NFPA 170

Standard for Fire Safety and Emergency Symbols

2006 Edition

NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471
An International Codes and Standards Organization

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NFPA 170

Standard for

Fire Safety and Emergency Symbols

2006 Edition

This edition of NFPA 170, *Standard for Fire Safety and Emergency Symbols*, was prepared by the Technical Committee on Fire Safety and Emergency Symbols and acted on by NFPA at its June Association Technical Meeting held June 6–10, 2005, in Las Vegas, NV. It was issued by the Standards Council on July 29, 2005, with an effective date of August 18, 2005, and supersedes all previous editions.

This edition of NFPA 170 was approved as an American National Standard on August 18, 2005.

Origin and Development of NFPA 170

The 1994 edition of NFPA 170 represented the completion of an effort to combine four previously separate documents that covered fire safety symbols for different purposes. These documents included the following:

NFPA 171, *Public Firesafety Symbols*

NFPA 172, *Fire Protection Symbols for Architectural and Engineering Drawings*

NFPA 174, *Fire Protection Symbols for Risk Analysis Diagrams*

NFPA 178, *Symbols for Fire Fighting Operations*

The Technical Committee on Fire Safety Symbols believed that placing all fire safety symbols in one document made it easier for users of symbols to find the one(s) most appropriate for their application. It also eliminated duplication between these and eventually other NFPA documents.

The first edition of NFPA 170 placed these four documents in one document but did not combine them, except for definitions that were in each document.

For the second edition of NFPA 170, the Technical Committee on Fire Safety Symbols completely restructured the text into a logical and cohesive arrangement. The duplication of symbols that occurred during the aforementioned consolidation of documents was eliminated. New symbols added included those for *campfire prohibitions, smoke barriers, illuminated exit signs*, and *belowground tanks*.

For the third edition of NFPA 170, changes included the following:

(1) Upgrading recommendations on *pre-incident planning* to requirements
(2) Adding new symbols for *pull station, area of refuge,* and *cooking prohibition*
(3) Clarifying the symbols for *smoke detectors, battery-powered emergency lights,* and *fire service/ emergency telephone station*
(4) Recognizing the phaseout of Halon now taking place and the introduction of *clean agents*

The fourth edition further recognized the introduction of clean agents by adding new symbols for *clean agent* and *water mist systems*. A new appendix (Appendix C) was added to include symbols that can be used for life safety planning.

The fifth edition was reformatted to conform to the *Manual of Style for NFPA Technical Committee Documents*. Symbols for fire alarm system components were added for consistency with *NFPA 72®*, *National Fire Alarm Code®*.

In 2004, the scope of the committee was expanded to include emergency symbols to allow emergency mapping symbols in a new Chapter 8.

The 2006 edition of NFPA 170 includes the refinement of exit symbology for better recognition of exit, arrow, and flame symbols that are consistent with international standards.

A new Chapter 8, Symbology for Emergency Management Mapping, has been added to assist the user in the preparation for, prevention of, protection against, response to, and recovery from threats to the nation's population centers and critical infrastructure from terrorist, criminal, accidental, or natural origin.

The symbols in Chapter 8 are the result of efforts by the Federal Geographic Data Committee — Homeland Security Working Group (http://www.fgdc.gov/fgdc/homeland/index.html). The symbols have been included in this standard so that they can be processed through an accredited standards-writing organization and made available to the public.

Technical Committee on Fire Safety and Emergency Symbols

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David R. Hague, NFPA Staff Liaison

This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for documents on fire safety and emergency symbols, including those for building design plans, investigation diagrams, maps, and for public fire safety and emergency. It shall coordinate its work with NFPA technical committees and other groups dealing with subjects to which fire safety symbols apply.

Contents

NFPA 170

Standard for

Fire Safety and Emergency Symbols

2006 Edition

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

Changes other than editorial are indicated by a vertical rule beside the paragraph, table, or figure in which the change occurred. These rules are included as an aid to the user in identifying changes from the previous edition. Where one or more complete paragraphs have been deleted, the deletion is indicated by a bullet (•) between the paragraphs that remain.

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for extracts in mandatory sections of the document are given in Chapter 2 and those for extracts in informational sections are given in Annex D. Editorial changes to extracted material consist of revising references to an appropriate division in this document or the inclusion of the document number with the division number when the reference is to the original document. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

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

Chapter 1 Administration

1.1 Scope. This standard presents symbols used for fire safety, emergency, and associated hazards.

1.2 Purpose. The purpose of this standard is to standardize the symbols used in representing fire safety, emergency, and associated hazards.

1.3 Retroactivity. The provisions of this standard reflect a consensus of what is necessary to provide an acceptable degree of protection from the hazards addressed in this standard at the time the standard was issued.

1.3.1 Unless otherwise specified, the provisions of this standard shall not apply to facilities, equipment, structures, or installations that existed or were approved for construction or installation prior to the effective date of the standard. Where specified, the provisions of this standard shall be retroactive.

1.3.2 In those cases where the authority having jurisdiction determines that the existing situation presents an unacceptable degree of risk, the authority having jurisdiction shall be permitted to apply retroactively any portions of this standard deemed appropriate.

1.3.3 The retroactive requirements of this standard shall be permitted to be modified if their application clearly would be impractical in the judgment of the authority having jurisdiction, and only where it is clearly evident that a reasonable degree of safety is provided.

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. Metric units of measurement used in this standard shall be in accordance with the International System of Units (SI). One unit (liter), outside of but recognized by SI, is commonly used in international fire protection. For conversion factors, see Table 1.5.

Table 1.5 Metric Conversion Factors

Name of Unit	Unit Symbol	Conversion Factor
Liter	L	1 gal = 3.785 L
Cubic decimeter	dm^3	1 gal = 3.785 dm^3
Pascal	Pa	1 psi = 6894.757 Pa
Meter	m	1 ft = 0.3048 m
Millimeter	mm	1 in. = 25.4 mm

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 Publication. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response,* 2001 edition.

2.3 Other Publications.

2.3.1 ANSI Publications. American National Standards Institute, Inc., 25 West 43rd Street, 4th Floor, New York, NY 10036.

ANSI A117.1, *Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People,* 1992.

ANSI Z535.1, *Safety Color Code,* 2002.

2.3.2 NECA Publication. National Electrical Contractors Association, 3 Bethesda Metro Center, Suite 1100, Bethesda, MD 20814.

NECA 100, *Symbols for Electrical Construction Drawings*, 1999.

2.3.3 Other Publication.

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

2.4 Reference for Extracts in Mandatory Sections.

NFPA 10, *Standard for Portable Fire Extinguishers,* 2002 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.

3.3 General Definitions.

3.3.1 Pre-Incident Planning. A written document resulting from the gathering of general and detailed information/data to be used by public emergency response agencies and private industry for determining the response to reasonable anticipated emergency incidents at a specific facility.

3.3.2* Referent. An object or concept (message) represented by a symbol.

3.3.3 Self-Luminous. A type of sign that is self-energized with respect to luminosity and requires no external power source.

3.3.4* Supplementary Indicators. Figures, numbers, subscripts, or letter abbreviations used to enhance the effectiveness of symbols.

3.3.5* Symbol. A graphic representation of a referent.

Chapter 4 Symbols for General Use

4.1 Introduction.

4.1.1 This chapter presents general referents and symbols for fire prevention and visual alerting that shall be used for fire and related life safety emergencies.

4.1.2 Purpose.

4.1.2.1 This chapter shall provide uniform fire safety symbols to improve communication wherever signs and symbols are employed to provide fire safety information.

4.1.2.2 This chapter provides uniformity in the selection of symbols that shall be designed to assist in locating exits, fire safety alerting equipment, and safe areas.

4.1.2.3* The fundamental imagery for symbols, as well as their background color and shape, is designated in this chapter.

