

# NFPA® 1225

## Standard for Emergency Services Communications

2022 Edition



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## NFPA® 1225

### Standard for

## Emergency Services Communications

### 2022 Edition

This edition of NFPA 1225, *Standard for Emergency Services Communications*, was prepared by the Technical Committees on Public Safety Telecommunicator Professional Qualifications and Public Emergency Service Communication, released by the Correlating Committee on Professional Qualifications, and acted on by the NFPA membership during the 2021 NFPA Technical Meeting held June 14–July 2. It was issued by the Standards Council on August 26, 2021, with an effective date of September 15, 2021.

This document has been amended by one or more Tentative Interim Amendments (TIAs) and/or Errata. See “Codes & Standards” at [www.nfpa.org](http://www.nfpa.org) for more information.

This edition of NFPA 1225 was approved as an American National Standard on September 15, 2021.

### Origin and Development of NFPA 1225

This is the first edition of NFPA 1225; it consolidates NFPA 1061, *Standard for Public Safety Telecommunications Personnel Professional Qualifications*, and NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*, into a single standard. The Standards Council approved the consolidation of NFPA 1061 and NFPA 1221 in April 2019. The two standards are separate and identifiable in NFPA 1225 for individual reference or adoption.

For this edition of NFPA 1225, the Committee on Public Safety Telecommunicator Professional Qualifications evaluated the job performance requirements for each position for validity to measure competency with the identified duties of each position. The committee identified the need for each position to maintain competency through professional development activities. To each position, the committee added the task of identifying fellow employees who exhibit signs and symptoms of emotional and behavioral distress. Updates to referenced standards were also identified by the committee.

The Committee on Public Emergency Service Communication made enhancements to all chapters addressing emergency services radio communications. Attention to maintaining the reliability of mission-critical communication was a prime focus of the committee. The committee recognized the role that Internet communication pathways play in emergency service communications. The committee created a separate chapter specific to in-building emergency responder communications enhancement systems to give stakeholders a centralized viewpoint of requirements for the systems and made refinements to definitions, permitting, system survivability, and system acceptance testing.

For more information about the ERRS consolidation project see [nfpa.org/errs](http://nfpa.org/errs).

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NFPA 1225

Standard for

Emergency Services Communications

2022 Edition

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**NOTICE:** An asterisk (\*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced and extracted publications can be found in Chapter 2 and Annex G.

Chapter 1 Administration

**1.1 Scope.** This standard identifies the minimum job performance requirements (JPRs) for Public Safety Telecommunications Personnel, and provides minimum requirements for the installation, maintenance, and use of emergency services communications systems.

**1.2 Purpose.** The purpose of this standard is to specify the minimum job performance requirements (JPRs) for service as Public Safety Telecommunications Personnel and specify minimum requirements for systems, retransmissions, dispatching, performance levels and quality of installations for emergency services communications.

**1.3\* Application.** This standard can be applied as follows:

- (1) Chapters 1 through 11, and Annexes A, B, C, D, E, and G constitute the 2022 edition of NFPA 1061.
- (2) Chapters 1 through 3, Chapters 12 through 23, and Annexes A, F, and G constitute the 2022 edition of NFPA 1221.

**1.4 Equivalency.** Nothing in this standard is intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard.

**1.4.1** Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency.

**1.4.2** The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

**1.5 Units.** In this standard, equivalent values in SI units shall not be considered as the requirement, as these values can be approximate. (See Table 1.5.)

Table 1.5 U.S.-to-SI Conversions

| Quantity | U.S. Unit/Symbol  | SI Unit/Symbol    | Conversion Factor |
|----------|-------------------|-------------------|-------------------|
| Length   | inch (in.)        | millimeter (mm)   | 1 in. = 25.4 mm   |
|          | foot (ft)         | meter (m)         | 1 ft = 0.305 m    |
| Area     | square foot (ft²) | square meter (m²) | 1 ft² = 0.0929 m² |

Chapter 2 Referenced Publications

**2.1 General.** The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

**2.2 NFPA Publications.** National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

- NFPA 1, *Fire Code*, 2021 edition.
- NFPA 10, *Standard for Portable Fire Extinguishers*, 2022 edition.
- NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2022 edition.
- NFPA 37, *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines*, 2021 edition.
- NFPA 54, *National Fuel Gas Code*, 2021 edition.
- NFPA 58, *Liquefied Petroleum Gas Code*, 2020 edition.
- NFPA 70®, *National Electrical Code®*, 2020 edition.
- NFPA 72®, *National Fire Alarm and Signaling Code®*, 2022 edition.
- NFPA 75, *Standard for the Fire Protection of Information Technology Equipment*, 2020 edition.
- NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*, 2021 edition.
- NFPA 90B, *Standard for the Installation of Warm Air Heating and Air-Conditioning Systems*, 2021 edition.
- NFPA 101®, *Life Safety Code®*, 2021 edition.
- NFPA 110, *Standard for Emergency and Standby Power Systems*, 2022 edition.
- NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems*, 2022 edition.
- NFPA 220, *Standard on Types of Building Construction*, 2021 edition.
- NFPA 731, *Standard for the Installation of Premises Security Systems*, 2020 edition.
- NFPA 780, *Standard for the Installation of Lightning Protection Systems*, 2020 edition.
- NFPA 1140, *Standard for Wildland Fire Protection*, 2022 edition.
- NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*, 2020 edition.

NFPA 1600®, *Standard on Continuity, Emergency, and Crisis Management*, 2019 edition.

NFPA 1901, *Standard for Automotive Fire Apparatus*, 2016 edition.

NFPA 5000®, *Building Construction and Safety Code*®, 2021 edition.

## 2.3 Other Publications.

**2.3.1 APCO Publications.** APCO International, 351 North Williamson Boulevard, Daytona Beach, FL 32114.

APCO ANS 2.106.1, *Public Safety Grade Site Hardening Requirements*, 2019.

**2.3.2 ASTM Publications.** ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, 2020.

**2.3.3 FEMA Publications.** Emergency Management Institute, 16825 S. Seton Ave., Emmitsburg, MD 21727.

IS 0100, *Introduction to the Incident Command System*, ICS 100, 2018.

IS 0200, *Incident Command System for Single Resources and Initial Action Incidents*, 2019.

IS 0700, *National Incident Management System (NIMS), An Introduction*, 2020.

IS 0800, *National Response Framework, An Introduction*, 2020.

*National Incident Management System (NIMS)*, 2017.

**2.3.4 IEEE Publications.** IEEE, 3 Park Avenue, 17th Floor, New York, NY 10016-5997.

IEEE C2, *National Electrical Safety Code*, 2017.

**2.3.5 IES Publications.** Illuminating Engineering Society, 120 Wall Street, 17th Floor, New York, NY 10005.

IESNA HB-9-00, *The Lighting Handbook*, 10th edition, 2019.

**2.3.6 NENA Publications.** National Emergency Number Association, 1700 Diagonal Road, Suite 500, Alexandria, VA 22314.

NENA-ADM-000.23, *NENA Master Glossary of 9-1-1 Terminology*, 2020.

NENA/APCO ANS 2.105.1, *NG9-1-1 Emergency Incident Data Document (EIDD)*, 2017.

**2.3.7 TIA Publications.** Telecommunications Industry Association, 1320 North Courthouse Road, Suite 200, Arlington, VA 22201.

TIA-102.BAAA, *Project 25 FDMA Common Air Interface*, 2017.

TIA-102.BBAB, *Project 25 Phase 2 Two-Slot Time Division Multiple Access Physical Layer Protocol Specification*, 2009.

TIA-102.BBAC, *Project 25 Two-Slot TDMA Media Access Control Layer Specification*, 2019.

TIA-603, *Land Mobile FM or PM Communications Equipment Measurement and Performance Standards*, 2016.

**2.3.8 UL Publications.** Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

UL 497C, *Standard for Protectors for Coaxial Communications Circuits*, 2001, revised 2017.

UL 752, *Standard for Bullet-Resistant Equipment*, 2005, revised 2015.

UL 2524, *Standard for In-Building 2-Way Emergency Radio Communication Enhancement Systems*, 2019.

**2.3.9 US Government Publications.** US Government Publishing Office, 732 North Capitol Street, NW, Washington, DC 20401-0001.

Homeland Security Presidential Directive 5, "Management of Domestic Incidents," February 28, 2003.

NIMS/ICS, *Emergency Responder Field Operations Guide*, 2011.

Presidential Policy Directive 8, "National Preparedness," March 30, 2011.

## 2.3.10 Other Publications.

*Merriam-Webster's Collegiate Dictionary*, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

## 2.4 References for Extracts in Mandatory Sections.

NFPA 70®, *National Electrical Code*®, 2020 edition.

NFPA 72®, *National Fire Alarm and Signaling Code*®, 2022 edition.

NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems*, 2022 edition.

NFPA 601, *Standard for Security Services in Fire Loss Prevention*, 2020 edition.

NFPA 1000, *Standard for Fire Service Professional Qualifications Accreditation and Certification Systems*, 2022 edition.

NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*, 2017 edition.

NFPA 1021, *Standard for Fire Officer Professional Qualifications*, 2020 edition.

NFPA 1041, *Standard for Fire and Emergency Services Instructor Professional Qualifications*, 2019 edition.

NFPA 1561, *Standard on Emergency Services Incident Management System and Command Safety*, 2020 edition.

## Chapter 3 Definitions

**3.1 General.** The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

## 3.2 NFPA Official Definitions.

**3.2.1\* Approved.** Acceptable to the authority having jurisdiction.

**3.2.2\* Authority Having Jurisdiction (AHJ).** An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

**3.2.3 Labeled.** Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

**3.2.4\* Listed.** Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

**3.2.5 Shall.** Indicates a mandatory requirement.

**3.2.6 Should.** Indicates a recommendation or that which is advised but not required.

**3.2.7 Standard.** An NFPA Standard, the main text of which contains only mandatory provisions using the word “shall” to indicate requirements and that is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions are not to be considered a part of the requirements of a standard and shall be located in an appendix, annex, footnote, informational note, or other means as permitted in the NFPA Manuals of Style. When used in a generic sense, such as in the phrase “standards development process” or “standards development activities,” the term “standards” includes all NFPA Standards, including Codes, Standards, Recommended Practices, and Guides.

### 3.3 General Definitions.

**3.3.1\* Alarm.** A signal or message from a device indicating the existence of an emergency or other situation that requires action by an emergency response agency.

**3.3.1.1\* Alarm Data.** Digital information related to an alarm that contains the physical location of the alarm and other explanatory information.

**3.3.2 Alert Data Message (ADM).** An analog or digital signal containing instructions for how a public alerting system alerting appliance (PASAA) is to deliver and, if capable, acknowledge a public alert.

**3.3.3 Alphanumeric Devices.** Paging receivers used as part of a radio alerting system that provide an audible alert and a text message to the user and that do not have the ability to provide voice messages.

**3.3.4 Alternate Communications Center.** A designated communications center capable of assuming the functions normally performed at the primary communications center.

**3.3.5 Annunciator.** A unit containing one or more indicator lamps, alphanumeric displays, or other equivalent means in which each indication provides status information about a circuit, condition, or location. [72, 2022]

**3.3.6 Antenna.** A device connected to a radio receiver, transmitter, or transceiver that radiates the transmitted signal, receives a signal, or both.

**3.3.7 Automatic Call Distributor (ACD).** Equipment that automatically distributes incoming calls to available public safety answering point (PSAP) attendants in the order in which the calls are received or that queues calls until an attendant becomes available.

**3.3.8\* Automatic Location Identification (ALI).** The automatic display at the PSAP of the caller’s telephone number, the address/location of the telephone, and supplementary emergency services information about the location from which a call originates.

**3.3.9\* Automatic Number Identification (ANI).** A series of alphanumeric characters that informs the recipient of the source of an event.

**3.3.10\* Backbone.** A communications cable in an in-building emergency responder communications enhancement system that carries radio frequency (RF) signals that are required to make the overall system operational from the donor antenna signal source, through the amplifiers, and up to the connection point of the distribution antenna cables.

**3.3.11 Backbone Cable.** Coaxial cable, optical fiber cable and other cables utilized within the backbone to acquire and distribute RF signals to the in-building emergency responder communications enhancement systems.

**3.3.12 Backbone Cable Components.** Splitters, couplers, and connectors utilized within the backbone to acquire and distribute RF signals to the in-building emergency responder communications enhancement systems.

**3.3.13 Band.** A range of frequencies between two defined limits.

**3.3.14 Base Station.** A stationary radio transceiver with an ac or dc power supply or power supply module.

**3.3.15 Cable.** A factory assembly of two or more conductors having an overall covering. [70:805.2]

**3.3.16 Call.** Any type of request for emergency assistance (RFEA), which is not limited to voice.

**3.3.17 Call Answer.** The condition when a call is delivered to and acknowledged by a telecommunicator or an auto greeting and two-way communication can begin.

**3.3.18 Call Answer Interval.** The elapsed time between call arrival and call answer.

**3.3.19 Call Arrival.** The condition when a call is presented to the PSAP customer premises equipment (CPE), which can include acknowledgment by an auto attendant.

**3.3.20 Call Detail Recording (CDR).** A system that provides metadata for each call, including ANI, the trunk number, and the answering attendant number, as well as the time of seizure, answer, and disconnect/transfer.

**3.3.21\* Call Server.** A system of electrical, mechanical, and computer components the function of which is to process incoming and outgoing telephone calls.

**3.3.22 Certification.** An authoritative attestation; the issuance of a document that states that an individual has demonstrated

the knowledge and skills necessary to function in a particular fire service professional field. [1000, 2022]

**3.3.23 Channel Access Time.** The time-lapse from the activation of a radio transmitter's push-to-talk (PTT) switch to an acknowledgment from the system and commencement of transmission.

**3.3.24\* Circuit.** The conductor or radio channel and associated equipment that are used to perform a specific function in connection with an alarm system.

**3.3.25 Coded Receivers.** Paging receivers used as part of a radio alerting system that respond only to messages directed to a specific unit or to units in an assigned group.

**3.3.26 Common Battery.** The battery used to power recorders, transmitters, relays, other communications center equipment, and alternate communications center equipment.

**3.3.27\* Communications Center.** A building or portion of a building that is specifically configured for the primary purpose of providing emergency communications services or PSAP services to one or more public safety agencies under the authority or authorities having jurisdiction.

**3.3.28\* Communications Officer.** The individual responsible for the development of plans to make the most effective use of incident-assigned communications equipment and facilities, installation and testing of all communications equipment, supervision and operation of the incident communications center, distribution and recovery of equipment assigned to incident personnel, and maintenance and on-site repair of communications equipment.

**3.3.29\* Communications System.** A combination of devices, networks, applications, computers, and services.

**3.3.30\* Comprehensive Emergency Management Plan (CEMP).** A disaster plan that conforms to guidelines established by the authority having jurisdiction and that is designed to address natural, technological, and man-made disasters.

**3.3.31\* Computer-Aided Dispatch (CAD).** A combination of hardware and software that provides data entry, makes resource recommendations, and notifies and tracks those resources before, during, and after alarms, preserving records of those alarms and status changes for later analysis.

**3.3.32 Control Console.** A wall-mounted or desktop panel or cabinet containing controls to operate communications equipment.

**3.3.33 Conventional Radio.** A radio system in which automatic computer control of channel assignments is not required or used, system-managed queuing of calls is not provided, and channels are selected manually by users.

**3.3.34 Coordinated Universal Time.** A coordinated time scale, maintained by the Bureau International des Poids et Mesures (BIPM), that forms the basis of a coordinated dissemination of standard frequencies and time signals.

**3.3.35 Critical Operations Power Systems (COPS).** Power systems for facilities or parts of facilities that require continuous operation for the reasons of public safety, emergency management, national security, or business continuity. [70:708.2]

**3.3.36 Customer Premise Equipment (CPE).** Equipment for the reception and origination of telephone calls located at a PSAP.

**3.3.37 Cybersecurity.** The ability of any computing system, software program, or infrastructure to resist intentional interference, compromise, or incapacitation through the misuse of the Internet or public or private telecommunications systems, or similar conduct that harms interstate commerce or threatens public health or safety.

