STANDARDS UPDATE NOTICE (SUN)
ISSUED: February 5, 2018

STANDARD INFORMATION

Standard Number: NFPA 72
Standard Name: National Fire Alarm and Signaling Code
Standard Edition and Issue Date: 2016 Edition Dated September 7, 2015
Date of Revision: September 7, 2015
Date of Previous Revision of Standard: 2013 Edition Dated August 29, 2012

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **January 25, 2020**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

Overview of Changes:

- Chapter 7 adds items to the minimum documentation.
- Addition of Class N wiring, which addresses internet infrastructures for alarm and signalling systems.
- Chapter 17 revises the requirements for “total coverage”.
- Chapter 24 has been restructured.
- Chapter 26 has been revised adding requirements for multiple communication paths.
- Chapter 29 now has requirements pertaining to remote resetting and silencing of fire alarm control units.

Specific details of new/revised requirements are found in table below.

If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).

Client Action Required:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		Additions to existing requirements are underlined and deletions are shown ~~lined out~~ below.
7	Info	**Documentation**
7.2	Info	**Minimum Required Documentation. (SIG-FUN)**
7.2.1		Where documentation is required by the enforcing authority having jurisdiction, the following list shall represent the minimum documentation required for ~~all~~ new fire alarm systems, supervising station and shared communication equipment, and emergency communications systems, including new systems and additions or alterations to existing systems: (1)*Written narrative providing intent and system description (2) Riser diagram (3) Floor plan layout showing locations of all devices ~~and control equipment~~, control equipment, and supervising station and shared communications equipment with each sheet showing the following: (a) Point of compass (north arrow) (b) A graphic representation of the scale used (c) Room use identification (d) Building features that will affect the placement of initiating devices and notification appliances (4) Sequence of operation in either an input/output matrix or narrative form (5) Equipment technical data sheets (6) Manufacturers' published instructions, including operation and maintenance instructions (7) Battery capacity and de-rating calculations (where batteries are provided) (8) Voltage drop calculations for notification appliance circuits (9) Mounting height elevation for wall-mounted devices and appliances (10) Where occupant notification is required, minimum sound pressure levels that must be produced by the audible notification appliances in applicable covered areas (11) Pathway diagrams between the control unit and the supervising station and shared communications equipment (12) Completed record of completion in accordance with 7.5.6 and 7.8.2 (13) Copy For software-based systems, a copy of site-specific software ~~where applicable~~, including specific instructions on how to obtain the means of system and software access (password) (14) Record (as-built) drawings ~~Periodic inspection, testing, and maintenance documentation in accordance with Section 7.6~~ (15) Records, record retention, and record maintenance in accordance with Section

		7.7 (16) Completed record of inspection and testing in accordance with 7.6.6 and 7.8.2
7.3	Info	**Design (Layout) Documentation**
7.3.7	Info	**Performance-Based Design Documentation**
7.3.7.4		***New clause added;*** Performance-based design documentation for signaling line circuit zoning shall be in accordance with 23.6.1.4 and 23.6.1.5. (SIG-PRO)
7.5	Info	**Completion Documentation**
7.5.4		***New clause added;*** For new emergency communications systems, an owner's manual shall be provided and shall contain the following documentation: (1) Detailed narrative description of the system inputs, evacuation signaling, ancillary functions, annunciation, intended sequence of operations, expansion capability, application considerations, and limitations (2) Written sequence of operation for the system including an operational input/output matrix (3) Operator instructions for basic system operations, including alarm acknowledgment, system reset, interpretation of system output (LEDs, CRT display, and printout), operation of manual evacuation signaling and ancillary function controls, and change of printer paper (4) Detailed description of routine maintenance and testing as required and recommended and as would be provided under a maintenance contract, including testing and maintenance instructions for each type of device installed, which includes the following: (a) Listing of the individual system components that require periodic testing and maintenance (b) Step-by-step instructions detailing the requisite testing and maintenance procedures, and the intervals at which those procedures shall be performed, for each type of device installed (c) Schedule that correlates the testing and maintenance procedures that are required by this section (5) Service directory, including a list of names and telephone numbers of those who provide service for the system (6) Product data sheets for all system equipment (SIG-ECS)
7.5.6	Info	**Record of Completion. (SIG-FUN)**
7.5.6.6	Info	**Revisions**
7.5.6.6.1		All ~~fire alarm and/or signaling systems~~ modifications made after the initial installation shall be recorded on a revised version of the original completion documents.
7.5.7	Info	**Site-Specific Software. (SIG-TMS)**

