be self-resetting. The activation of sprinklers outside the hoistway or machine room shall not disconnect the main line power supply*~~

~~**607.5.1** *Elevator power shunt trip shall not activate prior to the completion of elevator Phase I emergency recall operation to the recall floor.*~~

~~**607.5.2** *Elevator power shunt trip capability shall be disabled during Phase II emergency in-car operation.*~~

~~**607.5.3** *Audible and visual annunciation shall be provided at the fire alarm control unit indicating the disabling of elevator power shunt trip capability under Phase II operation.*~~

~~**607.5.4** *Audible and visual annunciation shall be provided at the fire alarm control unit indicating that the automatic sprinklers, smoke detectors or heat detectors in the elevator hoistway or elevator machine room have activated.*~~

~~**607.5.5** *Visual annunciation shall be provided inside all elevator cars indicating that the automatic sprinklers, smoke detectors or heat detectors in the elevator hoistway or elevator machine room have activated.*~~

**CHAPTER 9
FIRE PROTECTION SYSTEMS**

~~**903.3.1.1.1 Exempt locations.** *In other than Group I-2, I-2.1 and I-3 occupancies, a*Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an *approved* automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance rated construction or contains electrical equipment.~~

1. In other than Group I-2, I-2.1 and I-3 occupancies, Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. In other than Group I-2, I-2.1 and I-3 occupancies, Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the fire code official.
3. ~~Fire service access e~~ Elevator machine rooms and machinery spaces in accordance with 3006.4.1 of the California Building Code.
4. Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, and associated electrical power distribution equipment, provided those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour fire barriers constructed in accordance with Section 707 of the California Building Code or not less than 2-hour horizontal assemblies constructed in accordance with Section 712 of the California Building Code, or both.

**CHAPTER 47
REFERENCED STANDARDS**



National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02269-9101

| Standard reference number | Title | Referenced in code section number |
|---------------------------|---|---|
| 13—70 | Installation of Sprinkler Systems <i>as amended</i> *. | 903.3.1.1, 903.3.2, 903.3.5.1.1, 903.3.5.2, 904.11, 905.3.4, 907.7.3, 2301.1, 2304.2, Table 2306.2, 2306.9, 2307.2, 2307.2.1, 2308.2.2, 2308.2.2.1, 2308.4, 2310.1, 2501.1, 2804.1, 2806.5.7, 3404.3.3.9, Table 3404.3.6.3(7), 3404.3.7.5.1, 3404.3.8.4 |
| | <i>*NFPA 13, Amended Sections as follows:</i> | |
| | 8.15.5.6 Sprinklers shall be installed at the top and bottom of elevators that utilize polyurethane-coated steel belts or other similar combustible belt material. <u>Exception: Elevator cables and belts, including counterweight cables that are limited combustible with a flame spread of less than 25.</u> | |

Notation:

Authority: Health and Safety Code Sections 1250, 1569.72, 1569.78, 1568.02, 1502, 1597.44, 1597.65, 13108, 13143, 13143.9, 13146, 13210, 13211, 17921, 18949.2
References: Health and Safety Code Sections 13143, 13211, 18949.2