**3.3.38 Data Security.** Protection of the integrity of an organization's data resources to ensure that they are available to support the mission and that the data is not compromised.

**3.3.39\* Delivered Audio Quality (DAQ).** A measure of speech intelligibility of land mobile radios.

**3.3.40 Denial-of-Service Attack.** An attack on a computer system or network with the objective of causing a loss of service to some or all users by saturating the system or network with useless traffic, making it impossible for legitimate users of the system to use the facility.

**3.3.41 Digital Radio System.** A radio system that uses a binary representation of audio from one radio to another.

**3.3.42 Direct Exterior Window.** A window in a communications center that faces an area that is not part of the secure area assigned solely to the communications center or that is accessible to the public.

**3.3.43\* Directory.** A printed or virtual listing of telephone numbers.

**3.3.44\* Dispatch Circuit.** A circuit over which a signal is transmitted from the communications center to an emergency response facility (ERF) or emergency response units (ERUs) to notify ERUs to respond to an emergency.

**3.3.45 Dispatcher.** See 3.3.127, Telecommunicator.

**3.3.46 Dispatching.** See 3.3.54, Emergency Event Processing/Dispatching.

**3.3.47 Display Screen.** An electronic device that is capable of displaying text, video, and graphics.

**3.3.48\* Distribution Antenna.** A radio antenna that is specifically designed to radiate RF energy into a specific and limited building area, usually from a ceiling- or wall-mounted antenna.

**3.3.49\* Distribution Antenna Cable.** A communications cable that carries RF energy in both directions along its length to distribution antennas in one or more places in a building.

**3.3.50 Donor Antenna.** Antennas used with in-building emergency responder communications enhancement systems that provide the connection between the wide area communications system of interest and the in-building system.

**3.3.51 Donor Site.** The specific wide-area communications site from which the donor antenna acquires services.

**3.3.52\* Emergency.** A condition that endangers or is believed to endanger life or property and that requires the urgent response of an emergency response agency.

**3.3.53 Emergency Dispatch Protocol.** A standard sequence of questions used by telecommunicators that provides post-dispatch or pre arrival instructions to callers.

**3.3.54\* Emergency Event Processing/Dispatching.** A process by which an event answered at the communications center creates a call for service and is transmitted to emergency response facilities (ERFs) or to emergency response units (ERUs) in the field.

**3.3.55 Emergency Incident.** Any situation to which the emergency services organization responds to deliver emergency services, including rescue, fire suppression, emergency medical care, special operations, law enforcement, and other forms of hazard control and mitigation. [1561, 2020]

**3.3.56\* Emergency Response Agency (ERA).** Organizations providing law enforcement, emergency medical, fire, rescue, communications, and related support services.

**3.3.57\* Emergency Response Facility (ERF).** A structure or a portion of a structure that houses emergency response agency equipment or personnel for response to events.

**3.3.58 Emergency Response Unit (ERU).** Personnel who respond to fire, medical, law enforcement, and other emergency situations for the preservation of life and safety.

**3.3.59\* Emergency Services Communications System.** A communications system dedicated to the receipt of events, the coordination and dispatch of first responder resources, and the management of resources and activities post-dispatch.

**3.3.60 Enhanced 9-1-1.** Emergency telephone service that provides selective routing and both automatic number identification (ANI) and automatic location identification (ALI) of the calling party.

**3.3.61\* Event.** An emergency or other situation that requires action by an emergency response agency.

**3.3.62\* Event Data.** Information related to an event that contains the physical location of the event, the callback number of the reporting party/system, and other explanatory information.

**3.3.63\* Frequencies.** The particular waveband(s) at which a communications system broadcasts or transmits.

**3.3.64 Frequency License Holder(s).** The person(s) or entity(ies) that hold the license from the licensing authority of the country of jurisdiction for the frequencies being used by both the in-building emergency responder communications enhancement system and the emergency services communications system that it enhances.

**3.3.65 Frequency Licensing Authority.** The government authority in a country that issues licenses for the use of communication frequencies by authorized entities and individuals.

**3.3.66 In-building Emergency Responder Communications Enhancement System.** A combination of components, RF-emitting devices, antennas, cables, power supplies, control circuitry, and programming installed at a specific location to improve wireless communications within the building and between on-scene first responders and communications centers.

**3.3.67 Incident Management System.** The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure with responsibility for the management of assigned resources to effectively accomplish stated objectives pertaining to an incident.

**3.3.68 Incident/Tactical Dispatcher.** See 3.3.101.1.

**3.3.69 Information Communication Technology (ICT) Security.** Security of the integrity of the organization's data within the organization's normal use of that data, as well as security to prevent unauthorized external parties from attempting to access or damage the data using cyber attack techniques.

**3.3.70 Instant Recall Recorder.** A device that records voice conversations and provides a telecommunicator with a means to review such conversations in real time.

**3.3.71 Intelligent Transportation System.** A means of electronic communications or information processing used singly or in combination to improve the efficiency or safety of a surface transportation system.

**3.3.72\* IP-Enabled Device.** A data-centric device that uses Internet protocol (IP) as a means of communication.

**3.3.73 Job Performance Requirement (JPR).** A written statement that describes a specific job task, lists the items necessary to complete the task, and defines measurable or observable outcomes and evaluation areas for the specific task. [1000, 2022]

**3.3.74 Link Budget.** Engineering calculations that estimate the RF signal strength from a portable radio or other field device used by ERUs to the first responder communications fixed network (i.e., uplink) and the RF signal strength back from the first responder communications fixed network to the portable radio or other field device used by ERUs (i.e., downlink).

**3.3.75\* Logging Recorder.** A device that records event and dispatch information.

**3.3.76 Master Time Source.** A system providing time information that is traceable to Coordinated Universal Time (UTC) to connected PSAP equipment.

**3.3.77 Microwave.** Radio waves with frequencies of 1000 MHz and higher.

**3.3.78 Modem (Modulator/Demodulator Unit).** A device that converts data that is compatible with data-processing equipment to a form that is compatible with transmission equipment, and vice versa.

**3.3.79 Monitor.** To listen to or observe message traffic without transmitting a response.

**3.3.80 Monitoring for Integrity.** Automatic monitoring of circuits and other system components for the existence of defects or faults that interfere with receiving or transmitting data related to an event.

**3.3.81\* Multi-Line Telephone System (MLTS).** A system designed to aggregate more than one incoming voice communication channel for use by more than one telephone. This includes network- and premises-based systems.

**3.3.82 Next Generation 9-1-1 (NG9-1-1).** NG9-1-1 is an IP-based system comprised of managed emergency services IP networks (ESInets), functional elements such as applications, and databases that replicate traditional Enhanced 9-1-1 features and functions and provide additional capabilities. NG9-1-1 is designed to provide access to emergency services from all connected communications sources and to provide multimedia data capabilities for PSAPs and other emergency service organi-

zations. [NENA-ADM-000.23, *NENA Master Glossary of 9-1-1 Terminology*]

**3.3.83\* Notification.** The time at which an event or alarm is received and acknowledged at a communications center.

**3.3.84 Numeric Receivers.** Paging receivers used as part of a radio alerting system that provide an audible alert and a numeric message to a user and that do not have the ability to provide text or voice messages.

**3.3.85 Operations Room.** The room in the communications center where events and alarms are received and processed and where communications with emergency response personnel is conducted.

**3.3.86 P.01 GOS.** A probability statement for the grade of service (GOS) that no more than one call out of 100 attempts made during the average busy hour will receive a busy signal.

**3.3.87 Pager.** A compact radio receiver used for providing one-way communication or limited digital/data two-way communication.

**3.3.88 Path (Pathways).** Any circuit, conductor, optic fiber, radio carrier, or other means connecting two or more locations. [72, 2022]

**3.3.89 Perceptual Objective Listening Qualitative Analysis (POLQA).** A method of automated voice quality testing for telecommunications systems. (See A.20.3.10.)

**3.3.90 Permanent Visual Record (Recording).** An immediately readable, not easily alterable record of all occurrences of a status change.

**3.3.91 Portable Radio.** A battery-operated, hand-held transceiver.

**3.3.92 Power Source.** The power obtained from a utility distribution system, an engine-driven generator, or a battery.

**3.3.93\* Private Branch Exchange (PBX).** A system designed to connect to a local incumbent or competitive exchange carrier to allow telephone calls to be distributed to extensions to use a set of voice communication channels to make outbound calls.

**3.3.94 Protective Signaling System.** Any alarm or system of alarms designed to give notification or warning, whether audible at the location or at a central receiving area, of the existence of a probable emergency or other unusual occurrence that might involve life safety or property protection. [601, 2020]

**3.3.95 Public Alarm Reporting System.** A system of alarm-initiating devices, receiving equipment, and connecting circuits — other than a public telephone network — used to transmit alarms from street locations to the communications center.

**3.3.96 Public Alerting System (PAS).** A system that creates, transmits, and displays a public alert message, sounds a signal, or both, that is intended to alert the public to situations that could result in loss of life, endanger their health, or destroy property.

**3.3.97 Public Alerting System Alerting Appliance (PASAA).** A device that receives a signal from a public alerting system (PAS) and broadcasts an audible and visual alarm that could be in the form of text or speech.

**3.3.98 Public Safety Agency/Public Safety Organization.** See 3.3.56, Emergency Response Agency (ERA).

**3.3.99\* Public Safety Answering Point (PSAP).** A facility equipped and staffed to receive emergency and non-emergency calls requesting public safety services via telephone and other communication devices.

**3.3.100 Public Safety Communications Center.** A building or portion of a building that is specifically configured for the primary purpose of providing emergency communications services or public safety answering point (PSAP) services to one or more public safety agencies under the authority or authorities having jurisdiction.

**3.3.101 Public Safety Communications Center Personnel.**

**3.3.101.1 Incident/Tactical Dispatcher.** A person serving as a specialized telecommunicator who responds to the scene of an emergency, manages the flow of information from the command center to the communications center, and documents requests for and deployment of specialized teams, equipment, or agencies.

**3.3.101.2\* Public Safety Communications Manager/Director.** A public safety communications professional who directs communications center staff by establishing operational procedures, managing center operations, and responding to constantly changing needs to provide essential emergency communications services.

**3.3.101.3\* Public Safety Communications Supervisor.** The first-level public safety communications professional who provides leadership to employees through experience and training in order to achieve the agency's mission, standards, and goals.

**3.3.101.4 Public Safety Communications Training Coordinator.** The public safety professional who is responsible, in an administrative and technical capacity, for the development and implementation of a training program for the Public Safety Telecommunicator that will specifically meet the needs of the agency, in compliance with any state, federal, local or AHJ requirements for curriculum, reporting, and record keeping.

**3.3.101.5 Public Safety Communications Training Officer (CTO).** The first-line public safety communications professional who demonstrates superior conduct, professionalism, skills, and knowledge in the training of a new hire, accomplished through the use of adult learning principles using agency-defined training parameters in a classroom setting and through on-the-job and one-on-one interactions and simulations.

**3.3.101.6 Public Safety Quality Assurance Coordinator.** The public safety professional who is responsible for the coordination, upkeep, and maintenance of a formal quality assurance process as approved by the AHJ while ensuring that standards and procedures are adhered to and that delivered products or services consistently meet standards or performance requirements.

**3.3.101.7 Public Safety Telecommunicator.** The individual tasked by a public safety agency as the first of the first responders whose primary responsibility is to receive, process, transmit, and/or dispatch emergency and non-emergency calls for law enforcement, fire, emergency

medical, and other public safety services via telephone, radio, and other communication devices.

**3.3.101.7.1 Public Safety Telecommunicator I (Call Taker).** The individual who is the initial point of contact in obtaining service requests to facilitate the prioritization, preparation, and dissemination of allocated and appropriate resources; provides instruction pursuant to agency policy or protocol; makes independent decisions, conveys information, and provides referrals; works in cooperation with the Public Safety Telecommunicator II; and disseminates information that is paramount to ensuring the safety of the public and responders.

**3.3.101.7.2 Public Safety Telecommunicator II (Radio Dispatcher).** The individual who prioritizes, initiates, and coordinates the response of public safety agencies; manages the flow of incident-related information to and from field units or public safety resources; monitors the status of field units; and assigns additional resources as requested or required.

**3.3.102 Public Switched Telephone Network (PSTN).** An assembly of communications equipment and telephone service providers that utilize managed facilities-based voice networks (MFVN) to provide the general public with the ability to establish communications channels via discrete dialing codes. [72, 2022]

**3.3.103 Qualified Telecommunicator.** A person that has met the qualifications for a Telecommunicator II as defined in Chapter 5 and authorized by the AHJ.

**3.3.104 Radiating Cable.** A coaxial cable that distributes small amounts of RF energy along its length by means of periodic breaks in the shield surrounding the center conductor.

**3.3.105\* Radio Channel.** A band of frequencies of a width sufficient to allow its use for radio communications. [72, 2022]

**3.3.106\* Radio Control Station.** A mobile or base station radio in a fixed location — often on a desktop or in a dispatcher's console — that operates on a radio frequency configuration so it can access a land mobile radio-fixed repeater station or fixed trunking station to gain access to the communication system.

**3.3.107\* Radio Frequency.** A measurement representing the oscillation rate of the electromagnetic radiation spectrum or electromagnetic radio waves.

**3.3.108\* Remote Communications Facility.** A normally unattended facility, remote from the communications center, that is used to house the equipment necessary for the functioning of a communications system.

**3.3.109 Repeater.** A device for receiving and re-transmitting one-way or two-way communication signals.

**3.3.110 Requester.** Any person, device, machine, or system observing and reporting an event requiring emergency response.

**3.3.111 Requisite Knowledge.** Fundamental knowledge one must have in order to perform a specific task.

**3.3.112 Requisite Skills.** The essential skills one must have in order to perform a specific task.

**3.3.113\* Response Unit.** A vehicle, equipment, or personnel identified by the AHJ for dispatch purposes.

**3.3.114 RF-Emitting Device.** An active or passive device that emits a radio frequency signal as part of an in-building emergency responder communications enhancement system.

**3.3.114.1 Active RF-Emitting Device.** Any type of circuit component that requires an ac or dc power source with the ability to electrically control electron flow or amplification of an RF signal, including, but not limited to, signal boosters, repeaters, bidirectional amplifiers, and fiber distributed antenna systems.

**3.3.114.2 Passive RF-Emitting Device.** A device that does not require an external ac or dc source of power for its operation and does not provide amplification of an RF signal, including, but not limited to, coax cable, couplers, splitters, and passive antennas.

**3.3.115\* RF System Designer.** An individual who has the education, experience, training, and understanding of RF theory and application to design an in-building emergency responder communications enhancement system (ERCES) that complies with this standard and the requirements of the licensing authority of the country of jurisdiction.

**3.3.116 Security Vestibule.** A compartment with two or more doors where the intended purpose is to prevent continuous and unobstructed passage by allowing the release of only one door at a time.

**3.3.117 Service Request.** Any communication from the public or an agency that prompts action by a telecommunicator.

**3.3.118 Simplex Radio Channel.** A radio channel using a single frequency that, at any one time, allows either transmission or reception, but not both, by a particular radio.

**3.3.119\* Standard Operating Procedures (SOPs).** Written organizational directives that establish or prescribe specific operational or administrative methods that are to be followed routinely for the performance of designated operations or actions.

**3.3.120 Stored Emergency Power Supply System (SEPSS).** A system consisting of an uninterruptible power supply (UPS), a rectifier plant, or a motor generator powered by a stored electrical energy source; a transfer switch designed to monitor preferred and alternate load power sources and provide desired switching of the load; and all necessary control equipment to make the system functional. [111, 2022]

**3.3.121 Subscriber.** A mobile radio, portable radio, or radio control station operated by a user in a wireless communications system on a radio frequency configuration so that it can access a land mobile radio-fixed repeater station or fixed trunking base station to gain access to the communication system.