7.5.7.1.1		The site-specific software documentation shall include both the user passcode and either the system programming password or specific instructions on how to obtain the programming password from the system manufacturer.
7.5.7.1.2		***New clause added;*** The passwords provided shall enable currently certified qualified programming personnel to access, edit, modify, and add to the existing system site-specific software.
7.7	Info	**Records, Record Retention, and Record Maintenance**
7.7.2	Info	**Document Accessibility. (SIG-FUN)**
7.7.2.6		***New clause added;*** The building owner or the building owner's representative shall, on an annual basis, review any electronic documentation media formats and associated interfacing hardware for compatibility and update, if necessary.
10	Info	**Fundamental**
10.5	Info	**Personnel Qualifications**
10.5.1	Info	**System Designer**
10.5.1.5		***New clause added;*** System design trainees shall be under the supervision of a qualified system designer.
10.5.2	Info	**System Installer**
10.5.2.4		***New clause added;*** System installation trainees shall be under the supervision of a qualified system installer.
10.5.3	Info	**Equipment**
10.5.3.3		**Service Personnel.** Service personnel shall ~~be qualified in~~ have knowledge and experience of the maintenance and servicing ~~of systems addressed within the scope~~ requirements contained in this Code, ~~Qualified personnel shall include, but not limited to, one of more of the following:~~ of the equipment being serviced or maintained, and of the servicing or maintenance methods. That knowledge and experience shall be acceptable to the authority having jurisdiction or meet the requirement of 10.5.3.4. ~~(1)*Personnel who are factory trained and certified for the specific type and brand of system being serviced~~ ~~(2)*Personnel who are certified by a nationally recognized certification organization acceptable to the authority having jurisdiction~~ ~~(3)*Personnel, either individually or through their affiliation with an organization that is registered, licensed, or certified by a state or local authority to perform service on systems addressed within the scope of this Code~~ ~~(4) Personnel who are employed and qualified by an organization listed by a~~

		~~nationally recognized testing laboratory for the servicing of systems within the scope of this Code~~
10.5.3.4		***New clause added;*** **Means of Qualification.** Qualified personnel shall include, but not be limited to, one or more of the following: (1)*Personnel who are factory trained and certified for the specific type and brand of system being serviced (2)*Personnel who are certified by a nationally recognized certification organization acceptable to the authority having jurisdiction (3)*Personnel, either individually or through their affiliation with an organization that is registered, licensed, or certified by a state or local authority to perform service on systems addressed within the scope of this Code (4) Personnel who are employed and qualified by an organization listed by a nationally recognized testing laboratory for the servicing of systems within the scope of this Code
10.5.4		***New section added;*** **Plans Examiners and Inspectors**
10.5.4.1		Fire alarm system and emergency communications system plans and specifications submitted for review and approval shall be reviewed by personnel who are qualified to review such plans and specifications.
10.5.4.2		Fire alarm system and emergency communications system installations shall be inspected by personnel who are qualified to perform such inspections.
10.5.4.3		State or local licensure regulations shall be followed to determine qualified personnel.
10.5.4.4		Personnel shall provide documentation of their qualifications by one or more of the following: (1) Registration, licensing, or certification by a state or local authority (2) Meeting the requirements of NFPA 1031 (3) Assignment by the authority having jurisdiction to perform plan reviews and inspections
10.6	Info	**Power Supplies**
10.6.5	Info	**Primary Power Supply**
10.6.5.1	Info	**Branch Circuit**
10.6.5.1.2		***New clause added;*** The branch circuit supplying the fire alarm equipment or emergency communication system(s) shall supply no other loads.
10.6.5.5		**Overcurrent Protection.** An overcurrent protective device ~~of suitable current-carrying capacity that is capable of interrupting the maximum short-circuit current to which it can be~~ ~~subject~~ shall be provided in ~~each underground connector~~ accordance with *NFPA 70.*

10.6.10	Info	**Storage Batteries.**
10.6.10.4		**Overcurrent Protection.** Overcurrent devices shall be provided to protect the batteries from excessive load current.
10.6.10.4.1		~~The batteries shall be protected against excessive load current by overcurrent devices.~~
10.6.10.4.2		~~The batteries shall be protected from excessive charging current by overcurrent devices or by automatic current-limiting design of the charging source.~~
10.11	Info	Alarm Signals
10.11.2		***New clause added;*** Visible notification appliances, textual visible notification appliances, and speaker notification appliances located in the same area shall be activated and deactivated as a group unless otherwise required by an ECS emergency response plan. (SIG-ECS)
10.11.3		***New clause added;*** Visible alarm strobe notification appliances shall not be activated when speaker notification appliances are used as permitted by 24.3.5 for non-emergency paging. (SIG-ECS)
10.20	Info	**Impairments**
10.20.6		The system owner or the owner's designated representative and the authority having jurisdiction shall be notified when an impairment period ~~is completed or discontinued~~ ends.
12	Info	**Circuits and Pathways**
12.2.3.4		***New clause added;*** Where operational capability is required to be maintained or continued during the application of a fault, the operational capability required in 10.11.1 shall be restored within 200 seconds from the time the fault is introduced.
12.3	Info	**Pathway Class Designations**
12.3.6		***New clause added;*** **Class N.** A pathway shall be designated as Class N when it performs as follows: (1)*It includes two or more pathways where operational capability of the primary pathway and a redundant pathway to each device shall be verified through end-to-end communication. *Exception: When only one device is served, only one pathway shall be required.* (2) A loss of intended communications between endpoints shall be annunciated as a trouble signal. (3) A single open, ground, short, or combination of faults on one pathway shall not affect any other pathway. (4)*Conditions that affect the operation of the primary pathway(s) and redundant pathway(s) shall be annunciated as a trouble signal when the system's minimal