4.1.2.4* This chapter does not specify viewing distance, size, or optimal combinations of symbols, words, or other presentations.

4.1.3* Symbol Presentation.

4.1.3.1 The orientation for prohibition symbols shall not be altered from that shown in this chapter.

4.1.3.2 The symbol background shape shall be square.

4.1.3.2.1* For prohibition symbols, a circle and diagonal slash (at 45 degrees from upper left to lower right) shall be used.

4.1.3.3 Symbol Color. The symbol color shall meet the requirements of ANSI Z535.1, *Safety Color Code.*

4.1.3.4* Symbols shall be permitted to be used in combination with other symbols either vertically or horizontally on the same sign or on separate signs adjacent to each other.

4.2* Symbols for General Use. See Table 4.2.

Table 4.2 Symbols for General Use

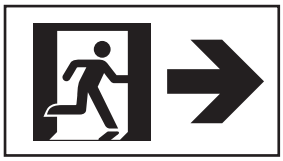
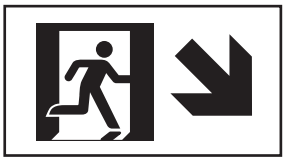
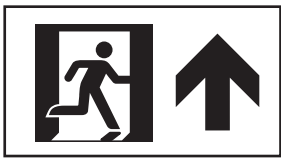
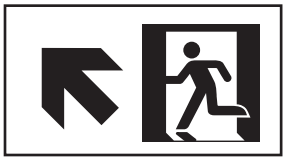
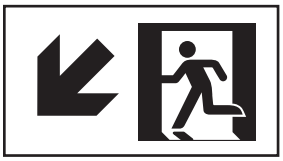
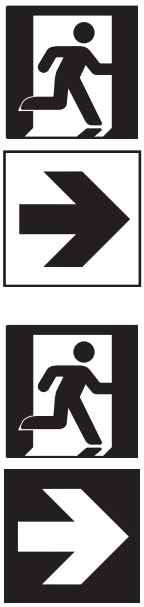
Symbol	Characteristics	Application	Example
Emergency Exit 	Square field Background green Door opening white Image in green	The identification and location of an emergency exit	The location of exit for use in a fire emergency
Emergency Exit Use of Arrows 	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress to the right
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress up and to the right
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress down and to the right
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress forward
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress down
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress to the left

Table 4.2 *Continued*

Symbol	Characteristics	Application	Example
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress up and to the left
	Painted version: Background color white Arrows red or black Backlit version: Doorway, arrows, and lettering in green or red	The identification and location of a route to an emergency exit	Progress down and to the left
Emergency Exit Route (Combination of Two Symbols) 	Square field Background green Door opening white Image in green For arrows: Square field Green arrow on white background or white arrow on green background	The identification and location of a route to be used in an emergency	The direction to a fire exit
Accessible Emergency Exit (Combination of Two Symbols) 	Square field Background green Door opening white Image in green International symbol of accessibility per ANSI A117.1, *Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People*	The identification of a route that leads to an emergency exit that is accessible to disabled users, as specified by ANSI A117.1, *Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People*	The location of a route toward a fire exit that is accessible to disabled users

(continues)

Table 4.2 *Continued*

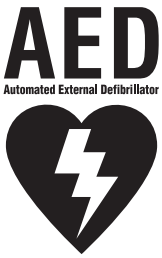
Symbol	Characteristics	Application	Example
Accessible Emergency Exit Route (Combination of Three Symbols) 	Square field Background green Door opening white Image in green International symbol of accessibility per ANSI A117.1, *Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People* For arrows: Square field Green arrow on white background or white arrow on green background	The identification of a route that leads to an emergency exit that is accessible to disabled users	The location of the route toward a fire exit that is accessible to disabled users
Not an Exit 	Square field Background white Door frame green Door opening white Image in black Red circle and diagonal slash	The identification of doors that do NOT lead to an exit	The location of an interior door such as one leading to a closet, an interior courtyard, or a basement
Use Stairs in Case of Fire 	Square field Red flame Black figure White background	An instruction to the user to use stairs (downward egress) in case of fire	The identification that stairs are to be used in case of fire
Use Stairs in Case of Fire 	Square field Red flame Black figure White background	An instruction to the user to use stairs (upward egress) in case of fire	The identification that stairs are to be used in case of fire

Table 4.2 *Continued*

Symbol	Characteristics	Application	Example
Do Not Use Elevator in Case of Fire 	Rectangular field Red flame Black figures White background Red circle and slash	An instruction not to use elevators in case of fire	Posted near elevator call button
No Smoking 	Circular field Red circle and slash Black image White background	The identification of areas in which smoking is prohibited	The identification of areas, such as those for flammable liquid storage, where smoking could lead to fire or explosion
No Campfires 	Circular field Red circle and slash Black image White background	The identification of areas, such as municipal parks, where campfires are not permitted	
Manual Station — Pull Station/Fire Alarm Box 	Rectangular field Red background White flame White hand White box White horn White wave	An instruction to actuate an alarm-initiating device in a fire emergency	Posted above a manually activated initiating device
No Cooking 	Square field White background Red flame Black pot and steam Red circle and slash	An instruction not to cook food in an area	Posted inside a guest room in a hotel or a student room in a college dormitory

(continues)

Table 4.2 *Continued*

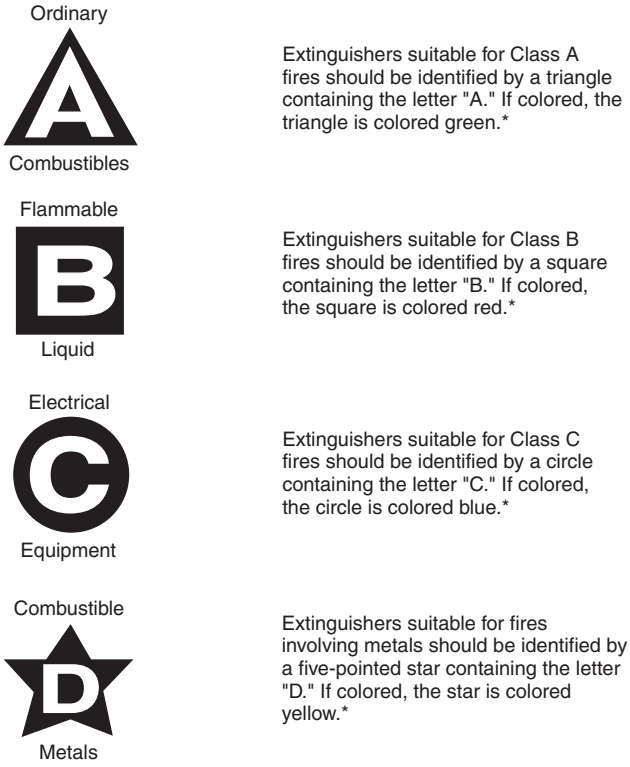
Symbol	Characteristics	Application	Example
Area of Refuge 	Square field White background Red flame	The identification of an area of refuge	A designated area of refuge to be used in a fire emergency
No Hanger 	Red circle and slash Black image	To prohibit hanging clothes or other items from sprinklers	
Automated External Defibrillator (AED) 	Square field White background Red heart White bolt through the heart Black lettering	To identify the location of AEDs	Airports and other places of assembly
Fire Extinguisher 	Square field Red background White symbol	For everyday use in workplaces and public areas; supplementary text sign can be used to increase comprehension	Fire safety signage, manuals, and notices
Fire Hose or Standpipe 	Square field Red background White symbol	For everyday use in workplaces and public areas; supplementary text sign can be used to increase comprehension	Fire safety signage, manuals, and notices

Note: Recommended colors, per PMS (Pantone Matching System) include the following:

BLUE — 299

RED — Warm Red

FIGURE 4.3(a) Recommended Marking System. [10: Figure B.2.1]



* Recommended colors, per PMS (Pantone Matching System) include the following:

GREEN — Basic Green
RED — 192 Red
BLUE — Process Blue
YELLOW — Basic Yellow

FIGURE 4.3(b) Letter-Shaped Symbol Markings. [10: Figure B.2.2]

4.3 Class of Fire Symbols. See Figure 4.3(a) and Figure 4.3(b).

Chapter 5 Symbols for Use by the Fire Service

5.1 Introduction.

5.1.1* This chapter presents standard referents and symbols that shall be used for visually alerting fire fighters and other emergency responders during fire and related emergencies.