**3.3.122 Supervisor.** An individual responsible for overseeing the performance or activity of other members. [1021, 2020]

**3.3.123 Tactical Interoperable Communications Plan (TICP).** A document used to clearly define the breadth and scope of interoperable assets available in the area and how those assets are shared and how their use is prioritized, as well as the steps individual agencies should follow to request, activate, use, and deactivate each asset.

**3.3.124 Talkgroup.** A group of radios addressed as a single entity by the system and functionally equivalent to a conventional repeater channel.

**3.3.125 Task.** A specific job behavior or activity. [1002, 2017]

**3.3.126 TDD/TTY.** A device that is used in conjunction with a telephone to communicate with persons who are deaf, who are hard of hearing, or who have speech impairments by typing and reading text.

**3.3.127 Telecommunicator.** An individual whose primary responsibility is to receive, process, or disseminate information of a public safety nature via telecommunication devices.

**3.3.128\* Telematics.** The combination of communications and information systems used to provide information or communications from a vehicle to a PSAP through a telematics service provider.

**3.3.129 Telephone Number.** A multidigit number corresponding to a specific voice connection for accessing that connection.

**3.3.130 Tie Circuit.** A circuit that connects a communications center with an alternate communications center or with a public safety answering point (PSAP).

**3.3.131 Transceiver.** A combined transmitter and receiver radio unit.

**3.3.132 Trouble Signal.** A signal initiated by a dispatch system or device indicative of a fault in a monitored circuit or component.

**3.3.133 Trunked Radio.** A radio system that uses computer control to automatically assign channels from an available pool of channels to users and groups of users.

**3.3.134\* Two-Way Alphanumeric Devices.** Paging transceivers used as part of a radio-alerting system that provide an audible alert and a text message to the user and that have the ability to acknowledge messages received back to the control point.

**3.3.135\* Uninterruptible Power Supply (UPS).** A device or system that provides quality and continuity of ac power through the use of a stored-energy device as the backup power source during any period when the normal power supply is incapable of performing acceptably. [111, 2022]

**3.3.136\* Voice Communication Channel.** A single circuit for communication by spoken word that is distinct from other circuits for communications.

**3.3.137\* Voice Connection.** A physical or virtual audio connection.

**3.3.138 Wired Circuit.** A metallic or fiber-optic circuit leased to or owned by a jurisdiction that is dedicated to a specific alarm or communication system under the control of that jurisdiction.

## Chapter 4 Public Safety Telecommunicator I —Professional Qualifications (NFPA 1061)

### 4.1 Administration.

**4.1.1 Scope.** Chapters 4 through 11 shall identify the minimum job performance requirements (JPRs) for public safety telecommunications personnel.

**4.1.2 Purpose.** Chapters 4 through 11 shall specify the minimum JPRs for service as public safety telecommunications personnel.

**4.1.2.1** Chapters 4 through 11 shall define public safety telecommunications personnel.

**4.1.2.2** The intent of Chapters 4 through 11 shall be to ensure that personnel serving as public safety telecommunications personnel are qualified.

**4.1.2.3\*** Chapters 4 through 11 shall not address organization or management responsibility.

**4.1.2.4** Chapters 4 through 11 shall not restrict any jurisdiction from exceeding or combining these minimum requirements.

**4.1.2.5** JPRs for each level and position are the tasks personnel shall be able to perform in order to carry out the job duties.

**4.1.2.6\*** Public safety telecommunications personnel shall remain current with the knowledge, skills, and JPRs addressed for each level or position of qualification.

**4.1.3 Application.** The application of Chapters 4 through 11 shall specify which requirements apply to public safety telecommunications personnel.

**4.1.3.1** The JPRs shall be accomplished in accordance with the requirements of the authority having jurisdiction (AHJ) and all applicable NFPA standards.

**4.1.3.2** JPRs shall not be required to be mastered in the order in which they appear.

**4.1.3.3** The AHJ shall establish instructional priority and the training program content to prepare personnel to meet the JPRs of this standard.

**4.1.3.4\*** Performance of each requirement of Chapters 4 through 11 shall be evaluated by personnel approved by the AHJ.

**4.1.3.5\*** The JPRs for each level or position shall be completed in accordance with recognized practices and procedures or as defined by law or by the AHJ.

**4.1.3.6** Personnel assigned to any duties defined in Chapters 4 through 11 shall meet all of the requirements specific to their position as defined in the relevant chapter prior to being qualified.

**4.1.3.7** The AHJ shall provide personal protective clothing and the equipment necessary to conduct assignments.

**4.1.3.8** JPRs involving exposure to products of combustion shall be performed in approved personal protective equipment (PPE).

**4.1.3.9** Prior to training to meet the requirements of Chapters 4 through 11, personnel shall meet the following requirements:

- (1)\* Educational requirements established by the AHJ
- (2) Age requirements established by the AHJ
- (3) Medical requirements established by the AHJ
- (4)\* Job-related physical performance requirements established by the AHJ
- (5)\* Background investigation and character traits as established by the AHJ

**4.1.3.10** Wherever in Chapters 4 through 11 the terms *rules, regulations, policies, procedures, supplies, apparatus, or equipment* are used, they shall be those of the AHJ.

**4.1.3.11** Public safety telecommunications personnel shall meet all of the requirements defined by the National Incident Management System (NIMS) and the Incident Command System (ICS) as mandated by Homeland Security Presidential Directives 5 and 8 (see [www.FEMA.gov](http://www.FEMA.gov)) and as directed by the NIMS Integration Center.

**4.1.3.12\*** For each level of progression as identified in Chapters 4 through 11, persons shall participate in continuing professional development activities to maintain competency with the JPRs covered in this standard for each level and position that the person is professionally qualified to perform.

**4.2 General.** The Public Safety Telecommunicator I shall receive and process service requests and disseminate information as defined in Sections 4.3 through 4.6.

### 4.3 Receiving Requests for Service.

**4.3.1 Description of Duty.** To process any request for public safety services.

**4.3.2** Establish secure communications with the service requester, given a communication device, a means of collecting information, and a work station, so that a communication link with the requester is achieved.

**(A)\* Requisite Knowledge.** Verbal communications process.

**(B)\* Requisite Skills.** Operation and basic troubleshooting of communications systems and devices and application of verbal and listening skills in order to obtain accurate information.

**4.3.3** Collect pertinent information, given a request for service, so that accurate information regarding the request is obtained.

**(A) Requisite Knowledge.** Local area dispatch protocol system(s) as defined by the AHJ.

**(B)\* Requisite Skills.** Controlling the conversation utilizing established questioning and active listening techniques.

**4.3.4** Utilize nonverbal communications, given a request for service through a communications device, so that accurate information regarding the request is obtained.

**(A)\* Requisite Knowledge.** Nonverbal communication protocols.

**(B)\* Requisite Skills.** Use of nonverbal communication devices.

### 4.4 Processing Requests for Service.

**4.4.1\* Description of Duty.** Prepare data for dispatch or referral by evaluating, categorizing, formatting, and documenting the incident per established policies, procedures, or protocols.

**4.4.2** Prepare records of public safety services requests, given agency policies, procedures, guidelines, and resources, so that the record is correct, complete, and concise.

**(A) Requisite Knowledge.** Policies, procedures, guidelines, and protocols established by the AHJ.

**(B) Requisite Skills.** Application of basic language and writing skills, interpreting and condensing information, basic

computer skills, keyboarding, mousing, typing skills, and legible handwriting.

**4.4.3** Utilize information provided by a service requester, given the policies, procedures, and guidelines of the agency, so that the request is accurately categorized and prioritized.

**(A)\* Requisite Knowledge.** Incident categories, priority levels, and identification of potential threats, risks, and hazards.

**(B) Requisite Skills.** Basic comprehension and problem solving.

**4.4.4\*** Determine incomplete, conflicting, or inconclusive information or data, given agency policies, procedures, guidelines, protocols, and resources, so that an allocation of resources is selected.

**(A) Requisite Knowledge.** Available resources, agency jurisdictions, and boundaries.

**(B) Requisite Skills.** Reading maps and charts and applying a global positioning system (GPS) to existing maps and resource lists.

**4.4.5** Notify correct personnel about addition, deletion, and correction of data, given agency policies, procedures, guidelines, and protocols, so that documents, files, databases, maps, and resource lists are accurately maintained.

**(A) Requisite Knowledge.** Familiarity with maps, databases, and resource lists.

**(B) Requisite Skills.** Basic writing skills, legible handwriting, and basic computer skills.

### 4.5 Disseminate Requests for Services.

**4.5.1** Relay instructions, information, and directions to the service requester, given agency policies, procedures, guidelines, and protocols, so that information appropriate to the incident is consistent with agency policies, procedures, guidelines, and protocols and results in resolution, referral, or response.

**(A)\* Requisite Knowledge.** Availability of resources, policies, and procedures regarding prearrival instructions.

**(B)\* Requisite Skills.** Voice control, provide directions, route callers, and operate communication devices.

**4.5.2\*** Relay information to other public safety telecommunications personnel or entities, given processed data, so that accurate information regarding the request for service is provided.

**(A) Requisite Knowledge.** Policies, procedures, or guidelines as determined by the AHJ.

**(B) Requisite Skills.** Voice control, verbal skills, and basic computer skills.

**4.5.3** Respond to requests for information, given an inquiry from the public or the media, so that the policies, procedures, and guidelines are followed.

**(A) Requisite Knowledge.** Policies, procedures, or guidelines as determined by the AHJ.

**(B) Requisite Skills.** Verbal and written skills.

#### 4.6 Fellow Employee Exhibiting Signs and Symptoms of Emotional and Behavioral Distress.

**4.6.1** Identify signs and symptoms of emotional and behavioral health distress of an individual in crisis, given an individual exhibiting signs and symptoms of emotional and behavioral health distress in a peer setting and policies and procedures to be initiated with an awareness level education in emotional and behavioral health distress so that the emotional or behavioral health distress issue is recognized, confidentiality is maintained within the guidelines of the AHJ, communication is open, nonjudgmental awareness is retained, a department or community-based program is made accessible, and assistance is offered or an appropriate referral is initiated.

**(A) Requisite Knowledge.** Emotional and behavioral health distress signs and symptoms, such as anxiety, stress, depression, addictions, or suicidal thoughts or behaviors; knowledge of the programs within the department or within the community, including, but not limited to, employee assistance programs (EAP), community mental health programs, chaplains, and the National Suicide Prevention Lifeline to help an individual when emotional or behavioral health distress is noticed; and how to listen and when to communicate.

**(B) Requisite Skills.** The ability to approach an individual exhibiting signs of emotional or behavioral distress; to use empathic and listening skills; and to refer an individual to an EAP, community mental health program, chaplain, the National Suicide Prevention Lifeline, or an individual trained in emotional and behavioral health.

### Chapter 5 Public Safety Telecommunicator II (NFPA 1061)

**5.1 General.** The Public Safety Telecommunicator II shall meet the job performance requirements in Chapter 4 for Public Safety Telecommunicator I and those defined in Sections 5.2 through 5.4 of this standard.

#### 5.2 Receive Requests for Service.

**5.2.1\* Description of Duty.** To manage information from multiple sources requiring requests for services or assistance.

**5.2.2\*** Monitor public safety radio systems, given equipment used by the agency, so that information requiring action by the Public Safety Telecommunicator II is identified.

**(A)\* Requisite Knowledge.** Basic radio systems, technology, and standard terminology used by the AHJ.

**(B) Requisite Skills.** Operation of radio equipment, differentiation between various audio stimuli, and effective listening abilities.

**5.2.3\*** Monitor electronic data systems, given equipment used by the agency, so that information requiring action by the Public Safety Telecommunicator II is identified.

**(A)\* Requisite Knowledge.** Response to audio and visual stimuli.

**(B)\* Requisite Skills.** Basic computer skills and interpretation of visual symbols.

**5.2.4** Monitor alarm systems, given equipment used by the agency, so that information requiring action by the Public Safety Telecommunicator II is identified.

**(A) Requisite Knowledge.** Familiarity with alarm equipment and system operation and technology.

**(B) Requisite Skills.** Interpretation of alarm system signals, data, or messages.

#### 5.3 Process Requests for Service.

**5.3.1 Description of Duty.** Review and format data for dispatch or referral. Monitor resource status and determine units for deployment.

**5.3.2** Validate incident information, given a request for service; available resources; and agency policies, procedures, guidelines, and protocols, so that an appropriate response is determined and a resource allocation prepared.

**(A) Requisite Knowledge.** Policies, procedures, guidelines, and protocols related to the allocation of resources and the duties and functions of response units.

**(B) Requisite Skills.** Interpretation of incident information.

**5.3.3\*** Maintain location and status of units, given the resources available to the agency and utilizing the systems and equipment in the public safety communications center, so that the current availability, status, and safety of all deployable resources is known.

**(A)\* Requisite Knowledge.** Capabilities and functions of personnel, units, and specialized equipment and tools and their availability and current location.

**(B) Requisite Skills.** Operation of public safety communications center systems and equipment used for maintaining status.

**5.3.4** Categorize alarm information, given signals, messages, codes, and data, so that the information is properly interpreted in preparation for the allocation of resources.

**(A) Requisite Knowledge.** Operational principles, practices, procedures, guidelines, and protocols for alarm systems provided in the public safety communications center and agency policies related to alarm system operations.

**(B) Requisite Skills.** Basic computer skills, including keyboarding and mousing, and differentiation between multiple audiovisual stimuli.

**5.3.5** Determine the priority of a service request, given information provided by other telecommunicators or field units and the agency policies, procedures, guidelines, and protocols, so that the priority of the request is defined.

**(A) Requisite Knowledge.** Policies, procedures, guidelines, and protocols related to call prioritization, incident categories, priority levels, and identification of potential threats, risks, and hazards.

**(B) Requisite Skills.** Operation of systems and aids provided in the public safety communications center for call prioritization, and decision-making skills.

**5.3.6\*** Formulate a response, given the validated and prioritized request for service and the availability of deployable resources, so that the appropriate response is selected for the safety of responders.

**(A) Requisite Knowledge.** Procedures for the allocation or assignment of resources and requesting mutual aid.

**(B) Requisite Skills.** Operation of systems and aids provided in the public safety communications center.

#### 5.4 Disseminate Requests for Service.

**5.4.1\* Description of Duty.** Transmit and relay information or data to field units or other resources, given a request for service, that results in a notification for the response.

**(A) Requisite Knowledge.** Applicable Federal Communications Commission (FCC) rules; radio procedures and protocols; codes; agency policies, procedures, and guidelines; an incident management system, and the telecommunicator's role and function within the system.

**(B) Requisite Skills.** Voice control and operation of telecommunications equipment.

**5.4.2\*** Initiate deployment of response units, given the validated and prioritized request for service and the agencies' telecommunications equipment, so that service request information is conveyed to units designated for response.

**(A) Requisite Knowledge.** All radio communications in compliance with the rules and regulations governing wireless communications in the country of operation; radio procedures and protocols; codes; agency policies, procedures, and guidelines; an incident management system; and the telecommunicator's role and function within the system.

**(B) Requisite Skills.** Voice control and operation of telecommunications equipment, public address (PA) systems, Internet protocol (IP) systems, and data terminals.

**5.4.3** Relay service request information, given available resources and telecommunications equipment, so that all pertinent information is communicated to all responding units and agencies.

**(A) Requisite Knowledge.** All radio communications in compliance with the rules and regulations governing wireless communications in the country of operation; radio procedures and protocols; codes; agency policies, procedures, and guidelines; an incident management system, and the telecommunicator's role and function within the system.

**(B) Requisite Skills.** Voice control and operation of telecommunications equipment.

**5.4.4** Gather supplemental information, given a service request, so that the current information is evaluated, prioritized, and relayed to response units or other personnel and agencies as needed.

**(A) Requisite Knowledge.** Agency policies, procedures, and guidelines and accessing other resources as requested.

**(B)\* Requisite Skills.** Use of printed and electronic reference materials, databases, and emergency action plans.

**5.4.5\*** Activate the community emergency action plan, given data indicating the likelihood or onset of a critical situation beyond the normal scope of operations, so that the implementation is timely and in accordance with agency policies, procedures, guidelines, and protocols.

