# Supervising Station Alarm Systems

# снартег 26

Chapter 26 provides the requirements for three supervising station services: central station, proprietary station, and remote station. It also provides the requirements for various transmission technologies.

The 2019 edition of *NFPA 72*°, *National Fire Alarm and Signaling Code*°, resulted in the addition or deletion of several definitions used in the chapter. The following list is a summary of significant revisions to Chapter 26 for the 2019 edition of the Code:

- Incorporated many requirements that had been in NFPA 720, *Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment,* which were applicable to the requirements in the chapter for other alarm systems.
- Eliminated the use of exceptions in concert with other *NFPA 72* chapters. Users of the Code should read all subsections related to a specific code section carefully because the material in these subsections may have existed as exceptions in previous editions of the Code.
- Revised the chapter by rewriting sections that had contained more than one requirement under a single code section number. Revisions result in no more than one requirement per section number. These changes bring the chapter into compliance with NFPA's *Manual of Style*.
- Replaced references to *public switched telephone network (PSTN)* with *managed facilities-based voice network (MFVN)*. MFVNs include equipment that was historically categorized as PSTN.
- Added an allowance in 26.6.3.13.1.2 for secondary power where two performance-based transmission pathways are provided where a single pathway is required.
- Supervising stations, other than a communications center, may delay the retransmission of trouble signals by up to 15 minutes to allow a trouble signal to restore on its own. This requirement is in 26.3.8.3.4(1) and 26.5.6.3.3.2.
- Aligned the requirements for central station service, proprietary supervising station alarm systems, and remote supervising station alarm systems.

# 26.1\* Application.

The performance, installation, and operation of alarm systems at a continuously attended supervising station and between the protected premises and the continuously attended supervising station shall comply with the requirements of this chapter.

Chapter 26 covers the requirements for the connection of a protected premises fire alarm system to, and the monitoring by, a continuously attended supervising station. This includes the transmission of signals from fire alarm control units (FACUs) that monitor systems, which may include alarm devices such as smoke and heat detectors and manual fire alarm boxes, as well as systems that supervise only suppression systems. New requirements address carbon monoxide (CO) systems that may be standalone or a part of a protected premises fire alarm system. Systems incorporating CO devices may also transmit signals off-premise to a supervising station based on the requirements of other codes or when required by the system owner.

Supervising station locations may be a central station, a proprietary supervising station, or a remote supervising station. The supervising station location, where permitted, would be part of one of the three defined types of supervising station alarm systems: central station, proprietary





Organization of Chapter 26.

supervising station or remote supervising station alarm systems. See Exhibit 26.1 for an illustration of the organization of Chapter 26.

**A.26.1** Table A.26.1 provides a tool for users of the Code to easily and systematically look up requirements for protected premises, central station service, remote supervising station, and proprietary supervising station alarm systems.

#### △ **TABLE A.26.1** Alarm System Performance Criteria

Attribute	Protected Premises Fire	Central Station	Remote Supervising	Proprietary Supervising
	Alarm System	Service Alarm System	Station Alarm System	Station Alarm System
Applicability	All fire alarm systems	Supervising station service provided by a prime contractor. There is a subscriber (26.3.2, 26.3.3, and 26.3.4).	Where central station service is neither required nor elected, properties under various ownership monitored by a remote supervising station (26.5.1.1 and 26.5.1.2)	Supervising station monitoring contiguous or noncontiguous properties under one ownership and responsible to the owner of the protected property (26.4.2.1 and 26.4.2.2)
Listing	Equipment listed for the use intended (10.3)	Equipment listed for the use intended (10.3). Compliance documentation (26.3.4).	Equipment listed for use intended (10.3)	Equipment listed for use intended (10.3)
Design	According to Code	According to Code	According to Code	According to Code
	by experienced	by experienced	by experienced	by experienced
	persons (10.5.1)	persons (10.5.1)	persons (10.5.1)	persons (10.5.1)
Compatibility	Detector devices pulling	Detector devices pulling	Detector devices pulling	Detector devices pulling
	power from initiating or	power from initiating or	power from initiating or	power from initiating or
	signaling circuits listed	signaling circuits listed	signaling circuits listed	signaling circuits listed
	for control unit (10.3.3)	for control unit (10.3.3)	for control unit (10.3.3)	for control unit (10.3.3)