5.1.2* Fundamental shapes of symbols, as well as the background color and shape, are designated in this chapter.

5.1.3* Symbol Presentation.

5.1.3.1* Symbol Shapes. The shape of symbols shall be as illustrated in Section 5.2.

5.1.3.2 Symbol Background.

5.1.3.2.1 The symbol background shall be square.

5.1.3.2.2 The symbol background color shall be red, white, or blue as designated and shall meet the requirements of ANSI Z535.1, *Safety Color Code,* for safety red, white, or blue.

5.1.3.3 Symbol Color. The symbol color shall be safety white or blue and shall meet the requirements of ANSI Z535.1, *Safety Color Code,* for safety white or blue.

5.1.3.4 Symbol Orientation. Symbol orientation shall not be altered from that shown in this chapter.

5.2* Symbols for Use by the Fire Service. See Table 5.2.

Table 5.2 Symbols for Use by the Fire Service

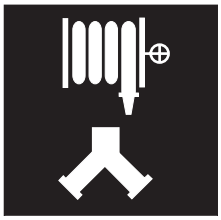
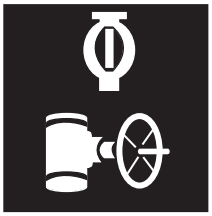
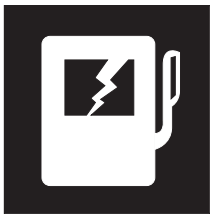
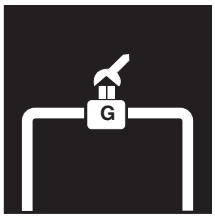
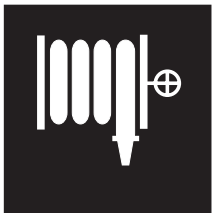
Symbol	Characteristics	Application	Examples
Fire Department Automatic Sprinkler Connection — Siamese 	Square field Red background White symbol	The identification and location of a fire department automatic sprinkler connection	The location of siamese automatic sprinkler connections on buildings The location of siamese freestanding automatic sprinkler connections
Fire Department Automatic Sprinkler Connection — Single 	Square field Red background White symbol	The identification and location of a fire department automatic sprinkler connection	The location of a single automatic sprinkler connection on buildings The location of a single freestanding automatic sprinkler connection
Fire Department Standpipe Connection 	Square field Red background White symbol	The identification and location of a fire department standpipe connection	The location of standpipe connections on buildings and structures The location of freestanding standpipe connections
Fire Department Combined Automatic Sprinkler/ Standpipe Connection 	Square field Red background White symbol	The identification and location of a fire department combined automatic sprinkler/standpipe connection	The location of combined sprinkler/standpipe connections on buildings The location of freestanding combined sprinkler/ standpipe connections

Table 5.2 *Continued*

Symbol	Characteristics	Application	Examples
Fire Hydrant (All Types) 	Square field Red background White symbol	The identification and location of a fire hydrant	The location of fire hydrants, wall hydrants, underground hydrants, or other fire-fighting water supplies
Automatic Sprinkler Control Valve 	Square field Red background White symbol	The identification and location of an automatic sprinkler control valve	The location of control valves for automatic sprinkler systems On doors of rooms containing control valves
Electric Panel or Electric Shutoff 	Square field Blue background White symbol	The identification and location of an electrical panel or other electric shutoff device	The location of electric panels or other electric control devices that can be located in basements or mechanical rooms
Gas Shutoff Valve 	Square field Red background White symbol Red letter G	The location of a gas shutoff valve	The location of gas shutoff valves On doors of rooms containing gas shutoff valves
Fire-Fighting Hose or Standpipe Outlet 	Square field Red background White symbol	The location of a fire-fighting hose or a standpipe outlet	The location of interior fire-fighting hose stations and standpipe outlets in buildings and structures The location on bridges or elevated highways

(continues)

Table 5.2 *Continued*

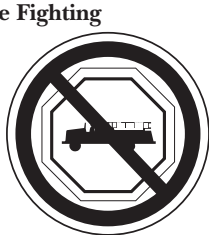
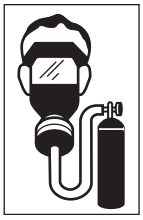
Symbol	Characteristics	Application	Examples
Fire Extinguisher 	Square field Red background White symbol	The location of a fire extinguisher	The location of fire extinguishers in buildings and exterior locations
Directional Arrow 	Square field Background green to correspond to accompanying sign White symbol	Direction to the location of fire-fighting equipment or utility; always used in conjunction with, and adjacent to, another symbol indicating the particular equipment or utility	
Diagonal Directional Arrow 	Square field Background green to correspond to accompanying sign White symbol	Direction to the location of fire-fighting equipment or utility; always used in conjunction with, and adjacent to, another symbol indicating the particular equipment or utility	
Child Care Center 	Square field Blue infant and hands White background	The identification and location of child care centers	On the door opening into child care centers At a fire department command or access point indicating presence and location of child care centers
Emergency Telephone 	Red background White phone	The identification and location of fire service or emergency telephone system	
No Fire Fighting 	Octagonal field White background Black truck Red prohibition symbol	To be posted on, near, or on the approach to buildings where fire fighting is not to occur	Explosives bunkers, frangible buildings, or contaminated buildings

Table 5.2 *Continued*

Symbol	Characteristics	Application	Examples
Self-Contained Breathing Apparatus (SCBA) 	Square field White symbol Green background	To indicate the location of SCBA, breathing air connections, or refill location	For SCBA fill locations in high-rise buildings

Chapter 6 Symbols for Use in Architectural and Engineering Drawings and Insurance Diagrams

6.1* Introduction.

6.1.1 This chapter presents symbols that shall be used in drawings and diagrams.

6.1.2* Symbol Presentation.

6.1.2.1* Symbol Shapes. The shape of symbols shall be as illustrated in Sections 6.2 through 6.12.

6.1.2.2 Screened Lines. Screened lines in the chapter shall not be considered part of the symbol, but shall be used to represent the piping, wiring, or mounting surface associated with the symbol.

6.1.2.3 Symbol Scale. All scales for symbols on any one drawing shall be the same relative size.

6.1.2.4* Symbol Orientation. Symbols shall be oriented to the walls, piping, electrical lines, and so forth to which they are attached.

6.2 Symbols for Site Features.

6.2.1 Buildings.

6.2.1.1 The exterior walls of buildings shall be outlined in single thickness lines if other than fire rated and double thickness lines if fire rated.

6.2.1.2* The perimeter of canopies, loading docks, and other open-walled structures shall be shown by broken lines.

6.2.2 Railroad Tracks. Railroad tracks shall be shown by a single line with cross dashes, as shown in Figure 6.2.2.

FIGURE 6.2.2 Symbol for Railroad Tracks.

6.2.3* Streets. Streets shall be shown.

6.2.4* Bodies of Water. Rivers, lakes, and so forth shall be outlined.

6.2.5 Fences.

6.2.5.1 Fences shall be shown by lines with x's evenly spaced.

6.2.5.2* Gates shall be shown.

6.2.6 Property Lines. The notation given in Figure 6.2.6 shall indicate property lines.

FIGURE 6.2.6 Notation Indicating Property Lines.