**(A) Requisite Knowledge.** Understanding agency policies, procedures, and guidelines and accessing other resources as requested.

**(B) Requisite Skills.** Use of printed and electronic reference materials, databases, and emergency action plans.

**5.4.6** Activate the public safety communication center emergency action plan, given internal emergency and agency policies, procedures, guidelines, and protocols, so that the integrity of the communications system is maintained and the safety of communications center personnel is achieved.

**(A) Requisite Knowledge.** Existing emergency and contingency plans for incidents within the public safety communication center.

**(B) Requisite Skills.** Use of predetermined mitigation and evacuation plans.

#### 5.5 Fellow Employee Exhibiting Signs and Symptoms of Emotional and Behavioral Distress.

**5.5.1** Identify signs and symptoms of emotional and behavioral health distress of an individual in crisis, given an individual exhibiting signs and symptoms of emotional and behavioral health distress in a peer setting and policies and procedures to be initiated with an awareness level education in emotional and behavioral health distress so that the emotional or behavioral health distress issue is recognized, confidentiality is maintained within the guidelines of the AHJ, communication is open, nonjudgmental awareness is retained, a department or community-based program is made accessible, and assistance is offered or an appropriate referral is initiated.

**(A) Requisite Knowledge.** Emotional and behavioral health distress signs and symptoms, such as anxiety, stress, depression, addictions, or suicidal thoughts or behaviors; knowledge of the programs within the department or within the community, including, but not limited to, employee assistance programs (EAP), community mental health programs, chaplains, and the National Suicide Prevention Lifeline to help an individual when emotional or behavioral health distress is noticed; and how to listen and when to communicate.

**(B) Requisite Skills.** The ability to approach an individual exhibiting signs of emotional or behavioral distress; to use empathic and listening skills; and to refer an individual to an EAP, community mental health program, chaplain, the National Suicide Prevention Lifeline, or an individual trained in emotional and behavioral health.

### Chapter 6 Incident/Tactical Dispatcher (NFPA 1061)

#### 6.1 General.

**6.1.1** The Incident/Tactical Dispatcher shall have the requisite knowledge of a telecommunicator in addition to the knowledge specific to the Incident/Tactical Dispatcher position.

**6.1.2** This Incident/Tactical Dispatcher shall be knowledgeable of the National Incident Management System (NIMS), the Incident Command System (ICS), and a resource ordering system.

**6.1.3** The Incident/Tactical Dispatcher shall have additional knowledge requirements for the following: responding to incidents; assuming the position's responsibilities; communicating effectively; ensuring the completion of assigned actions to meet identified objectives; and receiving, processing, and disseminating information.

**6.1.4** The Incident/Tactical Dispatcher's duty shall involve utilizing the organizational structure, forms, and terminology of NIMS and the ICS according to the job performance requirements of Section 6.2.

**6.2 Description of Duty.** Apply ICS structure and terminology, given an incident or planned event utilizing the ICS and the NIMS/ICS, *Emergency Responder Field Operations Guide*, so that the ICS is identified, the locations and functions of each unit are understood, and the role of the Incident/Tactical Dispatcher is assumed.

**6.2.1** Determine how to use a resource designation system, given an incident or planned event utilizing ICS and the NIMS/ICS, *Emergency Responder Field Operations Guide*, so that equipment typing and numbering are understood and the appropriate resources are used.

**(A) Requisite Knowledge.** ICS 100, *Introduction to the Incident Command System*; ICS 200, *Basic Incident Command System for Initial Response*; ICS 700, *An Introduction to the National Incident Management System*; ICS 800, *National Response Framework, an Introduction*; and any local, state, or federal mutual aid agreements.

**(B) Requisite Skills.** Filling out incident forms and documentation.

**6.2.2** Prepare ICS forms, given an incident or planned event utilizing ICS and the NIMS/ICS, *Emergency Responder Field Operations Guide*, so that all interactions within the communications unit are documented accurately.

**(A) Requisite Knowledge.** ICS 100, *Introduction to the Incident Command System*; ICS 200, *Basic Incident Command System for Initial Response*; ICS 700, *An Introduction to the National Incident Management System*; ICS 800, *National Response Framework, an Introduction*; and any local, state, or federal mutual aid agreements.

**(B) Requisite Skills.** Filling out incident forms and documentation.

**6.2.3** Utilize incident action plans (IAPs), given an incident or planned event utilizing ICS, the NIMS/ICS, *Emergency Responder Field Operations Guide*, and the IAP for the incident or event, so that the ICS organization is understood, the safety messages are adhered to, the division or group assignments are identified, and the communications plan is followed.

**(A) Requisite Knowledge.** ICS 100, *Introduction to the Incident Command System*; ICS 200, *Basic Incident Command System for Initial Response*; ICS 700, *An Introduction to the National Incident Management System*; ICS 800, *National Response Framework, an Introduction*; and any local, state or federal mutual aid agreements.

**(B) Requisite Skills.** Filling out incident forms and documentation.

**6.2.4** Recognize existing mutual or automatic aid agreements, given an incident or planned event utilizing ICS and any existing agreements or contracts for automatic and mutual aid, so that resources are utilized appropriately and in accordance with these agreements.

**(A) Requisite Knowledge.** ICS 100, *Introduction to the Incident Command System*; ICS 200, *Basic Incident Command System for Initial Response*; ICS 700, *An Introduction to the National Incident*

*Management System*; ICS 800, *National Response Framework, an Introduction*; and any local, state, or federal mutual aid agreements.

**(B) Requisite Skills.** Filling out incident forms and documentation.

**6.3 Resource Ordering and Tracking.** Utilize the standards and terminology of a resource ordering system according to the job performance requirements of 6.3.1 through 6.3.3.

**6.3.1** Identify resource typing for aircraft, equipment, and overhead, given an incident or planned event utilizing ICS, the NIMS/ICS, *Emergency Responder Field Operations Guide*, and a list of resources assigned to the incident, so that all the resources are tracked as to their role or type and location and status.

**(A) Requisite Knowledge.** Mutual aid coordination system (MACS), a resource ordering system, and organizational structure at the local, state, or national level as appropriate.

**(B) Requisite Skills.** Computer use.

**6.3.2** Utilize a resource ordering system, given an incident or planned event utilizing ICS and access to a resource ordering system, so that all the resources and event activity are tracked and the status is correct and visible to the system.

**(A) Requisite Knowledge.** MACS, a resource ordering system, and organizational structure at the local, state, or national level as appropriate.

**(B) Requisite Skills.** Computer use.

**6.3.3** Work with outside agencies, given an incident or planned event utilizing ICS and a resource ordering system, so that all the participating agencies are aware of outstanding requests, pending requests, and requests that are unable to be filled.

**(A) Requisite Knowledge.** MACS, a resource ordering system, and organizational structure at the local, state, or national level as appropriate.

**(B) Requisite Skills.** Computer use.

**6.4 Response to Incidents.** Prepare for and respond to incidents to fulfill the job of Incident/Tactical Dispatcher according to the job performance requirements of 6.4.1 through 6.4.4.

**6.4.1** Assemble a travel kit, given knowledge of potential circumstances in which an Incident/Tactical Dispatcher will be placed, so that he or she is able to function effectively in the position under most circumstances.

**(A) Requisite Knowledge.** Travel kit inventory information included in the Incident/Tactical Dispatcher class and ability to operate in austere conditions.

**(B) Requisite Skills.** Map reading and efficient packing skills.

**6.4.2** Obtain requests for assignment, given an incident or planned event, so that the location, order and request number, and any routing information is obtained.

**(A) Requisite Knowledge.** Travel kit inventory information included in the Incident/Tactical Dispatcher class and ability to operate in austere conditions.

**(B) Requisite Skills.** Map reading and efficient packing skills.

**6.4.3** Identify travel plans, given an incident or planned event, so that means of travel are identified and the best route information is used.

**(A) Requisite Knowledge.** Travel kit inventory information included in the Incident/Tactical Dispatcher class and ability to operate in austere conditions.

**(B) Requisite Skills.** Map reading and efficient packing skills.

**6.4.4** Check in at an incident, given an incident or planned event, so that the individual is documented as being at the incident.

**(A) Requisite Knowledge.** Travel kit inventory information included in the Incident/Tactical Dispatcher class and ability to operate in austere conditions.

**(B) Requisite Skills.** Map reading and efficient packing skills.

**6.5 Assume Position Responsibilities.** Take on the job responsibilities of an Incident/Tactical Dispatcher according to the job performance requirements of 6.5.1 through 6.5.5.

**6.5.1** Determine readiness for assignment, given an incident or planned event, so that the individual is prepared to begin work as soon as is needed for the event.

**(A) Requisite Knowledge.** Radio systems and terminology, telephone systems, and computer systems.

**(B) Requisite Skills.** Computer use and multitasking.

**6.5.2** Show the availability and capabilities of resources, given an incident or planned event, so that the resources are able to function in the communications unit.

**(A) Requisite Knowledge.** Radio systems and terminology, telephone systems, and computer systems.

**(B) Requisite Skills.** Computer use and multitasking.

**6.5.3** Gather, update, and apply situational information, given an incident or planned event, so that all the resources are tracked and the individual is able to respond quickly and efficiently to situations that might arise.

**(A) Requisite Knowledge.** Radio systems and terminology, telephone systems, and computer systems.

**(B) Requisite Skills.** Computer use and multitasking.

**6.5.4** Build relationships with relevant personnel, given an incident or planned event, so that members of the communications unit can work as a team and so that other incident personnel are familiar with the needs of the communications unit.

**(A) Requisite Knowledge.** Radio systems and terminology, telephone systems, and computer systems.

**(B) Requisite Skills.** Computer use and multitasking.

**6.5.5** Show the ability to use the tools necessary to complete an assignment, given an incident or planned event, so that all equipment and other available resources are utilized to their maximum efficiency.

**(A) Requisite Knowledge.** Radio systems and terminology, telephone systems, and computer systems.

**(B) Requisite Skills.** Computer use and multitasking.

**6.6 Communicate as the Incident Directs.** Receive and pass information accurately according to the job performance requirements of 6.6.1 through 6.6.3.

**6.6.1** Gather relevant information during briefings and debriefings, given an incident or planned event, so that the individual and communications unit is aware of the current and future situations and plans.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology and Incident/Tactical Dispatcher position responsibilities.

**(B) Requisite Skills.** Interpersonal communication.

**6.6.2** Prepare documentation, given an incident or planned event, so that it is complete and the disposition is appropriate.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology and Incident/Tactical Dispatcher position responsibilities.

**(B) Requisite Skills.** Interpersonal communication.

**6.6.3** Determine work expectations, given an incident or planned event and input from a supervisor, so that communications are effective and work is completed.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology and Incident/Tactical Dispatcher position responsibilities.

**(B) Requisite Skills.** Interpersonal communications.

**6.7 Ensure Completion of Assigned Actions to Meet Identified Objectives.** Perform tasks and processing requests according to the job performance requirements of 6.7.1 through 6.7.3.

**6.7.1** React to situations, given an incident or planned event, so that the appropriate action is based on situational information and prescribed procedures.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology, Incident/Tactical Dispatcher position responsibilities, and demobilization procedures.

**(B) Requisite Skills.** Computer use and completion of forms.

**6.7.2** Explain position duties to on-coming shifts, given an incident or planned event, so that there is a continuity of authority and knowledge.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology, Incident/Tactical Dispatcher position responsibilities, and demobilization procedures.

**(B) Requisite Skills.** Computer use and completion of forms.

**6.7.3** Prepare for demobilization, given an incident or planned event, so that demobilization procedures are followed.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology, Incident/Tactical Dispatcher position responsibilities, and demobilization procedures.

**(B) Requisite Skills.** Computer use and completion of forms.

**6.8 Receiving Information.** Receive information from multiple sources according to the job performance requirements of 6.8.1 through 6.8.5.

**6.8.1** Gather information by radio, given an incident or planned event, so that all pertinent information is obtained.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology, Incident/Tactical Dispatcher position responsibilities, IAP, and medical plans.

**(B) Requisite Skills.** Use of technology as provided by the AHJ.

**6.8.2** Obtain information by telephone, given an incident or planned event, so that all pertinent information is gathered.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology, Incident/Tactical Dispatcher position responsibilities, IAP, and medical plans.

**(B) Requisite Skills.** Use of technology as provided by the AHJ.

**6.8.3** Collect information in person, given an incident or planned event, so that all pertinent information is obtained.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology, Incident/Tactical Dispatcher position responsibilities, IAP, and medical plans.

**(B) Requisite Skills.** Use of technology as provided by the AHJ.

**6.8.4** Paraphrase unit activity, given an incident or planned event, so that all appropriate ICS forms are completed in a timely manner.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology, Incident/Tactical Dispatcher position responsibilities, IAP, and medical plans.

**(B) Requisite Skills.** Use of technology as provided by the AHJ.

**6.8.5** React to medical events, given an incident or planned event, so that all appropriate resources are dispatched and all appropriate personnel are notified.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology, Incident/Tactical Dispatcher position responsibilities, IAP, and medical plans.

**(B) Requisite Skills.** Use of technology as provided by the AHJ.

**6.9 Processing Information.** Process the information received according to the job performance requirements of 6.9.1 through 6.9.3.

**6.9.1** Identify where information goes to people and agencies within and outside the incident, given an incident or planned event, so that the information is passed on quickly and efficiently.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology and Incident/Tactical Dispatcher position responsibilities.

**(B) Requisite Skills.** Use of technology as provided by the AHJ.

**6.9.2** Identify information in weather reports, given an incident or planned event, so that the information can be passed on to the resources in the field when requested or directed.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology and Incident/Tactical Dispatcher position responsibilities.

**(B) Requisite Skills.** Use of technology as provided by the AHJ.

**6.9.3** Recognize information in fire behavior reports and field interactions, given an incident or planned event, so that pertinent information contained in those reports on interactions can be relayed to personnel.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology and Incident/Tactical Dispatcher position responsibilities.

**(B) Requisite Skills.** Use of technology as provided by the AHJ.

**6.10 Disseminating Information.** Release information according to the job performance requirements of 6.10.1 and 6.10.2.

**6.10.1** Record incident information, given an incident or planned event, so that the appropriate ICS forms are completed in an accurate and timely manner.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology and Incident/Tactical Dispatcher position responsibilities.

**(B) Requisite Skills.** Use of technology as provided by the AHJ.

**6.10.2** Notify field resources of pertinent information via radio, telephone, or written message, given an incident or planned event, so that personnel are aware.

**(A) Requisite Knowledge.** NIMS and ICS structure and terminology and Incident/Tactical Dispatcher position responsibilities.

**(B) Requisite Skills.** Use of technology as provided by the AHJ.

**6.11 Fellow Employee Exhibiting Signs and Symptoms of Emotional and Behavioral Distress.**

**6.11.1** Identify signs and symptoms of emotional and behavioral health distress of an individual in crisis, given an individual exhibiting signs and symptoms of emotional and behavioral health distress in a peer setting and policies and procedures to be initiated with an awareness level education in emotional and behavioral health distress so that the emotional or behavioral health distress issue is recognized, confidentiality is maintained within the guidelines of the AHJ, communication is open, nonjudgmental awareness is retained, a department or community-based program is made accessible, and assistance is offered or an appropriate referral is initiated.

**(A) Requisite Knowledge.** Emotional and behavioral health distress signs and symptoms, such as anxiety, stress, depression, addictions, or suicidal thoughts or behaviors; knowledge of the programs within the department or within the community, including, but not limited to, employee assistance programs (EAP), community mental health programs, chaplains, and the National Suicide Prevention Lifeline to help an individual when emotional or behavioral health distress is noticed; and how to listen and when to communicate.

**(B) Requisite Skills.** The ability to approach an individual exhibiting signs of emotional or behavioral distress; to use empathic and listening skills; and to refer an individual to an EAP, community mental health program, chaplain, the

National Suicide Prevention Lifeline, or an individual trained in emotional and behavioral health.