<table>
<tr><td></td><td></td><td>operational requirements cannot be met.
(5)*Primary and redundant pathways shall not be permitted to share traffic over the same physical segment.</td></tr>
<tr><td>12.6</td><td>Info</td><td>Monitoring Integrity and Circuit Performance of Installation Conductors and Other Signaling Channels</td></tr>
<tr><td>12.6.11</td><td></td><td><s>Monitoring for integrity shall not be required for central station circuits serving notification appliances within a central station.</s></td></tr>
<tr><td>14</td><td>Info</td><td>Inspection, Testing, and Maintenance</td></tr>
<tr><td>14.2.2</td><td>Info</td><td>Performance</td></tr>
<tr><td>14.2.2.2</td><td>Info</td><td>Impairments/Deficiencies</td></tr>
<tr><td>14.2.2.2.4</td><td></td><td>New clause added;

In the event that any equipment is observed to be part of a recall program, the system owner or the system owner’s designated representative shall be notified in writing.</td></tr>
<tr><td>14.3</td><td>Info</td><td>Inspection</td></tr>
<tr><td>14.3.4</td><td></td><td>New clause added;

Initial and reacceptance inspections shall be made to ensure compliance with approved design documents and to ensure installation in accordance with this Code and other required installation standards.</td></tr>
<tr><td>14.3.5</td><td></td><td><s>The visual inspection</s> <u>Periodic visual inspections in accordance with Table 14.3.1</u> shall be made to <s>ensure</s> <u>assure</u> that there are no changes that affect equipment performance.</td></tr>
<tr><td>14.4</td><td>Info</td><td>Testing</td></tr>
<tr><td>14.4.3</td><td>Info</td><td>Test Methods</td></tr>
<tr><td>Table 14.4.3.2 4.</td><td></td><td>
<table>
<tr><th>Component</th><th>Initial Acceptance</th><th>Periodic Frequency</th><th>Method</th></tr>
<tr><td>(f) Performance-based technologies</td><td>X</td><td>Annually</td><td>Perform tests to ensure the monitoring of integrity of the transmission technology and technology path. <u>Where shared communications equipment is used as permitted by 26.6.3.1.14, provided secondary (standby) power sources shall be tested in accordance with Table 14.4.3.2, item 7, 8, or 9, as applicable.</u>
Where a single communications path is used, disconnect the communication path. Manually initiate an alarm signal transmission or allow the check-in (handshake) signal to be transmitted automatically. Verify the premises unit annunciates the failure within 200 seconds of the transmission failure. Restore the communication path.
Where multiple communication paths are used, disconnect both communication paths. Manually initiate an alarm signal transmission. Verify the premises control unit annunciates the failure within 200 seconds of the transmission failure. Restore both communication paths.</td></tr>
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Table 14.3.2.2 17		

Component	Initial Acceptance	Periodic Frequency	Method
(j) Initiating devices, supervisory (1) Control valve switch	X	~~Annually~~ Semiannual	Operate valve and verify signal receipt to be within the first two revolutions of the handwheel or within one-fifth of the travel distance, or per the manufacturer's published instructions.

Table 14.4.3.2 25.

Component	Initial Acceptance	Periodic Frequency	Method
Area of refuge two-way communication system	X	Annually	~~At a minimum, test the two-way communication system to verify operation and receipt of visual and audible signals at the transmitting and receiving unit respectively. Operate systems with more than five stations with a minimum of five stations operating simultaneously. Verify voice quality and clarity.~~ Use the manufacturer's published instructions and the as-built drawings provided by the system supplier to verify correct operation after the initial testing phase has been performed by the supplier or by the supplier's designated representative. Test the two-way communication system to verify operation and receipt of visual and audible signals at the transmitting unit and the receiving unit, respectively. Operate systems with more than five stations with a minimum of five stations operating simultaneously. Verify voice quality and clarity. Verify directions for the use of the two-way communication system, instructions for summoning assistance via the two-way communication system, and written identification of the location is posted adjacent to the two-way communication system. Verify that all remote stations are readily accessible. Verify the timed automatic communications capability to connect with a constantly attended monitoring location per 24.5.3.4.