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# △ TABLE A.26.1 Continued

Attribute	Protected Premises Fire Alarm System	Central Station Service Alarm System	Remote Supervising Station Alarm System	Proprietary Supervising Station Alarm System
Performance and limitations	85% and 110% of the nameplate rated input voltage, 32°F (0°C) and 120°F (49°C) ambient temperature, 85% relative humidity at 86°F (30°C) (10.3.5)	85% and 110% of the nameplate rated input voltage, 32°F (0°C) and 120°F (49°C) ambient temperature, 85% relative humidity at 86°F (30°C) (10.3.5)	85% and 110% of the nameplate rated input voltage, 32°F (0°C) and 120°F (49°C) ambient temperature, 85% relative humidity at 86°F (30°C) (10.3.5)	85% and 110% of the nameplate rated input voltage, 32°F (0°C) and 120°F (49°C) ambient temperature, 85% relative humidity at 86°F (30°C) (10.3.5)
Documentation	Authority having jurisdiction notified of new or changed specifications, wiring diagrams, battery calculations, floor plans. Statement from contractor that system meets manufacturer's published instructions and NFPA requirements (7.5.2). Record of completion (7.5.6). Results of evaluation required in 23.4.3.1 (23.4.3.3).	Authority having jurisdiction notified of new or changed specifications, wiring diagrams, battery calculations, floor plans. Statement from contractor that system meets manufacturer's published instructions and NFPA requirements (7.5.2). Record of completion (7.5.6). Results of evaluation required in 23.4.3.1 (23.4.3.3).	Authority having jurisdiction notified of new or changed specifications, wiring diagrams, battery calculations, floor plans. Statement from contractor that system meets manufacturer's published instructions and NFPA requirements (7.5.2). Record of completion (7.5.6). Results of evaluation required in 23.4.3.1 (23.4.3.3).	Authority having jurisdiction notified of new or changed specifications, wiring diagrams, battery calculations, floor plans. Statement from contractor that system meets manufacturer's published instructions and NFPA requirements (7.5.2). Record of completion (7.5.6). Results of evaluation required in 23.4.3.1 (23.4.3.3).
Supervising station facilities	None	UL 827-compliant for the supervising station and any subsidiary station (26.3.5.1 and 26.3.5.2)	Communications centers or other location acceptable to the authority having jurisdiction (26.5.3)	Fire-resistive, detached building or cut-off room not near or exposed to hazards. Access restricted, NFPA 10, 26-hour emergency lighting (26.4.3).
Testing and maintenance	Chapter 14	Chapter 14. Pass code must be provided to place system into test mode (26.3.8.3.5.6).	Chapter 14	Chapter 14
Runner service	No	Yes Alarm — arrive at the protected premises within 2 hours where equipment needs to be reset. Guard's tour — 30 minutes. Supervisory — 2 hours. Trouble — 4 hours. (26.3.8)	No	Yes Alarm — arrive at the protected premises within 2 hours where equipment needs to be reset. Guard's tour — 30 minutes. Supervisory— 2 hours. Trouble — 4 hours. (26.4.6.1.6)
Operations and management requirements	None	Prime contractor provides all elements of central station service under a variety of contractual arrangements (26.3.3)	None	Supervising station is under same ownership and management responsibility as premises being supervised (26.4.2.1)

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(continues)