## Chapter 7 Public Safety Communications Training Officer (NFPA 1061)

**7.1\* General.** The Communications Training Officer (CTO) shall meet the job performance requirements defined in Sections 7.2 through 7.5 of this standard.

### 7.2 Personal Conduct.

**7.2.1** Apply the AHJ's mission, given the mission statement and the principles of leadership as defined by the AHJ, so that duties are articulated both formally and informally.

**(A) Requisite Knowledge.** The values and ethics that form the basis of competency and AHJ practices and programs that define professional conduct.

**(B) Requisite Skills.** Operational and technological competence, as defined by the AHJ, and effective problem solving.

**7.2.2** Project behavior, given the established code of ethics defined by the AHJ both formally and informally, so that the CTO serves as a role model.

**(A) Requisite Knowledge.** The values and ethics that form the basis of accepted behavior as defined by the AHJ.

**(B) Requisite Skills.** Self-restraint, discretion, a positive attitude, objectivity, and confidentiality.

**7.2.3** Resolve conflicts, given established methods and procedures, so that disagreements are settled in a fair and objective manner for both parties.

**(A) Requisite Knowledge.** Conflict resolution models, relevant standard operating procedures, labor agreements, and other available resources.

**(B) Requisite Skills.** Mediation and negotiation.

### 7.3 Program Management.

**7.3.1** Assemble course materials, given a specific topic, so that the lesson plan and all materials, resources, and equipment needed to deliver the lesson are obtained.

**(A) Requisite Knowledge.** The components of a lesson plan, policies and procedures for the procurement of materials and equipment, and resource availability.

**(B) Requisite Skills.** Basic computer skills.

**7.3.2** Review and adapt instructional materials, given the materials for a specific topic, target audience, and learning environment, so that elements of the lesson plan, learning environment, and resources that need adaptation are identified.

**(A) Requisite Knowledge.** Recognition of student limitations, methods of instruction, types of resource materials, organization of the learning environment, and policies and procedures.

**(B) Requisite Skills.** Analysis of resources, facilities, and materials.

**7.3.3** Prepare documentation and a file management system as prescribed by the AHJ, given the need to track trainee performance, so that accurate records are able to be referenced.

**(A) Requisite Knowledge.** Types of records and reports required and policies and procedures for processing records and reports.

**(B) Requisite Skills.** Basic computer skills, spreadsheet manipulation, and basic report writing and record completion.

### 7.4 Instructional Delivery.

**7.4.1** The delivery of instructional sessions, given prepared course materials and environments, so that learning objectives are met.

**(A) Requisite Knowledge.** Prepared lesson plans specific to a topic, environmental advantages and limitations, and classroom management and safety.

**(B) Requisite Skills.** Use of instructional media and materials.

**7.4.2** Provide on-the-job training, given an operating telecommunications position that can accommodate both the trainer and trainee, so that the CTO can observe and intervene as needed while the trainee interacts in a live environment and performs the duties for which they are being trained.

**(A) Requisite Knowledge.** Skill level of the trainee and safety of the caller in an emergency situation.

**(B) Requisite Skills.** The ability to recognize the use and limitations of any specialized dual-use telecommunications equipment and to assess the need to intervene when required.

**7.4.3** The delivery of continuing education, given prepared course materials, so that competency levels are maintained in a consistent fashion.

**(A) Requisite Knowledge.** Training sunset dates for assigned employees, minimum requirements to maintain certification(s), prepared lesson plans specific to a topic, environmental advantages and limitations, and classroom management and safety.

**(B) Requisite Skills.** File management and use of instructional media and materials.

**7.4.4** Schedule ride-along sessions with field personnel, given regular interaction with field units, so that the trainee gains insight into the duties, situations, and limitations experienced by the personnel who are being dispatched by that trainee.

**(A) Requisite Knowledge.** Personalities and duties of crews and safety.

**(B) Requisite Skills.** Basic scheduling.

### 7.5 Evaluation and Testing.

**7.5.1** Administer oral, written, and performance tests, given the lesson plan, evaluation instruments, and the evaluation procedures of the agency, so that the testing is conducted according to procedures and the security of the materials is maintained.

**(A) Requisite Knowledge.** Test administration, agency policies, laws affecting records and disclosure of training information, the purposes of evaluation and testing, and performance skills evaluation.

**(B) Requisite Skills.** Use of skills checklists and oral questioning techniques.

**7.5.2** Grade student tests — oral, written, or performance — given answer sheets and answer keys or skills checklists, so that the examinations are graded and secured.

**(A) Requisite Knowledge.** Procedures related to test security and record keeping.

**(B) Requisite Skills.** Grading and maintaining the confidentiality of scores.

**7.5.3** Report test results, given a set of test answer sheets or skills checklists, a report form, and policies and procedures for reporting, so that the results are accurately recorded, the forms are forwarded according to procedure, and unusual circumstances are reported.

**(A) Requisite Knowledge.** Reporting procedures and interpretation of test results.

**(B) Requisite Skills.** Communication skills and basic coaching.

**7.5.4** Provide feedback to the trainee, given comprehensive test and evaluation results, so that the trainee is able to distinguish correct performance.

**(A) Requisite Knowledge.** Interpersonal relations and AHJ policies and procedures.

**(B) Requisite Skills.** Presentation and conflict resolution.

**7.5.5** Identify transition periods, given the completion of identified training goals, so that accurate recommendations for progression, remediation, or termination are achieved.

**(A) Requisite Knowledge.** Test and evaluation results, documented daily performance reports, reported policy violations, exemplary performance reports, and AHJ-defined minimum training requirements.

**(B) Requisite Skills.** Analysis of work performance and decision making.

## **7.6 Fellow Employee Exhibiting Signs and Symptoms of Emotional and Behavioral Distress.**

**7.6.1** Identify signs and symptoms of emotional and behavioral health distress of an individual in crisis, given an individual exhibiting signs and symptoms of emotional and behavioral health distress in a peer setting and policies and procedures to be initiated with an awareness level education in emotional and behavioral health distress so that the emotional or behavioral health distress issue is recognized, confidentiality is maintained within the guidelines of the AHJ, communication is open, nonjudgmental awareness is retained, a department or community-based program is made accessible, and assistance is offered or an appropriate referral is initiated.

**(A) Requisite Knowledge.** Emotional and behavioral health distress signs and symptoms, such as anxiety, stress, depression, addictions, or suicidal thoughts or behaviors; knowledge of the programs within the department or within the community, including, but not limited to, employee assistance programs (EAP), community mental health programs, chaplains, and the National Suicide Prevention Lifeline to help an individual when emotional or behavioral health distress is noticed; and how to listen and when to communicate.

**(B) Requisite Skills.** The ability to approach an individual exhibiting signs of emotional or behavioral distress; to use empathic and listening skills; and to refer an individual to an

EAP, community mental health program, chaplain, the National Suicide Prevention Lifeline, or an individual trained in emotional and behavioral health.

## **Chapter 8 Public Safety Communications Supervisor (NFPA 1061)**

**8.1\* General.** The Public Safety Communications Supervisor shall meet the requirements of Public Safety Telecommunicator II and meet the job performance requirements as defined in Sections 8.2 through 8.6.

**8.2 Human Resource Management.** Utilize human resources to accomplish assignments in an efficient, safe manner. Evaluate member performance and supervise personnel during emergency and nonemergency work periods according to the following job performance requirements.

**8.2.1** Assign tasks or responsibilities to telecommunicators, given requests for service, so that all aspects of a request for service are handled in a proficient and professional manner.

**(A) Requisite Knowledge.** Verbal communications during emergency situations, techniques used to create assignments under stressful situations, and methods used to confirm understanding.

**(B) Requisite Skills.** The ability to condense instructions for frequently assigned tasks based on training, standard operating procedures, guidelines, or protocols as determined by the AHJ.

**8.2.2** Evaluate telecommunicator actions to identify performance problems, given a telecommunicator with a situation requiring assistance and the member assistance policies and procedures, so that the situation is identified and so that the actions taken are within the established policies and procedures.

**(A) Requisite Knowledge.** The signs and symptoms of telecommunicator-related problems, causes of stress in public safety communications personnel, and the adverse effects of stress on the performance of public safety communications personnel.

**(B) Requisite Skills.** The ability to recommend a course of action for a telecommunicator in need of assistance.

**8.2.3** Administer human resource policies and procedures, given a situation requiring action, so that the needs of the agency are met.

**(A) Requisite Knowledge.** Human resource policies and procedures.

**(B) Requisite Skills.** The ability to communicate orally and in writing and to document a situation and any actions taken toward a resolution.

**8.2.4** Coordinate the completion of assigned tasks and projects by telecommunicators, given a list of projects and tasks pursuant to job requirements, so that assignments meet agency objectives.

**(A) Requisite Knowledge.** Delegation, project management, principles of supervision, and basic human resource management.

**(B) Requisite Skills.** The ability to plan, set priorities, and follow up.

**8.3 Community Relations.** Respond to inquiries from the community.

**8.3.1** Initiate action on a citizen's question or concern, given policies and procedures, so that the question or concern is answered or referred to the correct individual for action and so that all policies and procedures are complied with.

**(A) Requisite Knowledge.** Interpersonal relationships and appropriate customer service techniques.

**(B) Requisite Skills.** The ability to effectively communicate with customers, peers, and others in a reasonable and logical manner.

**8.4 Administration.** Perform general administrative functions and coordinate the implementation of public safety communication center policies and procedures at the supervisor level.

**8.4.1** Recommend changes to existing departmental policies, given a departmental policy, so that the policy meets the agency's changing needs.

**(A) Requisite Knowledge.** Existing policies and procedures and changes in day-to-day operations.

**(B) Requisite Skills.** The ability to evaluate existing policies and procedures for relevancy and to communicate recommended changes.

**8.4.2** Implement changes to departmental policies, given a new or changed departmental policy, so that the policy is communicated to and understood by telecommunicators.

**(A) Requisite Knowledge.** Policies and procedures and changes in day-to-day operations.

**(B) Requisite Skills.** The ability to evaluate existing policies and procedures for relevancy, to communicate recommended changes, and to engage in written and oral communication.

**8.4.3** Conduct routine administrative functions, given forms and record-management systems, so that the reports and logs are complete and the files are maintained in accordance with policies and procedures.

**(A) Requisite Knowledge.** Administrative policies and procedures and records management systems.

**(B) Requisite Skills.** Generating reports, analyzing data, using agency software programs, and communicating findings either orally or in writing.

**8.5 Equipment and Systems Operations.** Monitor the operational integrity of complex and interrelated systems, technologies, and processes that support emergency communications within the agency and take action as approved or directed by the AHJ.

**8.5.1** Monitor the operating systems and interfaces, given the relevant policies, procedures, and monitoring tools, so that there is no degradation or interruption in service to ensure the continuity of operations.

**(A) Requisite Knowledge.** Systems operations, policies and procedures, and operation of the monitoring tools.

**(B) Requisite Skills.** Interpreting and communicating the findings of device indicators.

**8.5.2** Coordinate equipment repairs with technical staff or appropriate resources, given a system malfunction or failure, so

that the situation is remedied as defined and authorized by the AHJ.

**(A) Requisite Knowledge.** Equipment repair resource list and troubleshooting guides.

**(B) Requisite Skills.** Troubleshooting techniques.

**8.6 Health and Safety.** Integrate safety plans, policies, and procedures into daily activities in accordance with the requirements of the AHJ.

**8.6.1** Apply safe practices in the public safety communications center as defined by the AHJ, given safety policies and procedures, so that all applicable reporting is completed, in-service training is conducted, and responsibilities are conveyed to personnel.

**(A) Requisite Knowledge.** The common causes of personal injury and accidents, safety policies and procedures, and basic workplace safety.

**(B) Requisite Skills.** The ability to identify and act to mitigate safety hazards.

**8.6.2** Document the events leading up to and the potential causes of an accident, given an incident and any applicable forms, so that the incident is documented and reports are processed in accordance with policies and procedures.

**(A) Requisite Knowledge.** Procedures for reporting an accident and safety policies and procedures.

**(B) Requisite Skills.** The ability to document an accident in an accurate manner and to conduct interviews objectively.

**8.7 Fellow Employee Exhibiting Signs and Symptoms of Emotional and Behavioral Distress.**

**8.7.1** Identify signs and symptoms of emotional and behavioral health distress of an individual in crisis, given an individual exhibiting signs and symptoms of emotional and behavioral health distress in a peer setting and policies and procedures to be initiated with an awareness level education in emotional and behavioral health distress so that the emotional or behavioral health distress issue is recognized, confidentiality is maintained within the guidelines of the AHJ, communication is open, nonjudgmental awareness is retained, a department or community-based program is made accessible, and assistance is offered or an appropriate referral is initiated.

**(A) Requisite Knowledge.** Emotional and behavioral health distress signs and symptoms, such as anxiety, stress, depression, addictions, or suicidal thoughts or behaviors; knowledge of the programs within the department or within the community, including, but not limited to, employee assistance programs (EAP), community mental health programs, chaplains, and the National Suicide Prevention Lifeline to help an individual when emotional or behavioral health distress is noticed; and how to listen and when to communicate.

**(B) Requisite Skills.** The ability to approach an individual exhibiting signs of emotional or behavioral distress; to use empathic and listening skills; and to refer an individual to an EAP, community mental health program, chaplain, the National Suicide Prevention Lifeline, or an individual trained in emotional and behavioral health.

## Chapter 9 Public Safety Quality Assurance/Improvement Personnel (NFPA 1061)

**9.1\* General.** To qualify as Quality Assurance/Improvement Personnel, a candidate shall meet the job performance requirements defined in Section 9.2 through 9.7.1 of this standard.

**9.2 Review Calls for Service.** Perform or utilize human resources to accomplish assignments when reviewing calls for service. Evaluate communication center member performance during emergency and nonemergency work periods.

**9.2.1** Conduct random review of calls for service received by communication center members, given a request for service or assistance, so that the request is received and prioritized, safety considerations are addressed, and the desired outcomes are conveyed in accordance with the information management system utilized by the AHJ.

**(A) Requisite Knowledge.** Verbal communication during emergency and nonemergency calls for service, techniques to verify and collect information under stressful and nonstressful situations, and methods for confirming those techniques.

**(B) Requisite Skills.** The ability to provide written or electronic reports for reviewed calls for service and to meet the minimum call review requirements utilized by the AHJ.

**9.3 Feedback.** Perform or utilize human resources to accomplish assignments to provide feedback to communication center personnel from reviewed calls for service.

**9.3.1** Conduct a review of calls for service received by communication center members, given a call for service report, so that the desired outcomes are conveyed in accordance with the information management system utilized by the AHJ in a timely and accurate manner.

**(A) Requisite Knowledge.** Written and verbal communication.

**(B) Requisite Skills.** The ability to provide written and verbal communication in a generous, empathic, and calm demeanor using interpersonal skills in a methodical and organized manner to convey the desired results and using the information management system utilized by the AHJ.

### 9.4 Remediation.

**9.4.1** Recommend action for member-related problems requiring remediation training, given a member with a situation requiring assistance and the member assistance policies and procedures, so that the situation is identified and the actions taken are within the established policies and procedures.

**(A) Requisite Knowledge.** The signs and symptoms of member-related problems, causes of stress in emergency services personnel, adverse effects of stress on the performance of emergency service personnel, and awareness of AHJ member assistance policies and procedures.

**(B) Requisite Skills.** The ability to recommend a course of action for a member in need of assistance.

**9.5 Data Management.** Coordinate communication center projects, research, and studies by organizing, retrieving, and filing calls for service data. This will necessarily involve working with data-processing personnel to meet state, national, and agency-related needs.

**9.5.1** Collect calls for service data, given the goals and mission of the organization, so that communication center reports are timely and accurate.

**(A) Requisite Knowledge.** The information management system utilized by the AHJ.

**(B) Requisite Skills.** Written and verbal communication and state, national, and local agency computer software and reports utilized by the AHJ.

**9.6 Continuing Education.** Utilize communication center data and results from reviewed calls for service, along with the implementation of new communication center policies and procedures, to develop and deliver continuing education.