14.4.5	Info	**Single- and Multiple-Station Smoke Alarms. (SIG-HOU)**
14.4.5.2		***New clause added;*** Smoke alarms and connected appliances shall be inspected and tested at least monthly.
14.4.5.4		***New section added;*** Smoke alarms shall be replaced when they fail to respond to operability tests.
14.4.5.4.1		Smoke alarms shall not remain in service longer than 10 years from the date of manufacture, unless otherwise provided by the manufacturer's published instructions.
14.4.5.5		***New clause added;*** Combination smoke/carbon monoxide alarms shall be replaced when the end-of-life signal activates or 10 years from the date of manufacture, whichever comes first, unless otherwise provided by the manufacturer's published instruction.

14.4.5.6		***New clause added;*** Where batteries are used as a source of energy for smoke alarms or combination smoke/carbon monoxide alarms or single- and multiple-station smoke alarms, the batteries shall be replaced in accordance with the alarm equipment manufacturer's published instructions.
14.4.9		**In-Building Emergency Radio Communication Systems.** In-building emergency radio communication systems shall be inspected and operationally tested in accordance with the ~~manufacturer's published~~ requirements ~~by the local fire department, the building owner, or a designed representative~~ of NFPA 1221.
14.6	Info	**Records**
14.6.1	Info	**Permanent Records**
14.6.1.2		***New clause added;*** The requirements of 7.5.7 shall apply to site-specific software.
17	Info	**Initiating Devices**
17.4	Info	**General Requirements**
17.4.7.1		***New clause added;*** If a remote alarm indicator is provided, the location of the detector and the area protected by the detector shall be prominently indicated at the remote alarm indicator by a permanently attached placard or by other approved means.
17.4.7.2		***New clause added;*** Remote alarm or supervisory indicators shall be installed in an accessible location and shall be clearly labeled to indicate both their function and any device or equipment associated with each detector.
17.4.7.3		***New clause added;*** Fire detectors installed in concealed locations where the specific detector alarm or supervisory signal is indicated at the control unit (and on the drawings with its specific location and functions) shall not be required to be provided with remote alarm indicators as specified in 17.4.7.
18	Info	**Notification Appliances**
18.4	Info	**Audible Characteristics.**
18.4.1.4		Audible ~~notification appliances for~~ alert and evacuation signal tones shall meet the requirements of 18.4.3 (Public Mode Audible Requirements), 18.4.4 (Private Mode Audible Requirements), 18.4.5 (Sleeping Area Requirements), or 18.4.6 (Narrow Band Tone Signaling for Exceeding Masked Thresholds), as applicable. This requirement shall include audible tones that preceded or follow voice messages.
18.4	Info	**Mechanical Protection**
18.4.5	Info	**Sleeping Area Requirements**

18.4.5.3		Audible appliances provided for the sleeping areas to awaken occupants shall produce a low frequency alarm signal that complies with the following: (1) The alarm signal shall be a square wave or provide equivalent awakening ability. (2) The waveform shall have a fundamental frequency of 520 Hz ± 10 percent. (3)*The notification equipment shall be listed for producing the low frequency waveform.
18.5	Info	**Visible Characteristics — Public Mode**
18.5.3	Info	**Light, Color, and Pulse Characteristics**
18.5.3.2		The maximum light pulse duration shall be ~~0.2 seconds~~ 20 milliseconds with a maximum duty cycle of 40 percent. *Exception: Lights used to meet the requirements of 18.5.5.5 shall be permitted to be listed and labeled to have pulse durations up to 100 milliseconds.*
21	Info	**Emergency Control Function Interfaces**
21.5	Info	**Fire Service Access Elevators**
21.5.2		***New clause added;*** Temperature and presence of smoke in associated lobbies, machine rooms, control rooms, machinery spaces, or control spaces shall be continuously monitored and displayed on a building fire alarm system annunciator located at the fire command center.
23	Info	**Protected Premises Fire Alarm Systems**
23.2	Info	**Software and Firmware Control**
23.2.2.1		A record of installed software and firmware version numbers shall be ~~maintained at the location of the fire alarm control unit~~ prepared and maintained in accordance with Sections 7.5 and 7.7.
23.6	Info	**Performance of Signaling Line Circuits (SLCs)**
23.6.1		A single fault on a pathway connected to the addressable devices shall not cause the loss of the devices in more than ~~50 addressable devices~~ one zone.
23.6.1.1		***New clause added;*** For the purpose of this section, each floor of the building shall be considered a separate zone.
23.6.1.2		***New clause added;*** For the purpose of this section, if a floor of the building is subdivided into multiple zones by fire or smoke barriers and the fire plan for the protected premises allows relocation of occupants from the zone of origin to another zone on the same floor, each zone on the floor shall be considered a separate zone.