6.2.7 Fire Department Access. The symbol for fire department access shall be as shown in Figure 6.2.7.

FIGURE 6.2.7 Symbol for Fire Department Access.

6.2.8 Other Site Features. For other fire protection site features, see Section 6.4.

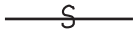
6.3 Symbols for Building Construction.

6.3.1* Types of Building Construction. Types of construction shall be shown narratively.

6.3.2* Height. Height shall be shown to indicate number of stories above ground, number of stories below ground, and height from grade to eaves.

6.3.3* Symbols for Walls and Parapets. See Table 6.3.3.

Table 6.3.3 Symbols for Walls and Parapets

Symbol	Description
	Wall — basic shape
	Smoke barrier wall
	½-hour fire-rated wall
	½-hour fire-rated/smoke barrier wall
	¾-hour fire-rated wall
	¾-hour fire-rated/smoke barrier wall
	1-hour fire-rated wall
	1-hour fire-rated/smoke barrier wall
	2-hour fire-rated wall
	2-hour fire-rated/smoke barrier wall
	3-hour fire-rated wall
	3-hour fire-rated/smoke barrier wall
	4-hour fire-rated wall
	4-hour fire-rated/smoke barrier wall
	Parapet — One cross for each 150 mm (6 in.) parapet that extends above roof (Shown is plan view of symbol.)

6.3.4 Symbols for Floor Openings, Wall Openings, Roof Openings, and Their Protection. See Table 6.3.4.

Table 6.3.4 Symbols for Floor Openings, Wall Openings, Roof Openings, and Their Protection

Symbol	Description
	Opening in wall
	Rated fire door in wall (less than 3 hours)
	Fire door in wall (3-hour rated)
	Elevator in combustible shaft
	Elevator in noncombustible shaft
	Open hoistway
	Escalator
	Stairs in combustible shaft
	Stairs in fire-rated shaft
	Stairs in open shaft
	Skylight

6.3.5* Special Symbols for Cross Sections. The symbols shown in Table 6.3.5 shall be used to indicate features of cross sections. It is recognized that descriptive notes often are required.

6.3.6 Miscellaneous Features. A number of features related to fire protection that do not fall under 6.3.1 through 6.3.5 are given in Table 6.3.6.

Table 6.3.5 Special Symbols for Cross Sections

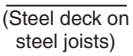
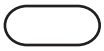
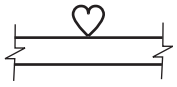
Symbol	Description	Comment
	Fire-resistive floor or roof	
	Wood joisted floor or roof	
	Other floors or roofs	Note construction
	Floor/ceiling or roof/ceiling assembly	Details indicated, as necessary
	Floor on ground	
	Truss roof	Note construction

Table 6.3.6 Miscellaneous Features

Symbol	Description	Comment
	Boiler	
	Chimney	Describe height and construction
	Fire escape	
	Horizontal aboveground tank	Indicate type, dimensions, construction, capacity, pressurization, and content
	Vertical aboveground tank	Indicate type, dimensions, construction, capacity, pressurization, and content
	Belowground tank	Indicate type, dimensions, construction, capacity, pressurization, and content
	Class I, Division 1 or 0	Hatch patterns for electrically classified locations
	Class I, Division 1 or Zone 1	Hatch patterns for electrically classified locations
	Class I, Division 2 or Zone 2	Hatch patterns for electrically classified locations
	Designates the location of automated external defibrillators (AEDs) on plans	

6.4* Water Supply and Distribution Symbols. See Table 6.4.

Table 6.4 Water Supply and Distribution Symbols

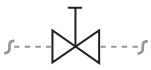
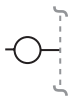
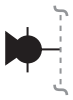
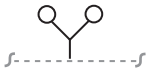
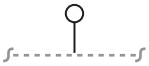
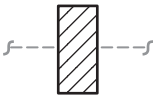
Symbol	Description	Comments
	Public water main	Indicate pipe size and material
	Private water main	Indicate pipe size and material
	Water main under building	Indicate pipe size and material
	Suction pipe	Indicate pipe size and material
	Thrust block	
	Riser	
	Valves (general)	Basic shape; indicate valve size
	Valve in pit	Indicate valve size
	Post-indicator valve	Indicate valve size
	Key-operated valve	Indicate valve size
	OS&Y valve (outside screw and yoke, rising stem)	Indicate valve size
	Indicating butterfly valve	Indicate valve size
	Nonindicating valve (nonrising-stem valve)	Indicate valve size

Table 6.4 ***Continued***

Symbol	Description	Comments
	Check valve	Basic shape; indicate valve size, direction of flow
	Backflow preventer — double check type	Also referred to as a double check valve assembly
	Backflow preventer — reduced pressure zone (RPZ) type	
	Pressure regulating valve	
	Pressure relief valve	
	Float valve	
	Meter	Indicate type
	Private hydrant, one hose outlet	Indicate size, type of thread, or connection
	Public hydrant, two hose outlets	Indicate size, type of thread, or connection
	Public hydrant, two hose outlets, and pumper connection	Indicate size, type of thread, or connection
	Wall hydrant, two hose outlets	Indicate size, type of thread, or connection

(continues)

Table 6.4 ***Continued***

Symbol	Description	Comments
	Private housed hydrant, two hose outlets	Indicate size, type of thread, or connection
	Siamese fire department connection	Specify type, size, and angle
	Freestanding siamese fire department connection	Sidewalk or pit type; specify size
	Single fire department connection	Specify type, size, thread, and angle
	Fire pump with drives	
	Freestanding test header	Freestanding; specify number and sizes of outlets
	Wall-mounted test header	Wall; specify number and sizes of outlets
	Screen/strainer	

6.5 Symbols for Control Panels. See Table 6.5.

Table 6.5 Symbols for Control Panels

Symbol	Description
	Control panel — basic shape
FACP	Fire alarm control panel
FSA	Fire system annunciator alarm
FAA	Annunciator panel — from NECA 100, symbol 7.006
FTR	Fire alarm transponder or transmitter
ESR	Elevator status/recall
FAC	Fire alarm communicator
FSCP	Fire system control panel
$FSCP_{HL}$	Halon
$FSCP_{CO_2}$	Carbon dioxide
$FSCP_{DC}$	Dry chemical
$FSCP_{FO}$	Foam
$FSCP_{WC}$	Wet chemical
$FSCP_{CA}$	Clean agent
$FSCP_{WM}$	Water mist

Table 6.5 ***Continued***

Symbol	Description
$FSCP_{DL}$	Deluge sprinkler
HVA	Control panel for heating, ventilation, air-conditioning, exhaust stairwell pressurization, or similar equipment
MIC	Remote MIC for voice evacuation system
EVAC	Voice evacuation panel — from NECA 100, symbol 7.008
FATC	Fire alarm terminal cabinet — from NECA 100, symbol 7.009
FCS	Fire command system
FACU	Fire alarm control unit
SAP	Sprinkler alarm panel
RP	Relay alarm panel
DGP	Data gathering panel
AMP	Amplifier rack
PP	Purge panel
BATT	Battery pack and charger — from NECA 100, symbol 7.010
ASFP	Air sampling control detector panel with associated air sampling piping network — from NECA 100, symbol 7.011

6.6 Symbols Related to Means of Egress. See Table 6.6.

6.7* Symbols for Fire Alarms, Detection, and Related Equipment.

6.7.1* Signal Initiating Devices and Activation Switches. See Table 6.7.1.