**9.6.1** Direct communication center members during a training evolution, given a training evolution and training policies and procedures, so that the evolution is performed in accordance with safety plans efficiently and as directed.

**(A) Requisite Knowledge.** Verbal communication techniques to facilitate learning.

**(B) Requisite Skills.** The ability to distribute issue-guided directions to unit members during training evolutions.

**9.7 Credentialing.** Maintain certifications, licenses, accreditations, and performance benchmarks that are required by all communication center personnel and others required by the AHJ.

**9.7.1** Schedule and recommend training, given the communication center personnel certification and other certification required by the AHJ, so that all personnel will meet and maintain all required training within the agency's established policies and procedures.

**(A) Requisite Knowledge.** Verbal communication during emergency and nonemergency calls for service, techniques used to verify and collect information under stressful and nonstressful situations, and methods of confirming those techniques.

**(B) Requisite Skills.** The ability to provide written or electronic reports on reviewed calls for service and to meet the minimum call review requirements utilized by the AHJ.

### 9.8 Fellow Employee Exhibiting Signs and Symptoms of Emotional and Behavioral Distress.

**9.8.1** Identify signs and symptoms of emotional and behavioral health distress of an individual in crisis, given an individual exhibiting signs and symptoms of emotional and behavioral health distress in a peer setting and policies and procedures to be initiated with an awareness level education in emotional and behavioral health distress so that the emotional or behavioral health distress issue is recognized, confidentiality is maintained within the guidelines of the AHJ, communication is open, nonjudgmental awareness is retained, a department or community-based program is made accessible, and assistance is offered or an appropriate referral is initiated.

**(A) Requisite Knowledge.** Emotional and behavioral health distress signs and symptoms, such as anxiety, stress, depression, addictions, or suicidal thoughts or behaviors; knowledge of the programs within the department or within the community, including, but not limited to, employee assistance programs (EAP), community mental health programs, chaplains, and the National Suicide Prevention Lifeline to help an individual

when emotional or behavioral health distress is noticed; and how to listen and when to communicate.

**(B) Requisite Skills.** The ability to approach an individual exhibiting signs of emotional or behavioral distress; to use empathic and listening skills; and to refer an individual to an EAP, community mental health program, chaplain, the National Suicide Prevention Lifeline, or an individual trained in emotional and behavioral health.

## Chapter 10 Public Safety Communications Training Coordinator (NFPA 1061)

**10.1\* General.** The Communications Training Coordinator shall meet the requirements for Communications Training Officer and the job performance requirements defined in Sections 10.2 through 10.6 of this standard.

### 10.2 Program Management.

**10.2.1** Recommend budget needs, given training goals, AHJ budget policy, and current resources so that the resources required to meet training goals are identified and documented. [1041:5.2.3]

**(A) Requisite Knowledge.** AHJ budget policy, resource management, needs analysis, sources of instructional materials, and equipment. [1041:5.2.3(A)]

**(B) Requisite Skills.** Resource analysis and preparation of supporting documentation. [1041:5.2.3(B)]

**10.2.2** Gather training resources, given an identified need, so that the resources are obtained within established timelines, budget constraints, and according to AHJ policy. [1041:5.2.4]

**(A) Requisite Knowledge.** AHJ policies, purchasing procedures, and budget. [1041:5.2.4(A)]

**(B) Requisite Skills.** Records completion. [1041:5.2.4(B)]

### 10.3 Develop Curricula.

**10.3.1** Create a lesson plan, given a topic, learner characteristics, and a lesson plan format, so that learning objectives, a lesson outline, course materials, instructional technology tools, an evaluation plan, and learning objectives for the topic are addressed. [1041:5.3.2]

**(A) Requisite Knowledge.** Elements of a lesson plan, components of learning objectives, instructional methodology, student-centered learning, methods for eliminating bias, types and application of instructional technology tools and techniques, copyright law, and references and materials. [1041:5.3.2(A)]

**(B) Requisite Skills.** Conduct research, develop behavioral objectives, assess student needs, and develop instructional technology tools; lesson outline techniques, evaluation techniques, and resource needs analysis. [1041:5.3.2(B)]

**10.3.2** Modify an existing training topic, given an existing lesson plan, so that the topic remains relevant and the technology is updated to standards set by the AHJ.

**(A) Requisite Knowledge.** Thorough knowledge of the existing lesson plan, improvements in industry standards and equipment, and improvements in instructional media.

**(B) Requisite Skills.** Research skills.

**10.3.3** Create a remediation strategy, given an evaluation report indicating the need for further training, so that trainees failing to meet the lesson plan standards are given additional training.

**(A) Requisite Knowledge.** Minimum accepted competency levels established by the AHJ, specific evaluation results of trainees recommended for remediation, and training strategies for varied learning styles.

**(B) Requisite Skills.** None.

### 10.4 Maintain Training Schedule and Staff.

**10.4.1** Maintain a continuing education training schedule, given an established lesson plan, so that training is ongoing and that continuing education objectives are met.

**(A) Requisite Knowledge.** Lesson plan topics; certification expiration dates; and AHJ, state, and federal minimum training requirements/certifications.

**(B) Requisite Skills.** Prioritization and records management.

**10.4.2** Schedule Communications Training Officers (CTOs) to conduct training, given a roster of certified CTOs, so that all CTOs are able to instruct regularly and maintain competency.

**(A) Requisite Knowledge.** A current list of classes instructed by all CTOs and the strengths and weaknesses of each trainer in regard to instructional skills.

**(B) Requisite Skills.** Personnel management, evaluation skills, and record keeping.

**10.4.3** Schedule instructional sessions, given the AHJ's scheduling policy, instructional resources, staff, facilities, and timeline for delivery, so that the specified sessions are delivered according to department policy.

**(A) Requisite Knowledge.** AHJ, state, and federal minimum training requirements/certifications; scheduling processes; supervision techniques; and resource management.

**(B) Requisite Skills.** None.

**10.4.4** Select instructional staff, given personnel qualifications, instructional requirements, and AHJ policies and procedures, so that staff selection meets AHJ policies and achievement of AHJ and instructional goals. [1041:6.2.4]

**(A) Requisite Knowledge.** AHJ policies regarding staff selection, instructional requirements, selection methods, the capabilities of instructional staff, and agency goals. [1041:6.2.4(A)]

**(B) Requisite Skills.** Evaluation techniques and interview methods. [1041:6.2.4(B)]

### 10.5 Document Training.

**10.5.1** Administer a training record system, given AHJ policy and type of training activity to be documented, so that the information captured is concise, meets all AHJ and legal requirements, and can be accessed. [1041:6.2.2]

**(A) Requisite Knowledge.** AHJ policy, record-keeping systems, professional standards addressing training records, legal requirements affecting record keeping, and disclosure of information. [1041:6.2.2(A)]

**(B) Requisite Skills.** Development of records and report generation. [1041:6.2.2(B)]

**10.5.2** Regularly review CTO reports and trainee evaluations, given regular reporting, so that training progress is monitored and negative trends are quickly recognized and corrected.

**(A) Requisite Knowledge.** The results of regular reports and evaluations.

**(B) Requisite Skills.** None.

## **10.6 Evaluation and Testing.**

**10.6.1** Develop student evaluation instruments, given learning objectives, learner characteristics, and training goals, so that the evaluation instrument measures whether the student has achieved the learning objectives. [1041:5.5.2]

**(A) Requisite Knowledge.** Evaluation methods, evaluation instrument development, and assessment of validity and reliability. [1041:5.5.2(A)]

**(B) Requisite Skills.** Evaluation item construction and assembly of evaluation instruments. [1041:5.5.2(B)]

**10.6.2** Develop a class evaluation instrument, given AHJ policy and evaluation goals, so that students have the ability to provide feedback on instructional methods, communication techniques, learning environment, course content, and student materials. [1041:5.5.3]

**(A) Requisite Knowledge.** Training evaluation methods. [1041:5.5.3(A)]

**(B) Requisite Skills.** Development of training evaluation forms. [1041:5.5.3(B)]

**10.6.3** Analyze student evaluation instruments, given test data, objectives, and AHJ policies, so that validity and reliability are determined and necessary changes are made. [1041:6.5.5]

**(A) Requisite Knowledge.** AHJ policies and applicable laws, test validity, reliability, and item analysis methods. [1041:6.5.5(A)]

**(B) Requisite Skills.** Item analysis. [1041:6.5.5(B)]

**10.6.4** Construct a performance-based instructor evaluation plan, given AHJ policies and procedures and job requirements, so that instructors are evaluated at regular intervals, following AHJ policies. [1041:6.2.5]

**(A) Requisite Knowledge.** Evaluation methods, employment laws, AHJ policies, staff schedules, and job requirements. [1041:6.2.5(A)]

**(B) Requisite Skills.** Evaluation techniques, scheduling, technical writing. [1041:6.2.5(B)]

**10.6.5** Present evaluation findings, conclusions, and recommendations to AHJ administrator, given data summaries and target audience, so that recommendations are unbiased, supported, and reflect AHJ goals, policies, and procedures. [1041:6.2.8]

**(A) Requisite Knowledge.** Statistical analysis and AHJ goals. [1041:6.2.8(A)]

**(B) Requisite Skills.** Presentation skills and report preparation following AHJ guidelines. [1041:6.2.8(B)]

**10.6.6** Develop a program evaluation plan, given AHJ policies and procedures, so that instructors, course components, program goals, and facilities are evaluated, student input is

obtained, and needed improvements are identified. [1041:6.5.4]

**(A) Requisite Knowledge.** Evaluation methods and AHJ goals. [1041:6.5.4(A)]

**(B) Requisite Skills.** Construction of evaluation instruments, technical writing. [1041:6.5.4(B)]

## **10.7 Fellow Employee Exhibiting Signs and Symptoms of Emotional and Behavioral Distress.**

**10.7.1** Identify signs and symptoms of emotional and behavioral health distress of an individual in crisis, given an individual exhibiting signs and symptoms of emotional and behavioral health distress in a peer setting and policies and procedures to be initiated with an awareness level education in emotional and behavioral health distress so that the emotional or behavioral health distress issue is recognized, confidentiality is maintained within the guidelines of the AHJ, communication is open, nonjudgmental awareness is retained, a department or community-based program is made accessible, and assistance is offered or an appropriate referral is initiated.

**(A) Requisite Knowledge.** Emotional and behavioral health distress signs and symptoms, such as anxiety, stress, depression, addictions, or suicidal thoughts or behaviors; knowledge of the programs within the department or within the community, including, but not limited to, employee assistance programs (EAP), community mental health programs, chaplains, and the National Suicide Prevention Lifeline to help an individual when emotional or behavioral health distress is noticed; and how to listen and when to communicate.

**(B) Requisite Skills.** The ability to approach an individual exhibiting signs of emotional or behavioral distress; to use empathic and listening skills; and to refer an individual to an EAP, community mental health program, chaplain, the National Suicide Prevention Lifeline, or an individual trained in emotional and behavioral health.

## **Chapter 11 Public Safety Communications Center Manager/Director (NFPA 1061)**

### **11.1\* General.**

**11.1.1** The Public Safety Communications Center Manager/Director shall have the requisite knowledge of the positions in the public safety communications center.

**11.1.2** The AHJ shall be able to request additional educational background, technical experience and the job performance requirements defined in Sections 11.2 through 11.5 of this standard.

**11.1.3** The Public Safety Communications Center Manager/Director shall have the requisite knowledge of the organizational structure of both the department and the department's organizational structure within the AHJ; the geographical configuration and political influences within the boundaries; administration of the department's budget development and implementation; development and implementation of the department's policies and procedures; and management of all personnel within the communications center.

## 11.2 Human Resource Management.

**11.2.1** Administer communication center members during daily operations, given minimum staffing levels established by the AHJ, so that the communication center meets the performance goals in accordance with local policies, procedures, and protocols established by the AHJ.

**(A) Requisite Knowledge.** The communication process for shift assignments, shift replacement, and emergent situations.

**(B) Requisite Skills.** The ability to coordinate shift coverage with peak needs, manage allocated time off, and follow labor/management agreements within the public safety communications center.

## 11.3 Public Safety Communications Center Operations.

**11.3.1** Create operational plans to include daily activities, given an area of responsibility as determined by the AHJ, so that daily activities that include emergency procedures both outside the center and within the center following federal, state, provincial, and local guidelines — including any mission statement or goals — are met as established by the AHJ.

**(A) Requisite Knowledge.** Comprehensive understanding of operational plans, applicable legal requirements and regulations, and positive professional development opportunities.

**(B) Requisite Skills.** Verbal and written communications skills to develop, implement, and evaluate operational plans, federal legislation, and the local requirements necessary to manage the center and to encourage and support professional development.

## 11.4 Stakeholder Relationships.

**11.4.1** Create a working relationship, given the varied stakeholders involved in a communications center, so that all stakeholders' concerns are met using positive feedback and a team environment.

**(A) Requisite Knowledge.** The needs of external stakeholders and the needs of the personnel within the center and an understanding of personal and governmental influences and other agencies that can affect operations within the center.

**(B) Requisite Skills.** The ability to communicate with stakeholders at an appropriate level, understand people and their agendas, administer discipline to internal stakeholders if necessary, and create a positive team environment.

## 11.5 Coordinate Technologies.

**11.5.1** Understand the systems used within the communications center, given the updates and improvements to technology, so that a request for capital improvements can be added to the budget process.

**(A) Requisite Knowledge.** A basic understanding of what technology is used in the center, having a support network to advise of changing technology, and making appropriate recommendations.

**(B) Requisite Skills.** Technological understanding, communications skills, and the ability to translate the information into lay terms so that stakeholders can make informed decisions.

## 11.6 Fellow Employee Exhibiting Signs and Symptoms of Emotional and Behavioral Distress.

**11.6.1** Identify signs and symptoms of emotional and behavioral health distress of an individual in crisis, given an individual exhibiting signs and symptoms of emotional and behavioral health distress in a peer setting and policies and procedures to be initiated with an awareness level education in emotional and behavioral health distress so that the emotional or behavioral health distress issue is recognized, confidentiality is maintained within the guidelines of the AHJ, communication is open, nonjudgmental awareness is retained, a department or community-based program is made accessible, and assistance is offered or an appropriate referral is initiated.

**(A) Requisite Knowledge.** Emotional and behavioral health distress signs and symptoms, such as anxiety, stress, depression, addictions, or suicidal thoughts or behaviors; knowledge of the programs within the department or within the community, including, but not limited to, employee assistance programs (EAP), community mental health programs, chaplains, and the National Suicide Prevention Lifeline to help an individual when emotional or behavioral health distress is noticed; and how to listen and when to communicate.

**(B) Requisite Skills.** The ability to approach an individual exhibiting signs of emotional or behavioral distress; to use empathic and listening skills; and to refer an individual to an EAP, community mental health program, chaplain, the National Suicide Prevention Lifeline, or an individual trained in emotional and behavioral health.

## Chapter 12 Communications Centers (NFPA 1221)

### 12.1 Administration.

#### 12.1.1 Scope.

**12.1.1.1** Chapters 12 through 23 shall cover the installation, performance, operation, and maintenance of public emergency services communications systems and facilities.

**12.1.1.2** Chapters 12 through 23 shall not be used as a design specification manual or an instruction manual.

**12.1.2 Purpose.** The purpose of Chapters 12 through 23 shall be as follows:

- (1) To specify operations, facilities, and communications systems that receive events from the public
- (2) To provide requirements for the retransmission of such events to the appropriate emergency response agencies
- (3) To provide requirements for dispatching of appropriate emergency response personnel
- (4) To establish the required levels of performance and quality of installations of emergency services communications systems

**12.1.2.1** Public fire alarm systems and fire alarm systems on private premises from which signals are received directly or indirectly by the communications center shall be in accordance with *NFPA 72*.

**12.1.2.2** Emergency reporting systems that are not covered by Chapters 12 through 23 shall be in accordance with *NFPA 72*.