23.6.1.3		***New clause added;*** The requirements in 23.6.1 shall not apply to the following: (1) Circuits between enclosures containing transponders and control units regardless of the number of initiating devices, notification appliances, or control relays that might be connected to those control units. (2) Circuits connecting short-circuit fault isolation modules to enclosures containing transponders and control units where the conductors are installed in metallic raceway or equivalently protected against mechanical injury and where the circuit does not exceed 3 ft (1 m) in length.
23.6.1.4		***New clause added;*** The loss of more than one zone shall be permitted on a documented performance-based design approach.
23.6.1.5		***New clause added;*** Performance-based designs submitted to the authority having jurisdiction for review and approval shall include documentation, in an approved format, of each performance objective and applicable scenario, together with technical substantiation used in establishing the proposed zone performance.
23.8	Info	**System Requirements**
23.8.2	Info	**Fire Alarm Control Units**
23.8.2.2		Except as permitted in 23.8.2.3, the fire alarm systems components shall be permitted to share control equipment or shall be able to operate as stand-alone subsystems, but~~, in any case, they~~ shall be arranged to function as a single system in accordance with 23.8.2.4 through 23.8.2.10.
23.8.2.7		Each interconnected fire alarm control unit shall be separately monitored for alarm, supervisory, and trouble conditions with supervised pathways that are in accordance with the manufacturers' published instructions.
23.8.2.7.1		***New clause added;*** Alarm conditions on interconnected fire alarm control units shall annunciate as alarm signals and initiate the evacuation signals.
23.8.2.7.2		***New clause added;*** Supervisory conditions on interconnected fire alarm control units shall annunciate as supervisory signals.
23.8.2.7.3		***New clause added;*** Trouble conditions on interconnected fire alarm control units shall annunciate as trouble signals.

23.8.2.7.4		***New clause added;*** Where supervised pathways between interconnected fire alarm control units is not achievable, a supervised annunciator shall be installed adjacent to control unit(s) to annunciate the status of the each control unit.
23.8.2.9.1		***New clause added;*** Where multiple control units of the same manufacturer are interconnected in a network arrangement and serve the same protected premises, the control units shall be arranged to be reset or silenced from one location.
23.8.2.9.2		***New clause added;*** Where multiple control units of the different manufacturers are interconnected in accordance with 23.8.2.5 through 23.8.2.8 and serve the same protected premises, the control units shall be permitted to be reset or silenced individually at each control unit.
23.8.2.9.3		***New clause added;*** Resetting procedures shall be documented and permanently posted beside each control unit and annunciator.
23.16	Info	**Special Requirements for Low-Power Radio (Wireless) Systems.**
23.16.3	Info	**Alarm Signals**
23.16.3.3		~~Fire alarm~~ Signals shall have priority ~~over al other signals~~ in accordance with 23.8.4.6.
23.16.3.4		~~The maximum allowable response delay from activation of an initiating device to receipt and display by the receiver/fire alarm control unit shall be 10 seconds.~~ Response time shall be in accordance with 10.11.1.
23.16.4	Info	**Monitoring for Integrity**
23.16.4.7		***New clause added;*** The indication required by 23.16.4.6 shall identify the specific trouble condition as an interfering signal
23.16.5		**Output Signals from Receiver/Transceiver/System Control Unit.** When the receiver/transceiver or system control unit is used to actuate remote devices, such as notification appliances and relays, by wireless means, the remote devices shall meet the following requirements: (1) Power supplies shall comply with Chapter 10 or the requirements of 23.16.2. (2) All monitoring for integrity requirements of Chapters 10, 12, 23, and 23.16.4 shall apply. (3) ~~The maximum allowable response delay from activation of an initiating device to activation of required alarm functions shall be 10 seconds.~~ Response time shall be in accordance with 10.11.1. (4) Each transceiver/system control unit shall automatically repeat activated