Table 6.6 Symbols Related to Means of Egress

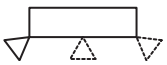
Symbol	Description	Comments
	Emergency light, battery-powered	Number of lamps on unit to be indicated. Indicate whether light head(s) [lamp(s)] is remote from battery
	Illuminated exit sign, single face	Indicate direction of flow for the face
	Illuminated exit sign, double face	Indicate direction of flow for each face

Table 6.6 *Continued*

Symbol	Description	Comments
	Combined battery-powered emergency light and illuminated exit sign	Number of lamps on unit to be indicated; indicate whether light head(s) [lamp(s)] is remote from battery; indicate direction of flow for the face
	Exit lighting	Exit lighting fixture, arrows, and exit face as indicated on drawings (mounting heights to be determined by job specifications) — from NECA 100, symbol 2.005
	Luminaire providing emergency illumination (filled in)	From NECA 100, symbol 2.300

Table 6.7.1 Symbols for Signal Intiating Devices and Activation Switches

Symbol	Description	Comments
	Manual station	Basic shape
	Manual station — Halon	
	Manual station — carbon dioxide	
	Manual station — dry chemical	
	Manual station — foam	
	Manual station — wet chemical	

Table 6.7.1 ***Continued***

Symbol	Description	Comments
P	Manual station — pull station/fire alarm box	
CA	Manual station — clean agent	
WM	Manual station — water mist	
DL	Manual station — deluge sprinkler	
MB	Fire alarm master box	
DK	Drill key	
PRE	Preaction system	
C	Fire service or emergency telephone station	Basic shape
C A	Fire service or emergency telephone station — accessible	
C J	Fire service or emergency telephone station — jack	
C H	Fire service or emergency telephone station — handset	
	Abort switch	Basic shape
HL	Abort switch — Halon	
CO_2	Abort switch — carbon dioxide	

(continues)

Table 6.7.1 *Continued*

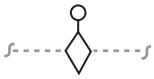
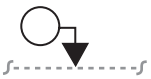
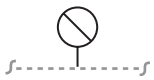
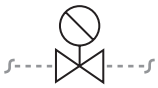
Symbol	Description	Comments
	Abort switch — dry chemical	
	Abort switch — foam	
	Abort switch — wet chemical	
	Abort switch — clean agent	
	Abort switch — water mist	
	Abort switch — deluge sprinkler	
	Abort switch — preaction system	
	Abort switch — emergency power off	
	Automatic detection and supervisory devices	Basic shape
	Heat detector (thermal detector)	Symbol orientation not to be changed
	Heat detector — combination: rate of rise and fixed temperature	Combination device
	Heat detector — rate compensation	
	Heat detector — fixed temperature	

Table 6.7.1 ***Continued***

Symbol	Description	Comments
	Heat detector — rate of rise only	
	Heat detector — line-type detector (heat-sensitive cable)	
	Smoke/heat detector	Combination device
	Smoke detector	Symbol orientation not to be changed
	Smoke detector — photoelectric products of combustion detector	
	Smoke detector — ionization products of combustion detector	
	Smoke detector — beam transmitter	
	Smoke detector — beam receiver	
	Smoke detector — air sampling	
	Smoke detector for duct	
	Gas detector	
	Flame detector	Indicate ultraviolet (UV), infrared (IR), ultraviolet/ infrared (UV/IR), or visible radiation-type detectors; symbol orientation not to be changed
	Flame	
	Ultraviolet	

(continues)

Table 6.7.1 ***Continued***

Symbol	Description	Comments
	Infrared	
	Combination ultraviolet/infrared	
	Visible radiation	
	Flow detector/switch	
	Pressure detector/switch	Specify type — water, low air, high air, and so forth; symbol orientation not to be changed
	Level detector/switch	Symbol orientation not to be changed
	Tamper detector	Alternate term — tamper switch
	Valve with tamper detector/switch	
	Output relay	
	Temperature switch — high temperature	
	Temperature switch — low temperature	

6.7.2 Indicating Appliances. See Table 6.7.2.

Table 6.7.2 Symbols for Indicating Appliances

Symbol	Description	Comments
	Speaker/horn (electric horn)	
	Mini-horn	
	Gong	
	Water motor alarm (water motor gong)	Shield optional
	Bell — vibrating	
	Bell — vibrating/strobe	
	Bell — single stroke gong	
	Bell — single stroke gong/ strobe	
	Bell — trouble	
	Bell — chime	
	Horn with light as separate assembly	
	Horn with light as one assembly	
	Light (lamp, signal light, indicator lamp, strobe)	

Table 6.7.2 *Continued*

Symbol	Description	Comments
	Rotating beacon to indicate emergency response points	
	Remote alarm indicating and test switch	

6.7.3 Related Equipment. See Table 6.7.3.

Table 6.7.3 Symbols for Related Equipment

Symbol	Description
	Door holder
	Addressable input module
	Addressable output module

6.8* Symbols for Fire Extinguishing Systems.

6.8.1 Various Types of Fire Extinguishing Systems.

6.8.1.1 Water-Based Systems. See Table 6.8.1.1.

Table 6.8.1.1 Symbols for Water-Based Systems

Symbol	Description
	Wet charged system — automatically actuated
	Wet charged system — manually actuated
	Dry system — automatically actuated
	Dry system — manually actuated
	Foam system — automatically actuated
	Foam system — manually actuated
	Water mist extinguishing system — automatically actuated
	Water mist extinguishing system — manually actuated

6.8.1.2 Dry Chemical Systems. See Table 6.8.1.2.

Table 6.8.1.2 Symbols for Dry Chemical Systems

Symbol	Description
	For liquid, gas, and electrical fires — automatically actuated
	For liquid, gas, and electrical fires — manually actuated
	For fires of all types (except metals) — automatically actuated
	For fires of all types (except metals) — manually actuated

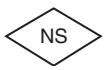
6.8.1.3 Systems Utilizing a Gaseous Medium. See Table 6.8.1.3.

Table 6.8.1.3 Symbols for Systems Utilizing a Gaseous Medium

Symbol	Description
	Carbon dioxide system — automatically actuated
	Carbon dioxide system — manually actuated
	Halon system or clean agent extinguishing system — automatically actuated
	Halon system or clean agent extinguishing system — manually actuated

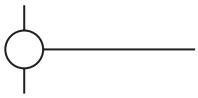
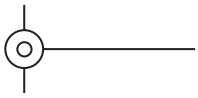
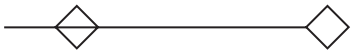
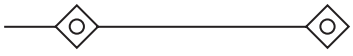
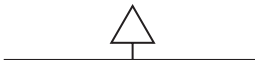
6.8.1.4 Supplementary Symbols. See Table 6.8.1.4.

Table 6.8.1.4 Supplementary Symbols

Symbol	Description
	Fully sprinklered space
	Partially sprinklered space
	Nonsprinklered space
	Water spray system

6.8.2* Symbols for Fire Sprinklers. See Table 6.8.2.

Table 6.8.2 Symbols for Fire Sprinklers

Symbol	Description	Comments
	Upright sprinkler	
	Pendent sprinkler	Note "DP" on drawing and/or in specifications where dry pendent sprinklers are employed
	Upright sprinkler; on sprig	
	Upright sprinkler on top of riser nipple	
	Upright sprinkler on top of riser nipple with sprig	
	Pendent sprinkler; on drop nipple	Note "DP" on drawing and/or in specifications where dry pendent sprinklers are employed
	Sprinkler, with guard	Upright sprinkler head shown
	Sidewall sprinkler	
	Outside sprinkler	Specify type, orifice size; for example, open sprinkler (window or cornice)
	Open sprinkler on branch line	
	Open sprinkler on branch line with sprig	
	Water spray nozzle	
	Window sprinklers	

6.8.3* Symbols for Piping, Valves, Control Devices, and Hangers. See Table 6.8.3.