**12.1.3\* Application.** Chapters 12 through 23 shall apply to publicly and privately owned communications systems that include, but are not limited to, the following:

- (1) Computer aided dispatching systems
- (2) Telephone systems
- (3) 9-1-1 systems
- (4) Next Generation 9-1-1 systems
- (5) Multi-line telephone systems (MLTS) used to access the Enhanced 9-1-1 systems
- (6) Telematics
- (7) Emergency response facility alerting systems
- (8) Public and private alarm reporting systems
- (9) One-way and two-way radio systems
- (10) Nationwide public safety broadband network (NPSBN)

**12.1.3.1** The communication systems listed in Section 12.1.3 shall provide the following functions:

- (1) Communication between the requester and emergency response agencies
- (2) Communication within the emergency response agency under emergency and nonemergency conditions
- (3) Communication among emergency response agencies

#### 12.1.4 Retroactivity.

**12.1.4.1** Unless otherwise noted, it is not intended that the provisions of Chapters 12 through 23 be applied to facilities, equipment, structures, or installations that were existing or approved for construction or installation prior to the effective date of the document.

**12.1.4.2** In those cases where it is determined that the existing situation involves a distinct hazard to life or property, the authority having jurisdiction shall be permitted to require retroactive application of any provisions of Chapters 12 through 23.

**12.1.4.3** The portions of this standard that shall be applied retroactively are listed in Table 12.1.4.3, Retroactivity.

#### 12.2 General.

**12.2.1\*** Communications centers and alternate communications centers shall comply with Chapter 12.

**Table 12.1.4.3 Retroactivity**

| Chapter | Retroactive                         |
|---------|-------------------------------------|
| 1       | N/A                                 |
| 2       | N/A                                 |
| 3       | Yes                                 |
| 12      | 12.2, 12.6.1, 12.6.2, 12.6.5–12.6.7 |
| 13      | No                                  |
| 14      | No                                  |
| 15      | Yes                                 |
| 16      | Yes                                 |
| 17      | No                                  |
| 18      | No                                  |
| 19      | No                                  |
| 20      | Yes                                 |
| 21      | Yes                                 |
| 22      | Yes                                 |
| 23      | No                                  |

**12.2.2\*** A comprehensive emergency management plan (CEMP) shall be in place for each communications center.

**12.2.2.1** The CEMP shall comply with the applicable requirements of *NFPA 1600* and additional requirements specified in this document.

**12.2.2.2** The AHJ shall review the CEMP for currency and applicability annually.

**12.2.2.3\* Emergency Fire Plan.** There shall be a management-approved, written, dated, and annually tested emergency fire plan that is part of the CEMP.

**12.2.2.4\* Damage Control Plan.** There shall be a management-approved, written, dated, and annually tested damage control plan that is part of the CEMP.

**12.2.2.5\*** Each jurisdiction shall develop a tactical interoperable communications plan (TICP) utilizing TIA-603, *Land Mobile FM or PM Communications Equipment Measurement and Performance Standards*, or a similar reference.

**12.2.2.6** The TICP shall be included in the comprehensive emergency management plan (CEMP).

**12.2.3** When provided, remote communications facilities shall comply with Section 12.11.

**12.2.4** Communications equipment shall be kept in working order at all times.

**12.2.5** Each center shall be provided with a designated primary means of communication that shall be compatible with the designated primary means of communication provided at the Emergency Response Facilities (ERFs).

**12.2.5.1** Each center shall be provided with an alternate means of communication that is compatible with the alternate means of communication provided at the ERFs.

**12.2.5.2** The alternate means shall be available to the telecommunicator in the event of failure of the primary communications system.

**12.2.6\*** Each jurisdiction shall maintain an alternate communications center that meets the criteria in 12.2.6.1 and 12.2.6.2.

**12.2.6.1** The alternate communications center shall be capable, when staffed, of performing the emergency functions performed at the primary communications center.

**12.2.6.2\*** The alternate communications center shall be separated geographically from the primary communications center at a distance that ensures the survivability of the alternate center.

**12.2.6.3** Each jurisdiction shall develop a formal plan to maintain and operate the alternate communications center.

**12.2.6.3.1** The plan shall include the ability to reroute incoming event and alarm traffic to the alternate center and to process and dispatch events at that center.

**12.2.6.3.2\*** The plan shall be included in the Comprehensive Emergency Management Plan (CEMP).

**12.2.6.4\*** When operations are from the alternate communications center, receipt, transfer, processing, and dispatching of alarms and events in accordance with the requirements of this standard shall not be dependent on the functioning of any equipment at the primary communications center.

**12.2.7\*** The communications center shall be capable of continuous operation long enough to enable the transfer of operations to the alternate communications center in the event of fire or other emergency in the communications center or in the building that houses the communications center.

**12.2.8** Systems that are essential to the operation of the communications center shall be designed to accommodate peak workloads as determined by the authority having jurisdiction (AHJ).

**12.2.9\*** Communications centers shall be designed to accommodate the staffing level necessary to operate the center as required by Chapter 15.

**12.2.10** The design of the communications center shall be based on number of personnel needed to handle peak workloads as determined by the AHJ.

### **12.3 Exposure Hazards.**

**12.3.1** Where the building that houses a communications center is adjacent to another structure, the exposed walls shall be protected in compliance with *NFPA 5000* or in compliance with the building code legally in effect, whichever is more restrictive.

**12.3.2\*** When the building that houses a communications center is located within 150 ft (46 m) of the potential collapse zone of a taller structure, the roof shall be designed to resist damage from collapse of the exposing structure.

**12.3.3\*** The lowest floor elevation of the communications center shall be above the 500-year flood plain established by the Federal Emergency Management Agency.

### **12.4 Construction.**

**12.4.1** Communications centers shall be located in buildings of Type I or Type II construction as defined by *NFPA 220*.

**12.4.2** Buildings that house communications centers shall have Class A roof coverings.

**12.4.3** Communications centers shall be separated from other portions of buildings occupied for purposes other than emergency communications by fire barriers having a fire resistance rating of 2 hours.

**12.4.4** Fire barriers shall comply with *NFPA 101*, Section 8.3.

**12.4.5\*** Communications centers shall not be located below grade unless the elevation of the lowest floor in the facility is above the 500-year flood plain.

**12.4.6** Communications centers located below grade shall comply with 11.7.3 of *NFPA 101* and be specifically designed for the location.

**12.4.7** The exposed surfaces of interior walls and ceilings shall have a flame spread index of 25 or less and a smoke development index of 50 or less when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*.

**12.4.8** Interior floor finish shall comply with the requirements of *NFPA 101* interior floor finish testing and classification and shall be Class I as established by *NFPA 101* or shall have a minimum critical radiant flux of 0.1 W/cm<sup>2</sup>.

**12.4.9** The operations room shall be equipped with a toilet facility and a lunch area that are directly accessible to the telecommunicators within the secured area as required by Section 12.7.

**12.4.9.1\*** Communications centers shall be provided with backup facilities for sanitation and drinking water to provide for the health and safety of employees during extended periods of failure of public water or sewer systems.

**12.4.10** The communications center or that portion of a building to be utilized as a communications center shall be protected against seismic damage in accordance with *NFPA 5000* or the building code legally in effect.

### **12.5 Climate Control.**

**12.5.1** Heating, ventilating, and air-conditioning (HVAC) systems shall be provided in accordance with *NFPA 90A* and *NFPA 90B*.

**12.5.1.1** HVAC systems shall be designed to maintain temperature and relative humidity within limits specified by the manufacturers of the equipment critical to the operation of the communications center as determined by the AHJ.

**12.5.1.1.1\*** Separate temperature and humidity controls shall be provided for each equipment room, for the operations room, for office areas, and for other spaces designated by the AHJ.

**12.5.1.2\*** HVAC systems shall be independent systems that serve only the communications center.

**12.5.1.3\*** HVAC system intakes for fresh air shall be arranged to minimize smoke intake from a fire inside or outside the building and to resist intentional introduction of irritating, noxious, toxic, or poisonous substances into the HVAC system.

**12.5.1.4** Emergency controls shall be provided in the operations room to permit closing of outside air intakes.

**12.5.1.5\*** Backup HVAC systems shall be provided for the operations room and other spaces housing electronic equipment determined by the AHJ to be essential to the operation of the communications center.

**12.5.1.6** Backup or redundant HVAC units shall be capable of receiving power from all power sources required by Section 12.8.

**12.5.1.7\*** HVAC systems shall be designed so that the communications center is capable of uninterrupted operation with the largest single HVAC unit or component out of service.

**12.5.1.8\*** Primary and backup HVAC systems shall be capable of operating from the normal power source required by 12.8.2 and the alternate power source required by 12.8.3.

**12.5.1.9\*** Primary and backup/redundant HVAC units shall be located to prevent tampering, vehicle impact, or introduction of hazardous/noxious chemicals or odors.

**12.5.2** Penetrations into the communications center shall be limited to those necessary for the operation of the center.

### **12.6 Fire Protection.**

**12.6.1** The communications center shall be provided with fire extinguishers that meet the requirements of *NFPA 10*.

**12.6.2** The communications center and spaces adjoining the communications center shall be provided with an automatic fire detection, alarm, and notification system in accordance with *NFPA 72*.

**12.6.2.1** The alarm system shall be monitored in the operations room.

**12.6.2.2** Operation of notification appliances shall not interfere with communications operations.

**12.6.3** The building that houses the communications center shall be protected throughout by an approved, supervised automatic sprinkler system that complies with *NFPA 13*.

**12.6.4** Supervision shall be in accordance with 9.7.2 of *NFPA 101*.

**12.6.5** Electronic computer and data processing equipment shall be protected in accordance with *NFPA 75*.

## **12.7 Security.**

**12.7.1** The communications center and other buildings that house essential operating equipment shall be protected against damage from vandalism, terrorism, and civil disturbances.

**12.7.2** Entry to the communications center and other buildings and structures that contain equipment essential to the operation of the communications systems shall be restricted to authorized persons.

**12.7.2.1** Potential points for unauthorized entry as determined by the AHJ shall be protected by an electronic intrusion detection system.

**12.7.2.2** The intrusion detection system shall be annunciated in the operations room and at another location designated by the AHJ.

**12.7.3\*** Entryways to the communications center shall be protected by a security vestibule.

**12.7.3.1** Door openings shall be protected by listed, self-closing fire doors that have a fire resistance rating of not less than 1 hour.

**12.7.3.2** Door openings shall be protected by listed, self-closing doors that are rated for bullet resistance to Level 4 as defined in *UL 752, Standard for Bullet-Resistant Equipment*.

**12.7.4** Where a communications center has windows, the requirements of 12.7.4.1 through 12.7.4.5 shall apply.

**12.7.4.1** Window sills on all direct exterior windows shall be a minimum of 4 ft (1.2 m) above floor level or 4 ft (1.2 m) above finished grade, whichever is higher.

**12.7.4.2** Direct exterior windows shall be rated for bullet resistance to Level 4 as defined in *UL 752, Standard for Bullet-Resistant Equipment*.

**12.7.4.3** Direct exterior windows that are not bullet resistant shall be permitted, provided that they face a secured area that cannot be accessed or viewed from outside the secured perimeter of the communications center.

**12.7.4.4** Direct exterior windows that are required to be bullet resistant shall be configured so that they cannot be opened.

**12.7.4.5\*** Direct exterior windows shall be arranged so that it is not possible to view the interior of the communications center from outside the secured perimeter.

**12.7.5\*** Perimeter walls shall be designed and constructed to provide the same level of ballistic protection as that required for windows.

**12.7.6** Means shall be provided to prevent unauthorized vehicles from approaching the building housing the communications center to a distance of no less than 82 ft (25 m).

**12.7.7\*** As an alternative to 12.7.6, unauthorized vehicles shall be permitted to approach closer than 82 ft (25 m) if the building has been designed to be blast resistant, as approved by the AHJ.

## **12.8 Power.**

**12.8.1 General.** Each communications center shall be provided with a critical operations power system in compliance with *NFPA 70*.

**12.8.1.1** Designated critical operations areas (DCOAs) shall include the operations room, information technology (IT) rooms, telephone rooms, electrical equipment rooms, mechanical equipment rooms, fire protection equipment rooms, sanitary facilities, and other spaces and equipment designated by the AHJ as requiring critical operations power.

**12.8.1.2** At least two independent and reliable power sources shall be provided, one primary and one emergency, and each shall be of adequate capacity for operation of the communications center.

**12.8.1.3** Power sources shall be monitored for integrity, with annunciation provided in the operations room.

**12.8.1.4** In addition to the two power sources required by 12.8.1.2, a means for connecting a portable or vehicle-mounted generator shall be provided.

**12.8.1.5\*** The means shall include an outdoor weatherproof power connector and a manual disconnecting means for the power connector. The disconnecting means shall connect to the center's power system on the load side of the automatic transfer switch required by 12.8.3.2.

**12.8.1.6\*** Wiring methods for feeders, branch circuits, and any control wiring utilized in the delivery of power for the operation of the communications center shall be designed in accordance with *NFPA 70*.

**12.8.2 Primary Power Source.** One of the following shall supply primary power:

- (1) A feed from a commercial utility distribution system
- (2) An approved engine-driven generator installation or equivalent under the control of communications center staff, designed for continuous operation, and with a person specifically trained in its operation on duty at all times
- (3) An approved engine-driven generator installation or equivalent under the control of communications center staff, arranged for cogeneration with commercial light and power, and with a person specifically trained in its operation on duty at all times

### 12.8.3 Emergency Power Supply System.

**12.8.3.1** The emergency power supply system shall consist of one or more engine-driven generators installed in accordance with *NFPA 70*.

**12.8.3.2** Upon failure of primary power, transfer to the standby emergency supply system shall be automatic.

#### 12.8.4\* Engine-Driven Generators.

**12.8.4.1** Engine-driven generators shall conform with the provisions of Chapter 4 of *NFPA 37* and with *NFPA 110*.

**12.8.4.2** Engine-driven generators shall conform with the provisions of *NFPA 110*, Type 10, Level 1, Class 72.

**12.8.4.2.1** The authority having jurisdiction shall be permitted to require a higher class if necessary to comply with the CEMP.

**12.8.4.3\*** Engine-driven generators shall be sized to supply power for the operation of all functions of the communications center and for any additional loads determined by the AHJ.

**12.8.4.4** When installed indoors, engine-driven generators shall be located in a ventilated and secured area that is separated from the communications center by fire barriers having a fire resistance rating of 2 hours.

**12.8.4.5** Fire barriers shall comply with *NFPA 101*, Section 8.3.

**12.8.4.6** When installed outdoors, engine-driven generators shall be located in a secure enclosure concealed from public view and accessible only to authorized personnel.

**12.8.4.6.1** The enclosure shall be capable of resisting the entrance of precipitation at the maximum wind velocities referenced in *NFPA 5000* or in accordance with the building code legally in effect, whichever is more restrictive.

**12.8.4.6.2** The enclosure shall be capable of resisting penetration by small arms fire. Doors, and windows if provided, shall be rated for bullet resistance to Level 4 as defined in *UL 752, Standard for Bullet-Resistant Equipment*.

**12.8.4.6.3** The enclosure shall be equipped with an intrusion detection system complying with *NFPA 731* that shall be monitored in the operations room and at another location designated by the AHJ.

**12.8.4.7** The area that houses an engine-driven generator shall not be used for storage other than spare parts or equipment related to the generator system.

**12.8.4.8** Liquid fuel shall be stored in accordance with *NFPA 37*.

**12.8.4.9** Liquid fuel for engine-driven generators shall not use a gravity-fed system.

**12.8.4.10** Natural gas installations shall comply with *NFPA 54*.

**12.8.4.11** Liquefied petroleum gas (LPG) installations shall comply with *NFPA 58*.

**12.8.4.12\*** Fuel to operate an engine-driven generator for 72 hours at full load shall be available on site.

**12.8.4.12.1\*** Diesel fuel shall be maintained and tested at regularly scheduled intervals as determined by the AHJ.

**12.8.4.12.2** Fuel tank levels shall be monitored electronically in the operations room. A low-fuel supervisory alert shall be

annunciated when the fuel level in a tank drops to two-thirds rated capacity. The AHJ shall be permitted to designate additional levels for tank level annunciation.