		response signals associated with life safety events at intervals not exceeding 60 seconds or until confirmation that the output device has received the alarm signal. (5) The remote devices shall continue to operate (latch-in) until manually reset at the system control unit.
24	Info	**Emergency Communications Systems (ECS)**
24.3.6	info	**Messages for One-Way Emergency Communications Systems.**
24.3.6.2		Based on the emergency response plan, emergency messages shall have content that provides information and instructions to people in the building, area, site, or installation.
24.3.7		**System Classification**
24.3.7.1		***New clause added;*** One-way emergency communications systems shall consist of one or more of the following: (1) In-building fire emergency voice/alarm communications systems (EVACS) *(see Section 24.4)* (2) In-building mass notification systems *(see Section 24.5)* (3) Wide-area mass notification systems *(see Section 24.6)* (4) Distributed recipient mass notification systems (DRMNS) *(see Section 24.7)*
24.3.7.2		***New clause added;*** Two-way emergency communications systems shall consist of one or more of the following: (1) Two-way, in-building wired emergency services communications systems (see Section 24.8) (2) Two-way radio communications enhancement systems (see Section 24.9) (3) Area of refuge (area of rescue assistance) emergency communications systems (see Section 24.10) (4) Elevator emergency communications systems (see Section 24.11) (5) Stairway communications systems (see Section 24.12)
24.3.12	Info	**Emergency Response Plan Elements**
24.3.12.3		The pathway survivability requirements in 24.3.13.4 through 24.3.13.12 shall apply to notification and communications circuits and other circuits necessary to ensure the continued operation of the emergency communications system.
24.3.12.4		In-building fire emergency voice/alarm communications systems shall comply with 24.3.13.4.1 or 24.3.13.4.2.
24.11		**Elevator Emergency Communications Systems**
24.11.3		***New clause added;*** Inspection and testing of elevator emergency communications systems shall be performed in accordance with ANSI/ASME A17.2, *Guide for Inspection of Elevators, Escalators and Moving Walks*.

24.12		***New section added;*** **Stairway Communications Systems.**
24.12.1		Where required by the building code in force and not included as part of another emergency communications system, a stairway communications system shall be installed in accordance with 24.12.
24.12.2		The stairway communications system shall be permitted to be integrated with another two-way emergency communications system providing it is installed in accordance with 24.12.
24.12.3		The stairway communications system shall comprise remotely located communications points and a central control point.
24.12.4		Each remote point shall have the capability to communicate with the central control point.
24.12.5		Quantity and locations of the remote communications points shall be as required by the building code in force and engineer specifications.
24.12.6		If the central control point is not constantly attended, it shall have a timed automatic communications capability to connect with a constantly attended monitoring location acceptable to the authority having jurisdiction where responsible personnel can initiate the appropriate response.
24.12.7		The physical location of the central control point shall be as designated by the building code in force or the authority having jurisdiction.
24.12.8		The remote communications points shall provide for two-way communications, provide an audible and visible signal to indicate communication has occurred, and indicate to the receiver the location sending the signal.
24.12.9		Instructions for the use of the stairway communications system, instructions for summoning assistance via the system, and written identification, including in braille, of the location shall be posted adjacent to each remote communications point.
24.13	Info	**Information, Command, and Control**
24.13.4	Info	**Power Supplies**
24.13.4.1		All control units shall meet the power supply requirements of Section 10.6 and 24.13.4.2
24.13.4.2		***New clause added;*** The power supply for the emergency command center for emergency communications systems shall include an uninterrupted power source with capacity sufficient to support the emergency response plan established for the specific premises.
26	Info	**Supervising Station Alarm Systems**
26.2.1	Info	**Alarm Signal Disposition**

		New clause added; Alarm signals initiated by manual fire alarm boxes, automatic fire detectors, waterflow from the automatic sprinkler system, or actuation of other fire suppression system(s) or equipment shall be treated as fire alarm signals.
26.2.1.1		
26.2.1.3		***New clause added;*** Fire alarm signals received at the supervising station by a zone or zones shall be retransmitted by zone to the communications center.
26.2.1.4		Fire alarm signals received at the supervising station that are identified as an individual point or points shall be retransmitted by point identifier to the communications center.
26.2.2	Info	**Alarm Signal Verification**
26.2.2.1 (8)		Alarm signals that are verified as ~~nuisance~~ unwanted alarms ~~are not dispatched and are handled in accordance with 26.2.3.2~~ shall be reported to the responsible fire department in a manner and at a frequency specified by the responsible fire department.
26.3	Info	**Central Station Service Alarm Systems**
26.3.3		~~**Contract Requirements.** The central station service elements shall be provided under contract to a subscriber by one of the following~~ a prime contractor that has a listing for central station fire alarm services. ~~(1) A listed central station that provides all of the elements of central station service with its own facilities and personnel.~~ ~~(2) A listed central station that provides, as a minimum, the signal monitoring, retransmission, and associated record keeping and reporting with its own facilities and personnel and shall be permitted to subcontract all or any part of the installation, testing, and maintenance and runner service.~~ ~~(3) A listed alarm service–local company that provides the installation, testing, and maintenance with its own facilities and personnel and that subcontracts the monitoring, retransmission, and associated record keeping and reporting to a listed central station with the required runner service provided by the listed alarm service–local company with its own personnel or the listed central station with its own personnel.~~ ~~(4) A listed central station that provides the installation, testing, and maintenance with its own facilities and personnel and that subcontracts the monitoring, retransmission, and associated record keeping and reporting to another listed central station with the required runner service provided by either central station.~~
26.3.3.1		***New cause added;*** The prime contractor shall be responsible for codecompliant service delivery, regardless of any subcontracting arrangements involved in the delivery of service.
26.3.3.2		Signal monitoring, retransmission, and associated recordkeeping and reporting shall be provided by a company that has a listing for central station alarm services covering these elements.