### △ TABLE A.26.1 Continued

Attribute	Protected Premises Fire Alarm System	Central Station Service Alarm System	Remote Supervising Station Alarm System	Proprietary Supervising Station Alarm System
Staff	None	Minimum of two persons on duty at supervising station. Operation and supervision primary task (26.3.7).	Minimum of two persons on duty at supervising station at all times. Other duties permitted per the authority having jurisdiction (26.5.5).	Two operators of which one may be the runner. When runner is not in attendance at station, time between contact not to exceed 15 minutes. Primary duties are monitoring alarms and operations of station (26.4.5).
Monitor supervisory signals	Control unit and command center (10.14.1 and 10.14.2)	Control unit, command center, and central station (10.14.1 and 10.14.2)	Control unit, command center, and remote supervising station (10.14.1 and 10.14.2)	Control unit, command center, and proprietary supervising station (10.14.1 and 10.14.2)
Retransmission of signals	None	Alarm to public service communications center and subscriber. Supervisory, trouble, and guard service to designated personnel (26.3.8).	Alarm to public service communications center when monitored privately. Supervisory and trouble signals to owner's designated representative (26.5.6).	Alarm to public service communications center and plant brigade. Supervisory, trouble, and guard service to designated personnel (26.4.6.1.6).
Retransmission time	None	Alarm — immediate. Supervisory — immediate. Guard's tour supervisory — without unreasonable delay. Trouble — immediate. (26.3.8)	Alarm — immediate. Supervisory — immediate. Trouble — immediate. (26.5.6)	Alarm — immediate. Supervisory — immediate. Guard's tour supervisory — at once. Trouble — immediate. (26.4.6.1.6)
Records	Current year and 1 year after (7.7.1)	Complete records of all signals received must be retained for at least 1 year. Reports provided of signals received to authority having jurisdiction in a form it finds acceptable (26.3.9).	At least 1 year (26.5.8.1).	Complete records of all signals received shall be retained for at least 1 year. Reports provided of signals received to authority having jurisdiction in a form it finds acceptable (26.4.7).

Table A.26.1 compares the performance characteristics of different protected premises alarm systems.

**26.1.1\*** Where any system regulated by this Code sends signals to a supervising station, the entire system shall become a supervising station alarm system.

FAQ

When an alarm system at a protected premises transmits a signal to a supervising station, what designation does the system take?

Once an alarm system connects to a supervising station, the entire alarm system becomes a supervising station alarm system. Some users and some authorities having jurisdiction may think that only

the part of the system that actually connected to or interfaced with the supervising station comprises the supervising station alarm system. Subsection 26.1.1 clarifies that once any alarm system regulated by this Code connects to a supervising station, the entire system becomes a supervising station alarm system.

**A.26.1.1** Supervising station alarm systems include the equipment at the protected premises as well as the equipment at the supervising station itself. While the operational requirements relating to the signals sent off-premises fall under the scope of Chapter 26, the requirements of Chapter 23 also apply. For example, for protected premises fire alarm systems, refer to Figure A.26.1.1.

The example in Figure A.26.1.1 correlates requirements between the chapter on protected premises alarm and signaling systems (Chapter 23) and the chapter on supervising station alarm systems (Chapter 26). The figure illustrates that all the components and subsystems in either arrangement constitute a supervising station alarm system.

Figure A.26.1.1 shows the responsibility of each of the two chapters for the two common arrangements of fire alarm systems transmitting from a protected premises to a supervising station. In the first arrangement, the fire alarm system master control unit connects to a supervising station transmitter at the protected premises that, in turn, transmits either to an off-site supervising station or to a supervising station at some other location on the same site. In the second arrangement, the fire alarm system master control unit is colocated with the supervising station at the protected premises.

**26.1.2** The requirements of Chapters 7, 10, 12, 14, and 23 shall apply unless otherwise noted in this chapter.

**26.1.3** The requirements of this chapter shall not apply to Chapter 29 unless otherwise noted.

The requirements of Chapter 26 apply to any occupancy, building or structure where an owner or authority having jurisdiction requires a significantly higher level of service.

Subsections 26.1.2 and 26.1.3 set the parameters for the other portions of the Code that apply to supervising station alarm systems. In 26.1.3, the requirements of Chapter 26 apply only to household signaling systems as directed by Chapter 29.

## 26.2 General.

#### 26.2.1 Alarm Signal Disposition.

This subsection emphasizes the importance of taking action when a supervising station receives fire alarm signals from a protected premises. Language permitting alarm signal preverification was included in the 2013 edition and was removed after only a single code cycle because it was not practical to implement and added a confusing step to the process.