**12.8.4.12.3** A dedicated fuel tank shall be provided for each engine.

**12.8.4.13** Equipment essential to the operation of the generator shall be supplied with standby power from the generator.

**12.8.4.14** Generators shall not use the public water supply for engine cooling.

**12.8.4.15** The engine conditions requiring remote audible annunciation for Level 1 systems in *NFPA 110*, Table 5.6.5.2, shall be individually visually annunciated in the operations room.

**12.8.4.15.1** In addition to the visual annunciation, an audible signal common to all annunciated signals shall be provided.

**12.8.4.15.2** A silencing switch for the audible signal in the operations room shall be permitted on the condition that when all supervisory signals have cleared, the silencing circuit will automatically reset or the audible alert will re-sound as a reminder to restore the switch to normal.

**12.8.5 Power Circuits.** Power circuits, together with their associated motors, generators, rectifiers, transformers, fuses, and controlling devices, shall be installed in accordance with *NFPA 70* and the requirements of this subsection.

**12.8.5.1** Primary power shall be obtained from the line side of the main service disconnect switch of the connection to a commercial utility distribution system or to the main conductors from an isolated power plant that is located on the premises.

**12.8.5.2** Power shall be permitted to be obtained from the load side of the main service disconnect switch only when the building is used exclusively for housing of emergency communications facilities.

**12.8.5.3** Power circuit conductors shall not be installed in conduit that is used for other circuits.

**12.8.5.4** The power circuit disconnecting means shall be installed so that it is accessible only to authorized personnel.

#### 12.8.6 Surge Protective Devices (SPDs).

**12.8.6.1\*** SPDs shall be provided in accordance with *NFPA 70*.

**12.8.6.2** SPDs shall be installed in accordance with *NFPA 70* for protection of telecommunications equipment, two-way radio systems, computers, and other electronic equipment determined by the AHJ to be essential to the operation of the communications center.

**12.8.7\* Single-Point Facility Grounding System.** Telecommunications equipment, two-way radio systems, computers, and other electronic equipment determined by the AHJ to be essential to the operation of the communications center shall be bonded to the single-point facility ground system in accordance with *NFPA 70*.

#### 12.8.8 Uninterruptible Power Supply (UPS) Systems.

**12.8.8.1\*** In addition to the required engine-driven generators, a UPS that complies with the requirements of 12.8.8 and *NFPA 70* shall be provided.

**12.8.8.2** The UPS shall provide conditioned, uninterrupted power to telecommunications equipment, two-way radio systems, IT equipment, and other sensitive electronic equipment determined by the AHJ to be essential to the operation of the emergency communication systems.

**12.8.8.3\*** The UPS shall be sized to carry the connected load for the length of time required to transfer operations to the alternate communications center as determined by the AHJ in connection with the CEMP, but in no case less than 15 minutes (Class 0.25.)

**12.8.8.4** The UPS shall provide performance equivalent to Type O or Type U stored emergency power supply system (SEPSS) as specified in Table 4.2.2 of NFPA 111.

**12.8.8.5** The UPS shall meet the SEPSS requirement for Level 1 as defined by NFPA 111.

**12.8.8.6** Each UPS shall be provided with a bypass switch that maintains the power connection during switchover and that is capable of isolating all UPS components while allowing power to flow from the source to the load.

**12.8.8.7** The following UPS conditions shall be annunciated in the operations room:

- (1) Source power failure, overvoltage, and undervoltage
- (2) High and low battery voltage
- (3) UPS in bypass mode

## **12.9 Lighting.**

### **12.9.1 General.**

**12.9.1.1** Artificial lighting shall be provided to enable personnel to perform their assigned duties.

**12.9.1.2** Lighting intensity shall be in accordance with IESNA HB-9-00, *The Lighting Handbook*.

**12.9.1.3** Lighting circuits, together with their associated motors, generators, rectifiers, transformers, fuses, and controlling devices, shall be installed in accordance with NFPA 70.

### **12.9.2 Emergency Lighting.**

**12.9.2.1** The communications center shall be equipped with emergency lighting that illuminates automatically within 15 seconds of failure of normal lighting power.

**12.9.2.1.1** Illumination levels shall be sufficient to allow all essential operations.

**12.9.2.2** In addition to the requirement of 12.9.2.1, the operations room shall be equipped with redundant emergency lighting provided by individual unit equipment in accordance with NFPA 70.

**12.9.2.3** Individual unit equipment emergency lighting shall be provided at locations of communications equipment situated outside the operations room and at the locations of engine-driven generators.

**12.10\* Lightning.** Buildings that house communications centers shall have lightning protection that complies with NFPA 780.

## **12.11 Remote Communications Facilities.**

### **12.11.1 General.**

**12.11.1.1** Remote communications facilities, where provided, shall comply with Section 12.11.

**12.11.1.2** Equipment essential to the operation of a remote communications facility shall be kept in working order at all times.

**12.11.1.3** Equipment that is essential to the operation of a remote communications facility shall be designed to accommodate peak loads as determined by the AHJ.

### **12.11.2 Exposure Hazards.**

**12.11.2.1** Where the building that houses a remote communications facility is adjacent to another structure, the exposed walls shall be protected in compliance with NFPA 5000 or in accordance with the building code legally in effect, whichever is more restrictive.

**12.11.2.2\*** Where the building that houses a remote communications facility is located within 150 ft (46 m) of the potential collapse zone of a taller structure, the roof shall be designed to resist damage from collapse of the exposing structure.

**12.11.2.3** In climates where communications towers are subject to accumulation of ice, roofs of communications equipment enclosures located within the falling ice danger zone shall be designed to resist damage from falling ice.

**12.11.2.4\*** Remote communications facilities shall be located above the 100-year floodplain established by the Federal Emergency Management Agency.

**12.11.2.5** Remote communications facilities shall be evaluated for wildland interface hazards in accordance with NFPA 1140.

### **12.11.3 Construction.**

**12.11.3.1** Where located inside buildings, remote communications facilities shall be located in buildings of Type I, Type II, or Type III construction as defined by NFPA 220.

**12.11.3.2** Buildings that house remote communications facilities shall have Class A roof coverings.

**12.11.3.3** Remote communications facilities shall be separated from other portions of buildings occupied for purposes other than emergency communications by fire barriers having a fire resistance rating of 2 hours.

**12.11.3.4** Fire barriers shall comply with NFPA 101, Section 8.3.

**12.11.3.5** Remote communications facilities shall not be located below grade unless the elevation of the lowest floor in the facility is above the 500-year floodplain.

**12.11.3.6\*** Facilities located below grade shall be both of the following:

- (1) Compliant with Section 11.7 of NFPA 101
- (2) Specifically designed for the location

**12.11.3.7\*** The exposed surfaces of walls and ceilings inside a remote communications facility shall have a flame spread index of 25 or less and a smoke development index of 50 or less when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*.

**12.11.3.8\*** Interior floor finish inside a remote communications facility shall be of noncombustible material or comply with the requirements of NFPA 101 Class II for interior floor finish.

**12.11.3.9** The AHJ shall determine whether anti-static flooring is required for protection of sensitive electronic equipment.

**12.11.3.10** Remote communications facilities shall be protected against seismic damage in accordance with *NFPA 5000* or in accordance with the building code legally in force, whichever is more restrictive.

#### **12.11.4 Climate Control.**

**12.11.4.1** Heating, ventilating, and air-conditioning (HVAC) systems shall be provided in accordance with NFPA 90A or NFPA 90B.

**12.11.4.1.1** HVAC systems shall be designed to maintain temperature and relative humidity within limits specified by the manufacturers of the equipment critical to the operation of the remote communications facility as determined by the AHJ.

**12.11.4.1.2** HVAC systems shall be independent systems that serve only the remote communications facility.

**12.11.4.1.3** HVAC system intakes for fresh air shall be arranged to minimize smoke intake from a fire inside or outside the building and to resist intentional introduction of irritating, noxious, toxic, or poisonous substances into the HVAC system.

**12.11.4.1.4** Backup HVAC systems shall be provided for spaces and enclosures housing electronic equipment determined by the AHJ to be essential to the operation of the remote communications facility.

**12.11.4.1.5** HVAC systems shall be designed so that the remote communications facility is capable of uninterrupted operation with the largest single HVAC unit or component out of service.

**12.11.4.1.6** Upon failure of the primary HVAC system, the backup system shall come on-line automatically.

#### **12.11.5 Fire Protection.**

**12.11.5.1** Remote communications facilities shall be provided with clean-agent fire extinguishers that meet the requirements of NFPA 10.

**12.11.5.2** A remote communications facility and building spaces adjoining that facility shall be provided with an automatic fire detection and alarm system in accordance with *NFPA 72*.

**12.11.5.2.1** The alarm systems shall be monitored in the communications center's operations room in accordance with *NFPA 72*.

**12.11.5.3** Where the remote communications facility equipment is housed in a building, the building shall be protected throughout by an approved, supervised automatic sprinkler system that complies with NFPA 13.

**12.11.5.4\*** Remote communications facilities not housed in buildings shall not be required to have automatic sprinkler protection.

**12.11.5.5** Penetrations into remote communications facilities shall be limited to those necessary for the operation of the facilities.

**12.11.5.6\*** Facilities that can be exposed to uncontrolled wild-fires shall comply with NFPA 1, Chapter 17, Wildland Urban Interface.

#### **12.11.6 Security.**

**12.11.6.1** Remote communications facilities shall be protected against damage from vandalism, terrorism, and civil disturbances.

**12.11.6.2** Entry into remote communications facilities shall be restricted to authorized persons.

**12.11.6.3** Doors furnishing access shall be protected by listed, self-closing fire doors that have a fire resistance rating of not less than 1 hour or by doors that are rated for bullet resistance to Level 4 as defined in UL 752, *Standard for Bullet-Resistant Equipment*.

**12.11.6.4** The AHJ shall determine which type of door is most appropriate for each location.

**12.11.6.5\*** A remote communications facility shall not have windows in exterior walls.

**12.11.6.6\*** Exterior walls shall provide resistance to direct small arms fire equivalent to Level 4 as defined in UL 752, *Standard for Bullet-Resistant Equipment*.

**12.11.6.7\*** Means shall be provided to prevent unauthorized vehicles from approaching the structure housing the remote communications facility to a distance of no less than 82 ft (25 m).

**12.11.6.8\*** As an alternative to 12.7.6, unauthorized vehicles shall be permitted to approach closer than 82 ft (25 m) if the building has been designed to be blast resistant, as approved by the AHJ.

**12.11.6.9\*** An electronic intrusion detection system shall be provided. The system shall be monitored for alarm and trouble signals in the communications center or by a listed central station, as determined by the AHJ. The system shall comply with NFPA 731.

#### **12.11.7 Power.**

**12.11.7.1 General.** Each remote communications facility shall be provided with a critical operations power system that complies with *NFPA 70*.

**12.11.7.1.1** Primary and emergency power sources shall be provided, each of which shall be of adequate capacity for operation of the facility.

**12.11.7.1.2** Power sources shall be monitored for integrity, with annunciation provided in the operations room.

**12.11.7.2 Primary Power Source.** One of the following shall supply normal power:

- (1) A feed from a commercial utility distribution system
- (2) An approved engine-driven generator installation or equivalent under the control of the AHJ, designed for continuous operation and with a person specifically trained in its operation on duty at all times

- (3) An approved engine-driven generator installation or equivalent under the control of the AHJ, arranged for cogeneration with commercial light and power, and with a person specifically trained in its operation on duty at all times

#### 12.11.7.3 Emergency Power Source.

**12.11.7.3.1** The emergency power source shall consist of one or more engine-driven generators installed in accordance with *NFPA 70*.

**12.11.7.3.2** Upon failure of the normal source, transfer to the alternate source shall be automatic.

**12.11.7.4 Stored Emergency Power Supply System (SEPSS).** In addition to the alternate source, a stored emergency power supply system (SEPSS) shall be provided. It shall comply with the requirements of 12.8.4.

**12.11.7.5\* Engine-Driven Generators.** Engine-driven generators shall comply with the requirements of NFPA 110 and the requirements of 12.8.4.

**12.11.7.6\* Power Circuits.** Power circuits, together with their associated motors, generators, rectifiers, transformers, fuses, and controlling devices, shall be installed in accordance with *NFPA 70* and the requirements of 12.8.5.

#### 12.11.7.7 Surge Protective Devices (SPDs).

**12.11.7.7.1** SPDs shall be provided in accordance with *NFPA 70*.

**12.11.7.7.2\*** SPDs shall be provided in accordance with *NFPA 70* for protection of telecommunications equipment, two-way radio systems, computers, and other electronic equipment determined by the AHJ to be essential to the operation of the remote communications facility.

**12.11.7.8\* Single-Point Facility Grounding System.** Telecommunications equipment, two-way radio systems, computers, and other electronic equipment determined by the AHJ to be essential to the operation of the remote communications facility shall be bonded to the single-point facility grounding system in accordance with *NFPA 70*.

#### 12.11.8 Lighting.

##### 12.11.8.1 General.

**12.11.8.1.1** Artificial lighting shall be provided to enable authorized personnel to safely perform tasks necessary for equipment maintenance.

**12.11.8.1.2\*** Lighting intensity shall be in accordance with IESNA HB-9-00, *The Lighting Handbook*.

**12.11.8.1.3** External lighting shall be provided as directed by the AHJ in accordance with the security plan for each facility.

**12.11.8.1.4** Lighting circuits, together with their associated motors, generators, rectifiers, transformers, fuses, and controlling devices, shall be installed in accordance with *NFPA 70*.

##### 12.11.8.2 Emergency Lighting.

**12.11.8.2.1** The remote communications facility shall be equipped with emergency lighting that illuminates automatically upon failure of normal lighting power.

**12.11.8.2.1.1** Illumination levels shall be sufficient to allow troubleshooting and emergency maintenance during a power outage.

**12.11.8.2.2** Individual unit equipment emergency lighting shall be provided at the locations of engine-driven generators.

**12.11.9\* Lightning Protection.** Remote communications facilities shall have lightning protection that complies with NFPA 780.

**12.11.9.1** Remote communications facilities not housed in buildings shall have lightning protection that complies with NFPA 780 and *NFPA 70*.

### Chapter 13 Communication and Signal Wiring (NFPA 1221)

#### 13.1 Circuit Construction and Arrangement.

**13.1.1\*** Installation shall be in accordance with *NFPA 70*.

**13.1.2** As an alternative to 13.1.1, installation of outdoor circuitry shall be in accordance with IEEE C2, *National Electrical Safety Code*, where approved by the AHJ.

**13.1.3** Circuits shall be routed so as to avoid damage due to mechanical injury, fire, falling walls, floods, corrosive vapors, and other risks that are identified in the CEMP.

**13.1.3.1** Alternate communications centers shall comply with the requirements of Chapter 12.

**13.1.4** All circuits shall be routed to allow circuits to be traced.

**13.1.5** Record drawings shall be provided as required by Chapter 21.

**13.1.6** Circuits shall not pass over, pass under, pass through, or be attached to buildings or property that is not owned by, or under the control of, the AHJ or the entity that is responsible for maintaining the system.

**13.1.7** Alarm instruments installed in buildings not under control of the AHJ shall be on separate dedicated circuits.

**13.1.8** The combination of public emergency services communication and signaling (C&S) circuits in the same cable with other circuits shall comply with 13.1.8.1 and 13.1.8.2.

**13.1.8.1** Other municipally controlled C&S circuits shall be permitted.

**13.1.8.2** Circuits of private signaling organizations shall be permitted only by permission of the AHJ.

#### 13.2 Circuit Conductors.

**13.2.1** Wires, conductors and fiber-optic strands shall be terminated in order to prevent breaking due to vibration or stress.

**13.2.2** Circuit conductors and fiber-optic cables on terminal racks shall be identified and isolated from conductors of other systems wherever possible and shall be protected from mechanical injury.

**13.2.3** Fiber-optic cables containing metallic protection or strength members shall be grounded and protected in accordance with *NFPA 70*.