26.4	Info	**Equipment**
26.4.6	Info	**Operations**
26.4.6.6	Info	**Dispositions of Signals.**
26.4.6.6.1		**Alarms.** Upon receipt of an alarm signal, the proprietary supervising station operator shall initiate action to perform the following: (1) Notify the ~~fire department~~ communications center, the emergency response team, and such other parties as the authority having jurisdiction requires in accordance with 26.2.1 (2) Dispatch a runner or technician to the alarm location to arrive within 2 hours after receipt of a signal (3) Restore the system as soon as possible after disposition of the cause of the alarm signal
26.6	Info	**Communications Methods for Supervising Station Alarm Systems**
26.6.3	Info	**Equipment**
26.3.4		**Multiple Communications Paths.** If multiple transmission paths are used, the following requirements shall be met: (1) Each path shall be supervised within not more than 6 hours. (2) The failure of any path of a multipath system shall be annunciated at the supervising station within not more than 6 hours. (3) Multiple communications paths shall be arranged so that a single point of failure shall not cause more than a single path to fail. (4) The failure to complete a signal transmission shall be annunciated at the protected premises in accordance with Section 10.14.
27	Info	**Public Emergency Alarm Reporting Systems**
27.3	Info	**Management and Maintenance**
27.3.7		***New clause added;*** **Personnel Qualification.** Personnel shall be qualified and experienced in accordance with the requirements of 10.5.6.
27.5	Info	**Alarm Processing Equipment**
27.5.3	Info	**Remote Communications Center**
27.5.3.1		All equipment ~~used to provide the primary and remote receiving facilities~~ shall be listed for its intended use and shall be installed in accordance with *NFPA 70*.
27.5.3.2		~~The monitoring for integrity of all box circuits shall be provided with a visual and audible means to indicate a 20 percent or greater reduction or increase in the normal current in any box alarm circuit. The visual means shall identify the exact circuit affected.~~ Alarm processing equipment located remote from the communications center shall be capable of providing basic dispatching information independent of the communications center.

27.5.3.3	~~Monitoring for integrity of all power supplies shall be provided with visual and audible means to indicate a loss of primary or standby power supplies at both the communications center and remote communications center~~. The alarm processing equipment shall be located where it can be monitored for alarm and trouble conditions and shall be accessible to be manned in case of a pathway or communications failure with the communications center.
27.5.3.4	~~A minimum of two separate means of interconnection shall be provided between the communications center and remote communications center receiving equipment. This interconnection shall be dedicated and shall not be used for any other purpose.~~ Wired or wireless alarm repeating systems used to repeat signals between a remote communication center and the alarm processing equipment location shall meet the requirements of 27.5.3.4.1 through 27.5.3.4.7.
27.5.3.4.1	***New clause added;*** There shall be a minimum of two complete and independent alarm repeater systems, including batteries and power supplies, to provide redundancy.
27.5.3.4.2	***New clause added;*** If the alarm repeater system is configured with one alarm repeater in standby mode, the system shall be capable of detecting a communications failure and shall automatically switch to the backup system without interruption or loss of any alarm or trouble transmission.
27.5.3.4.3	***New clause added;*** Alarm repeater systems shall not be used for any purpose other than alarm communications between the communications center and the alarm processing equipment.
27.5.3.4.4	***New clause added;*** If wireless alarm repeaters are used, they shall operate on a licensed frequency dedicated for this purpose and be licensed to a public entity. Unlicensed frequencies shall not be permitted.
27..53.4.5	***New clause added;*** The communications method used for the alarm repeater, wired or wireless, shall be two-way.
27.5.3.4.6	***New clause added;*** The public emergency alarm reporting system communications infrastructure shall be used to repeat alarm and trouble signals between the alarm processing equipment and a remote communications center.