Table 6.8.3 Symbols for Piping, Valves, Control Devices, and Hangers

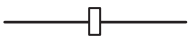
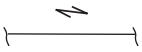
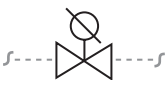
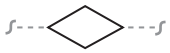
Symbol	Description	Comments
	Sprinkler piping and branch line	Indicate pipe size
	Pipe trace heater	See NECA 100, symbol 5.106
	Mechanical coupling	
	Pipe hanger	This symbol is a diagonal stroke imposed on the pipe that it supports
	Lateral brace	
	Longitudinal brace	
	Four-way brace	Only used to brace risers
	Angle valve (angle hose valve)	Indicate size, type, and other required data
	Check valve (general)	
	Alarm check valve	Specify size, direction of flow
	Dry pipe valve	Specify size
	Dry pipe valve with quick opening device (accelerator or exhauster)	Specify size and type

Table 6.8.3 *Continued*

Symbol	Description	Comments
	Deluge valve	Specify size and type
	Preaction valve	Specify size and type

6.9 Symbols for Portable Fire Extinguishers. See Table 6.9.

Table 6.9 Symbols for Portable Fire Extinguishers

Symbol	Description	Comments
	Portable fire extinguisher	Basic shape
	Water extinguisher	
	Foam extinguisher	
	Dry chemical extinguisher — for liquid, gas, or electrical fires	BC type
	Dry chemical extinguisher — for fires of all types (except metals)	ABC type
	CO_2 extinguisher	
	Halon or clean agent extinguisher	
	Extinguisher for metal fires	

6.10 Symbols for Fire-Fighting Equipment. See Table 6.10.

Table 6.10 Symbols for Fire-Fighting Equipment

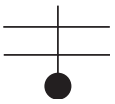
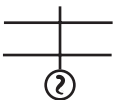
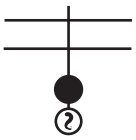
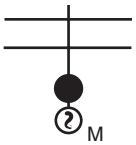
Symbol	Description	Comments
	Fire-fighting equipment	Basic shape
	CO_2 reel station	
	Dry chemical reel station	
	Foam reel station	
	Hose station, dry standpipe	
	Hose station, wet standpipe	
	Monitor nozzle, dry	Specify orifice size
	Monitor nozzle, charged	Specify orifice size

6.11 Symbols for Smoke/Pressurization Control. See Table 6.11.

Table 6.11 Symbols for Smoke/Pressurization Control

Symbol	Description	Comments
	Purge controls — manual control	
	Hand (manual)/ off-automatic	
	Fans — general	Arrow indicates direction of flow

Table 6.11 *Continued*

Symbol	Description	Comments
	Fans — duct	Arrow indicates direction of flow
	Fans — roof	Arrow indicates direction of flow
	Fans — wall	Arrow indicates direction of flow
	Dampers — fire	
	Dampers — smoke	
	Dampers — fire/smoke	
	Dampers — motorized fire/smoke	
	Dampers — barometric	
	Pressurized stairwell	Orient as required for base or head injection
	Ventilation openings	Orient as required for intake or exhaust

6.12* Miscellaneous Symbols. See Table 6.12.

Table 6.12 Miscellaneous Symbols

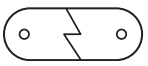
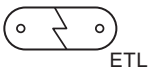
Symbol	Description	Comments
	Agent storage container	Specify type of agent and mounting
	Agent storage container — foam	
	Agent storage container — Halon	
	Agent storage container — carbon dioxide	
	Agent storage container — clean agent	
	Agent storage container — dry chemical	
	Agent storage container — water mist	
	Agent storage container — wet chemical	
	Special spray nozzle	Specify type, orifice, size, other required data (shown here on pipe)
	Fusible link	Specify degrees
	Fusible link with electrothermal feature	Specify degrees
	Solenoid valve	
	End of line device — resistor	

Table 6.12 *Continued*

Symbol	Description	Comments
EOL RI	End of line device — relay	
EOL C	End of line device — capacitor	
EOL D	End of line device — diode	
ATS	Transfer switch — automatic with handle	
MTS	Transfer switch — manual with handle	

Chapter 7 Symbols for Use in Pre-Incident Planning Sketches

7.1 Introduction.

7.1.1* This chapter presents symbols that shall be used in pre-incident planning sketches.

7.1.2* Symbol Shapes. The symbol shapes were chosen for their ease of reproduction through either freehand drawing or with the use of templates.

7.2* Access Features, Assessment Features, Ventilation Features, and Utility Shutoffs. See Table 7.2.

Table 7.2 Symbols for Access Features, Assessment Features, Ventilation Features, and Utility Shutoffs

Symbol	Description	Comments
	Access features, assessment features, ventilation features, and utility shutoffs	Basic shape
FD	Access feature — fire department access point	
K	Access feature — fire department key box	

Table 7.2 *Continued*

Symbol	Description	Comments
RA	Access feature — roof access	
AP	Assessment feature — fire alarm annunciator panel	
RP	Assessment feature — fire alarm reset panel	
CP	Assessment feature — fire alarm voice communication panel	
SP	Assessment feature — smoke control and pressurization panel	
WB	Assessment feature — sprinkler system water flow bell	
SL	Ventilation feature — skylight	

(continues)

Table 7.2 *Continued*

Symbol	Description	Comments
SV	Ventilation feature — smoke vent	
E	Utility shutoff — electric	
W	Utility shutoff — domestic water	
G	Utility shutoff — gas	
LPG	Specific variations — LP-gas shutoff	
NG	Specific variations — natural gas shutoff	
CNG	Specific variations — compressed natural gas shutoff	

7.3 Detection/Extinguishing Equipment. See Table 7.3.

Table 7.3 Symbols for Detection/Extinguishing Equipment

Symbol	Description	Comments
	Detection/ extinguishing equipment	Basic shape
DD	Duct detector	
HD	Heat detector	
SD	Smoke detector	
FS	Flow switch (water)	
PS	Manual station — pull station/fire alarm box	
TS	Tamper switch	
HL	Halon system	
DC	Dry chemical system	
CO_2	Carbon dioxide system	
WC	Wet chemical system	
FO	Foam system	
CA	Clean agent system	
BSD	Beam smoke detector	

7.4 Water Flow Control Valves and Water Sources. See Table 7.4.

7.5 Equipment Rooms. See Table 7.5.

Table 7.4 Symbols for Water Flow Control Valves and Water Sources

Symbol	Description	Comments
◯	Water flow control valves and water sources	Basic shape
PIV	Post-indicator valve	
RV	Riser valve	
ZV	Sprinkler zone valve	
SCV	Sectional control valve	
HC	Hose cabinet or connection	
WH	Wall hydrant	
TH	Test header (fire pump)	
TC	Inspector's test connection	
FH	Fire hydrant	
FDC	Fire department connection	
DS	Drafting site	
WT	Water tank	

Table 7.5 Symbols for Equipment Rooms

Symbol	Description	Comments
□	Equipment rooms	Basic shape
AC	Air-conditioning equipment room	AHUs = air handling units
EE	Elevator equipment room	
EG	Emergency generator room	
FP	Fire pump room	
TE	Telephone equipment room	
BR	Boiler room	
ET	Electrical/ transformer room	

7.6* Identification of Hazardous Materials. NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*, shall be permitted to be used to identify the location of hazardous materials within a structure.

Chapter 8 Symbology for Emergency Management Mapping

8.1 Damage Operational Symbology. Use Table 8.1 to cross-reference the damage operational symbols with their definitions.