**26.2.1.1** 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.

**26.2.1.2**\* Except as permitted by 26.2.2 and 29.10.9.7, all fire alarm signals received by a supervising station shall be immediately retransmitted to the communications center.

**A.26.2.1.2** The term *immediately* in this context is intended to mean "without unreasonable delay." Routine handling should take a maximum of 90 seconds from receipt of an alarm signal.



FIGURE A.26.1.1 Supervising Station Alarm System.

A definition of the term *immediately* (as used in Chapter 26) has been added to 3.3.137. The definition is limited to use in Chapter 26.

- $\Delta$  26.2.1.3 Fire alarm signals received at the supervising station shall be retransmitted to the communications center by one of the following methods:
  - (1) Signals that are identified by zone at the supervising station shall be retransmitted by zone to the communications center.
  - (2) Signals that are identified as an individual point or points at the supervising station shall be retransmitted by point or points to the communications center.
  - (3)\* Signals that are received at the supervising station as events shall be retransmitted by event to the communications center.
- **N** A.26.2.1.3(3) Events can be general alarm signals or other fire alarm signals not identified individually by point or zone.

Paragraphs 26.2.1.3(1) and (2) clarify that if the supervising station receives signals from a protected premises with a specific description such as "Sprinkler Riser 1 — First Floor" or "First Floor Elevator Lobby Smoke Detector," this information is required to be retransmitted to the communications center. This provides responding fire department personnel additional information related to the location of a fire alarm device or zone activation in a building as well as the subsequent location(s) of additional fire alarm devices or zones that may be received by the supervising station. This information may be used by the fire department to alter its response by either increasing or decreasing the amount of apparatus and personnel responding to the incident and whether the response should occur in either an emergency or non-emergency fashion.

New paragraph 26.2.1.3(3) for the 2019 edition of the Code requires that the supervising station retransmit any other alarm signals it receives to the communications center. Note that the Code does not currently set a limit to the amount of information, or the number of signals, that will be retransmitted to the communications center.

**26.2.2\* Fire Alarm Signal Verification.** For applications other than those addressed under the scope of 29.10.9.7, supervising station personnel shall attempt to verify alarm signals prior to reporting them to the communications center only where all the following conditions exist:

- (1)\* Alarm signal verification is required by the responsible fire department for a specific protected premises.
- (2) Documentation of the requirement for alarm signal verification is provided by the responsible fire department to the supervising station and the protected premises.
- (3) If the requirement for verification changes, the responsible fire department notifies the supervising station and the protected premises.
- (4)\* The verification process does not take longer than 90 seconds from the time the alarm signal is received at the supervising station until the time that retransmission of the verified alarm signal is initiated.
- (5) Verification of a true fire is received from anyone on premises or verification of an unwanted alarm signal is received only from a pre-assigned list of authorized personnel within the protected premises.
- (6)\* Verified alarm signals are immediately retransmitted to the communications center and include information that the signal was verified at the protected premises to be an emergency.
- (7)\* Alarm signals where verification is not conclusive are immediately retransmitted to the communications center.

(8)\* Alarm signals that are verified as unwanted alarms shall be reported to the responsible fire department in a manner and at a frequency specified by the responsible fire department.

**A.26.2.2** The term *immediately* in this context is intended to mean "without unreasonable delay." Routine handling should take a maximum of 90 seconds from receipt of an alarm signal or at the end of the verification time by the supervising station until the initiation of retransmission to the communications center.

**A.26.2.2(1)** It is recognized that individual fire departments will have a preference on whether verification is used in certain occupancies based on many variables such as department-specific staffing or response protocols, occupancy staffing, and occupancy risk. This section allows the fire authority to specifically select those occupancies where verification is allowed. It should be understood that the use of the alarm verification process could delay the response to the alarm by up to an additional 90 seconds.

**A.26.2.2(4)** The 90-second allowance for a supervising station to call the protected premise to verify the validity of the received alarm signal is in addition to the time allowed for the supervising station to initiate the retransmission to the communications center.

Annex A language for condition (4) indicates that the 90 seconds for alarm signal verification is "in addition to" the 90 seconds for retransmission.