		New section added;
27.5.3.4.7		Where it is not possible to use the public emergency alarm reporting system communications infrastructure to provide communications between the alarm processing equipment and the remote communications center, an alternative repeater method shall be permitted and shall meet the requirements of 27.5.3.4.7.1 and 27.5.3.4.7.2.
27.5.3.4.7.1		If an alternative alarm repeater method is used it shall be publically owned, operated, and controlled.
27.5.3.4.7.2		The alternative alarm repeater method shall meet the requirements of 27.5.3, except 27.5.3.4.2 shall not apply.
27.5.3.5		~~Where data transmission or multiplexing equipment is used that is not an integral part of the alarm-receiving equipment, a visual and audible means shall be provided to monitor the integrity of the external equipment. This shall include monitoring all primary and standby power supplies as well as the transmission of data.~~ Pathways between the remote communications center and the alarm processing equipment shall be monitored for integrity and shall be dedicated and not used for any other purpose.
27.5.3.6		~~Power shall be provided in accordance with 27.5.2.5.~~ When communications between the communications center and the alarm processing equipment fails, the requirements of 27.5.3.6.1 through 27.5.3.6.3 shall apply.
27.5.3.7		~~The use of an uninterruptible power supply (UPS) to comply with standby power requirements shall not be permitted.~~ Power supplies shall be provided in accordance with 27.5.2.5.
27.6	Info	**Alarm Boxes**
27.6.3	Info	**Auxiliary Alarm Box.**
27.6.3.1	Info	**Fundamental Requirements.**
27.6.3.1.2		Wiring between the auxiliary alarm system and the auxiliary alarm box or master alarm box shall be installed in rigid metal conduit, intermediate metal conduit, or electrical metallic tubing and shall meet the requirements of pathway survivability Level 2 *(see 12.4.3)*.
27.8	Info	**Emergency Communications Systems (ECS)**
27.8.1		~~ECS~~ Public emergency alarm reporting systems that are capable of two-way wired or wireless communications with command and control capabilities and/or voice communications capabilities shall be permitted to be ~~connected to~~ used as part of the communications infrastructure of an emergency communications system (ECS), provided that it does not interfere with the public emergency alarm reporting system.

27.8.2		~~ECS equipment and interface methods connecting to or utilizing public emergency alarm reporting systems shall be electrically and operationally compatible so as not to interfere with the public emergency alarm reporting systems.~~ The method of interfacing and monitoring for integrity between the public emergency alarm reporting system and the ECS shall be in accordance with 27.6.3.2.3 and treated as an auxiliary alarm system connected to a protected premises.
27.8.3		***New clause added;*** Wired or wireless alarm boxes shall be permitted for shared use with an emergency communications system and shall meet all the requirements of Chapter 27.
27.8.4		***New clause added;*** Trouble and alarm indications in the emergency communications system shall be visually and audibly annunciated at the communications center, except under fault conditions that prevent such a notification process.
27.8.5		***New clause added;*** When a fault condition prevents communications between the ECS and the communications center, an audible and visual trouble indication shall be activated at the fire command center in the protected premises.
27.8.6		***New clause added;*** Communications between the public emergency alarm reporting system and the emergency communications system shall be monitored for integrity, and faults shall be annunciated at the communications center, as well as at the fire command center or the emergency command center or both, in the protected premises.
29	Info	**Single- and Multiple-Station Alarms and Household Fire Alarm Systems**
29.6	Info	**Power Supplies**
29.6.1		**Smoke and Heat Alarms.** Smoke and heat alarms shall meet the requirements of 29.5.2.1.1 and be powered by one of the following means: (1) A commercial light and power source along with a secondary power source that is capable of operating the device for at least 7 days in the normal condition, followed by 4 minutes of alarm (2) If a commercial light and power source is not normally available, a noncommercial ac power source along with a secondary power source that is capable of operating the device for at least 7 days in the normal condition, followed by 4 minutes of alarm (3) A nonrechargeable, nonreplaceable primary battery that is capable of operating the device for at least 10 years in the normal condition, followed by 4 minutes of alarm, followed by 7 days of trouble (4) If a battery primary power supply is specifically permitted, a battery meeting the requirements of 29.6.6 (nonrechargeable primary battery) or the requirements of 29.6.7 (rechargeable primary battery) (5) A suitable spring-wound mechanism for the nonelectrical portion of a listed single-station alarm with a visible indication to show that sufficient operating

	power is not available
29.7	**Equipment Performance**
29.7.6	**System Control Equipment**
29.7.6.8	***New clause added;*** Any data exchange between the fire alarm system and separate independent devices via remote access shall not compromise the integrity of the fire alarm system.
29.7.6.9	***New clause added;*** Remote resetting and silencing of a fire alarm control unit from other than the protected premises shall be inhibited for a minimum of 4 minutes from the initial activation of the fire alarm signal.
29.7.9	**Supervising Stations**
29.7.9.1.3	**Other Than DACT.**
29.7.9.1.3.2	Where a communication or transmission means other than DACT is used, all equipment necessary to transmit an alarm signal shall be provided with a minimum of 24 hours of secondary power capacity and shall report a trouble condition indicating loss of primary power.

	CUSTOMERS PLEASE NOTE: This Table and column "Verdict" can be used in determining how your current or future production is or will be in compliance with new/revised requirements.