Table 8.1 Damage Operational Symbology Reference

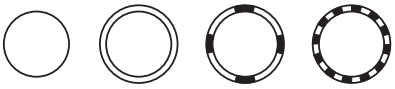
Symbol Types and Terms	Symbols	Definitions
Incident (No levels) (violet)		Not applicable
Natural Event (No levels) (black)		Not applicable
Operation (Level 1) (green)		Fully operational/open
Operation (Level 2) (blue)		Operational, but filled to capacity or otherwise closed
Operation (Level 3) (orange)		Operational, but partially damaged or partially incapacitated
Operation (Level 4) (red)		Destroyed or totally incapacitated
Infrastructure (Level 1) (green)		Fully operational/open
Infrastructure (Level 2) (blue)		Operational, but filled to capacity or otherwise closed
Infrastructure (Level 3) (orange)		Operational, but partially damaged or partially incapacitated
Infrastructure (Level 4) (red)		Destroyed or totally incapacitated

8.2 Operations Symbology.

8.2.1 Organizations, services, capabilities, or resources available during or implemented due to an emergency management situation.

8.2.2 Use Table 8.2.2 to cross-reference the operations symbols with their definitions.

Table 8.2.2 Operations Symbology Reference

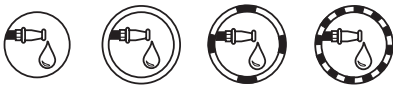
Symbol Types and Terms	Symbols	Keystroke	Definitions
Operations Background Symbol (Background)		!	The background fill shape for the Operations symbol, level 1
Operations Frame Symbol (Frame)		#	The frame shape for the Operations symbol, level 1
Emergency Medical Operation (Theme)		A	Urgent and unexpected medicinal treatment and/or transport during serious situations that require immediate action[1]
EMT Station Locations (Emergency Medical Feature)		B	The locus of an emergency medical team
Medical Evacuation Helicopter Station (Emergency Medical Feature)		C	The locus of an emergency helicopter landing pad, utilized to transport severely injured persons
Health Department Facility (Emergency Medical Feature)		D	The locus of a facility operated by a public institution that is dedicated to promotion of health and prevention of disease at the community, county, state, or national level[2]
Hospital (Emergency Medical Feature)		E	The locus of an institution where the sick or injured are given medical or surgical care
Hospital Ship (Emergency Medical Feature)		F	The locus of a ship where the sick or injured are given medical or surgical care
Medical Facilities Outpatient (Emergency Medical Feature)		G	The locus of a facility providing medical treatment to patients whose sickness or injury does not require hospitalization

(continues)

Table 8.2.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Morgue (Emergency Medical Feature)		H	The locus of a place where the bodies of persons found dead are kept until identified and claimed by relatives or released for burial[3]
Pharmacies (Emergency Medical Feature)		I	The locus of a place where medicines are compounded or dispensed[3]
Triage (Emergency Medical Feature)		J	The locus of a place where sorting and allocation of treatment to patients (especially victims of war or disaster) are performed according to a system of priorities designed to maximize the number of survivors[3]
Emergency Operation (Theme)		K	Those actions taken during the emergency period to protect life and property, care for the people affected, and temporarily restore essential community services[4]
Emergency Collection/Evacuation Point (Emergency Operation Feature)		L	A designated place where displaced persons or victims of war or disaster are assembled and/or evacuated from
Emergency Incident Command Center (Emergency Operation Feature)		M	The physical location from which an incident commander manages an incident[5]
Emergency Operations Center (Emergency Operation Feature)		N	The physical location where an organization comes together during an emergency to coordinate response and recovery actions and resources and make management decisions[6]
Emergency Public Information Center (Emergency Operation Feature)		O	No definition
Emergency Public Service Center (Emergency Operation Feature)		P	No definition

Table 8.2.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Emergency Shelters (Emergency Operation Feature)		Q	The locus of a designated emergency/relief shelter
Emergency Staging Areas (Emergency Operation Feature)		R	A designated place where emergency response forces, equipment, and supplies are assembled prior to engagement in operations
Emergency Teams (Emergency Operation Feature)		S	The locus of an emergency response team
Emergency Water Distribution Center (Emergency Operation Feature)		T	A place where potable water is distributed to displaced persons or victims of war or disaster
Emergency Food Distribution Centers (Emergency Operation Feature)		U	A place where food is distributed to displaced persons or victims of war or disaster
Fire Suppression Operation (Theme)		V	The extinguishing of a burning (and flaming) object by means of applying an agent, such as water[7]
Fire Hydrant (Fire Suppression Feature)		W	A discharge pipe with a valve and spout from which water may be drawn from a water main in sufficient volume and at sufficient pressure for fire-fighting purposes[8]
Other Water Supply Location (Fire Suppression Feature)		X	Any source of water other than a fire hydrant that is sufficient for the purpose of fire fighting
Fire Station (Fire Suppression Feature)		Y	A facility housing fire-fighting equipment and/or personnel
Law Enforcement Operation (Theme)		Z	Act of ensuring obedience to the laws[9]

(continues)

Table 8.2.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
ATF (Law Enforcement Feature)		a	A locus of U.S. Bureau of Alcohol, Tobacco, and Firearms facilities, equipment, or personnel
Border Patrol (Law Enforcement Feature)		b	A locus of U.S. Border Patrol facilities, equipment, or personnel
Customs Service (Law Enforcement Feature)		c	A locus of U.S. Customs Service facilities, equipment, or personnel
DEA (Law Enforcement Feature)		d	A locus of U.S. Drug Enforcement Administration facilities, equipment, or personnel
DOJ (Law Enforcement Feature)		e	A locus of U.S. Department of Justice facilities, equipment, or personnel
FBI (Law Enforcement Feature)		f	A locus of Federal Bureau of Investigation facilities, equipment, or personnel
Police (Law Enforcement Feature)		g	A locus of federal, state, or local police facilities, equipment, or personnel
Prison (Law Enforcement Feature)		h	A facility for the confinement of persons convicted of serious crimes[3]
Secret Service (Law Enforcement Feature)		i	A locus of U.S. Secret Service facilities, equipment, or personnel
TSA (Law Enforcement Feature)		j	A locus of U.S. Transportation Security Administration facilities, equipment, or personnel

Table 8.2.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
U.S. Coast Guard (Law Enforcement Feature)		k	A locus of U.S. Coast Guard facilities, equipment, or personnel
U.S. Marshals Service (Law Enforcement Feature)		l	A locus of U.S. Marshals Service facilities, equipment, or personnel
Sensor Operation (Theme)		m	A device that receives and responds to a signal or stimulus[9]
Biological Sensor (Sensor Operation Feature)		n	A device designed to respond to the presence of one or more biological substances and to transmit a resulting impulse[10]
Chemical Sensor (Sensor Operation Feature)		o	A device designed to respond to the presence of one or more chemicals and to transmit a resulting impulse[10]
Intrusion Sensor (Sensor Operation Feature)		p	A device designed to respond to physical penetration of, or attempts to physically penetrate, a protected area or spatial volume and to transmit a resulting impulse[10]
Nuclear Sensor (Sensor Operation Feature)		q	A device designed to respond to one or more decay product(s) of one or more radioactive nuclides and to transmit a resulting impulse[11]
Radiological Sensor (Sensor Operation Feature)		r	A device designed to respond to one or more decay product(s) of one or more radioactive nuclides and to transmit a resulting impulse[11]

Notes:
1. Source: www.dictionary.com; combined definition of *emergency* and *medical*
2. Source: Based on the APHA public health mission statement
3. Source: Merriam-Webster Online Dictionary
4. Source: Adapted from San Diego State University Emergency Plan Glossary, http://bfa.sdsu.edu/emergencyplan/glossary.htm
5. Source: Commonwealth of Virginia ICS, www.vdfp.state.va.us/ components.htm
6. Source: EMS web site
7. Source: Adapted from www.firewise.org glossary of terms
8. Source: Adapted from Merriam-Webster Online Dictionary definition of *hydrant*
9. Source: www.dictionary.com
10. Source: Adapted from Merriam-Webster Online Dictionary, definition of *sensor*
11. Source: Adapted from Merriam-Webster Online Dictionary definition of *sensor* and inherent knowledge of the process, detection, and measurement of radioactivity