**A.26.2.2(6)** It is important to notify the communications center that an alarm signal was verified and that fire conditions exist at the protected premises or that some other type of an emergency exists. Fire departments typically have a substantially larger response for confirmed structure fires.

**A.26.2.2(7)** If an alarm signal cannot be reliably confirmed as a nuisance alarm, then it should be immediately retransmitted. This might include situations where no contact is made within the premises, or where the persons within the premises cannot verify the source of the alarm within the allowable 90 seconds, or other related scenarios.

**A.26.2.2(8)** When verification of a fire alarm signal results in a signal not being reported to the communications center, it is important that fire department personnel be made aware of the alarm and the reason for nondispatch so that problematic systems can be identified.

Subsection 26.2.2 reduces fire department responses to nuisance fire alarm system activations. The verification process is carried out by the supervising station. To prevent serious consequences and potential liabilities of failing to report an emergency to the communications center due to faulty verification, these requirements prescribe a strict verification protocol. No verification is permitted unless desired and documented, in writing, by the responsible fire department on a premises-by-premises basis. Where permitted, one or more persons from the protected premises must be prearranged as authorized to provide verification. When an alarm signal is received, verification will be accepted only from those personnel and only if they are currently in the protected premises. It is important to note that alarm signal verification does not apply to CO signals received by a supervising station.

**26.2.3** Alarm Signal Content. Where required by the enforcing authority, governing laws, codes, or standards, alarm signals transmitted to a supervising station shall be by addressable device or zone identification.

This subsection defers to another authority's requirement for alarm signals to include detailed information about the alarm, either at the initiating device level for addressable systems or at the zone level for conventional systems. In effect, this requirement permits, but does not mandate, specific alarm signal

information to be transmitted. This requirement does not apply to supervisory or trouble signals. Refer to 26.2.1.3, which provides requirements that must be followed by the supervising station when receiving specific alarm signal information from a protected premises.

#### **N** 26.2.4 Carbon Monoxide Signal Disposition.

For the 2019 edition, many of the CO requirements that had been in NFPA 720 have been moved into Chapter 26 where they apply to the requirements for supervising station alarm systems.

#### N 26.2.4.1 Carbon Monoxide Alarm Signal Disposition.

**N** 26.2.4.1.1 A carbon monoxide alarm signal shall take precedence over supervisory or trouble signals.

A CO signal's priority is above a supervisory or trouble signal, but below a fire alarm signal or mass notification signal.

- **N** 26.2.4.1.2 The actuation of a carbon monoxide detector or system shall be distinctively indicated as a carbon monoxide alarm signal.
- **N** 26.2.4.1.3\* Servicing of a system in alarm that cannot be reset shall be in accordance with Chapter 14 and shall occur within 4 hours of the carbon monoxide alarm signal.
- **N** A.26.2.4.1.3 If a carbon monoxide detector cannot be reset in accordance with Chapter 14, it could indicate that carbon monoxide is still present in the premises. Until such time that carbon monoxide can be excluded as the source of the alarm, the assumption should be that carbon monoxide is present and appropriate life safety precautions should be followed.
- **N** 26.2.4.1.4 Upon receipt of a carbon monoxide alarm signal, supervising station personnel shall perform the following actions in the order listed:
  - (1) Where required by the emergency response agency, immediately retransmit indication of the carbon monoxide alarm signal to the communications center
  - (2) Contact the responsible party(s) in accordance with the notification plan
  - (3) Once contacted, inform the subscriber to take one of the actions in (a) or (b):
    - (a) Where the subscriber has a carbon monoxide emergency response plan, implement the plan
    - (b) Where the subscriber has no carbon monoxide emergency response plan:
      - i. Immediately move to fresh air, either outdoors or by an open door or window
      - ii. Verify that all occupants are accounted for
      - iii. Do not re-enter the premises or move away from an open door or window until the emergency service responders have arrived, the premises have been aired out, and the alarm returns to its normal condition

This paragraph provides operational requirements for the supervising station when a CO alarm signal is received. Note there are no similar requirements for the communications center in *NFPA 72* as those requirements are best covered by NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems.*  **NFPA 720**