8.3 Incidents Symbology.

8.3.1 Table 8.3.2 lists 8 themes and 42 features that symbolize a "cause of action" or "source of disaster."

8.3.2 Use Table 8.3.2 to cross-reference the Incidents symbols with their definitions.

Table 8.3.2 Incidents Symbology Reference

Symbol Types and Terms	Symbols	Keystroke	Definitions
Incidents Stage 01 Background Symbol (Background)		!	The background fill shape for the Incidents symbol, level 1
Incidents Stage 01 Frame Symbol (Frame)		#	The frame shape for the Incidents symbol, level 1
Civil Disturbance Incident (Theme)		A	Human activities resulting in the disrupting of services or requiring varying levels of support, law enforcement, or attention
Civil Demonstrations (Civil Disturbance Feature)		B	A public display of group feelings toward a person or cause[1]
Civil Displaced Population (Civil Disturbance Feature)		C	Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, violations of human rights, or natural or human-made disasters[2]
Civil Rioting (Civil Disturbance Feature)		D	A public disturbance involving (1) an act or acts of violence by one or more persons part of an assemblage of three or more persons, which act or acts shall constitute a clear and present danger of, or shall result in, damage or injury to the property of any other person or to the person of any other individual, or (2) a threat or threats of the commission of an act or acts of violence by one or more persons part of an assemblage of three or more persons having, individually or collectively, the ability of immediate execution of such threat or threats, where the performance of the threatened act or acts of violence would constitute a clear and present danger of, or would result in, damage or injury to the property of any other person or to the person of any other individual[3]

Table 8.3.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Criminal Activity Incident (Theme)		E	An unlawful pursuit or action in which an individual participates[4]
Bomb Threat (Criminal Activity Feature)		F	A warning of the of the possible presence of a bomb or expression of the intention to detonate a bomb
Bomb (Criminal Activity Feature)		G	An explosive device fused to detonate under specific conditions[5]
Bomb Explosion (Criminal Activity Feature)		H	A violent outburst resulting from detonation of a chemical or nuclear explosive or from the loss of a high pressure vessel's integrity
Looting (Criminal Activity Feature)		I	Burglary committed within an affected area during an emergency[6]
Poisoning (Criminal Activity Feature)		J	Use of a poisonous substance to injure or kill[1]
Shooting (Criminal Activity Feature)		K	Use of a firearm to kill or injure or to damage property[1]
Fire Incident (Theme)		L	The destructive act of something burning; caused by electrical or technological malfunction, lightning, arson, human error, or human negligence
Commercial Facility Fire (Fire Incident Feature)		M	A fire that originates at or affects a commercial facility, resulting in partial damage or total destruction of the structure and/or bodily injury, smoke inhalation, or death
Forest Fire (Fire Incident Feature)		N	An uncontrolled fire in a wooded area[7]

(continues)

Table 8.3.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Grassland Fire (Fire Incident Feature)		O	An uncontrollable fire in areas of vegetation dominated by grasses, grass-like plants, forbs, mosses, lichens, and/or ferns[8]
Hot Spot (Fire Incident Feature)		P	An area of intensified fire activity and increased heat or a particularly active part of a fire
Industrial Facility Fire (Fire Incident Feature)		Q	A fire that originates at or affects an industrial facility, resulting in partial damage or total destruction of the structure and/or bodily injury, smoke inhalation, or death
Origin (Fire Incident Feature)		R	Location of where the fire started[9]
Residential Fire (Fire Incident Feature)		S	A fire affecting a home or housing complex, resulting in partial or total destruction of the structure and/or bodily injury, smoke inhalation, or death
School Fire (Fire Incident Feature)		T	A fire that originates at or affects an educational facility, resulting in partial or total destruction of the structure and/or bodily injury, smoke inhalation, or death
Smoke (Fire Incident Feature)		U	The visible products of combustion rising above the fire[10]
Special Needs Fire (Fire Incident Feature)		V	A fire that affects special treatment facilities, such as nursing homes or assisted living centers, resulting in partial or total destruction of the structure and/or bodily injury, smoke inhalation, or death
Hazardous Incident (Theme)		W	See Note 11.

Table 8.3.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Chemical Agent (Hazardous Incident Feature)		X	A chemical substance that is intended for use in military operations to kill, resulting in psychological disorientation, serious injury, incapacitation or death[12]
Corrosive Material (Hazardous Incident Feature)		Y	Uncontrolled or potentially dangerous presence of a liquid or solid that causes full thickness destruction of human skin at the site of contact within a specified period of time
Dangerous When Wet (Hazardous Incident Feature)		Z	Uncontrolled or potentially dangerous presence of a material that, by contact with water, is liable to become spontaneously flammable or to give off flammable or toxic gas at a rate greater than 1 L/hr per kilogram of the material per hour
Explosive (Hazardous Incident Feature)		a	Uncontrolled or potentially dangerous presence of any substance or article, including a device that is designed to function by explosion (i.e., an extremely rapid release of gas and heat) or that, by chemical reaction within itself, is able to function in a similar manner even if not designed to function by explosion
Flammable Gas (Hazardous Incident Feature)		b	Uncontrolled or potentially dangerous presence of any material that is a gas at 20°C (68°F) or less and 101.3 kPa (14.7 psia) of pressure [a material that has a boiling point of 20°C (68°F) or less at 101.3 kPa (14.7 psia)]; that Is ignitable at 101.3 kPa (14.7 psia) when in a mixture of 13 percent or less by volume with air; or that has a flammable range at 101.3 kPa (14.7 psia) with air of at least 12 percent regardless of the lower limit
Flammable Liquid (Hazardous Incident Feature)		c	Uncontrolled or potentially dangerous presence of a liquid having a flash point of not more than 60.5°C (141°F)
Flammable Solid (Hazardous Incident Feature)		d	Uncontrolled or potentially dangerous presence of desensitized explosives that when dry are explosives of Class 1, which are wetted with sufficient water, alcohol, or plasticizer to suppress explosive properties

(continues)

Table 8.3.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Non-Flammable Gas (Hazardous Incident Feature)		e	Uncontrolled or potentially dangerous presence of any material (or mixture) that exerts in the packaging an absolute pressure of 280 kPa (40.6 psia) or greater at 20°C (68°F) and is not classified as a flammable gas
Organic Peroxides (Hazardous Incident Feature)		f	No definition
Oxidizers (Hazardous Incident Feature)		g	Uncontrolled or potentially dangerous presence of a material that can, generally by yielding oxygen, cause or enhance the combustion of other materials
Radioactive Material (Hazardous Incident Feature)		h	Uncontrolled or potentially dangerous presence of any material having a specific activity greater than 70 Bq/g
Spontaneously Combustible (Hazardous Incident Feature)		i	Uncontrolled or potentially dangerous presence of a liquid or solid that, even in small quantities and without an external ignition source, can ignite within five (5) minutes after coming in contact with air or a material that, when in contact with air and without an energy supply, is liable to self-heat
Toxic Gas (Hazardous Incident Feature)		j	Uncontrolled or potentially dangerous presence of a gas that presents a hazard to human health
Toxic and Infectious (Hazardous Incident Feature)		k	Uncontrolled or potentially dangerous presence of a poisonous substance that is a specific product of the metabolic activities of a living organism and is usually very unstable and can easily be transferred between organisms
Unexploded Ordnance (Hazardous Incident Feature)		l	Uncontrolled or potentially dangerous presence of an unexploded weapon or ammunition
Air Incident (Theme)		m	An event involving aircraft resulting in damage, bodily injury, death, or the disruption of transportation service

Table 8.3.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Air Accident (Air Incident Feature)		n	A sudden, unexpected event involving aircraft resulting in fuselage damage, bodily injury, death and/or the disruption of transportation service; prompting emergency landing procedures or uncontrolled impact with the ground
Air Hijacking (Air Incident Feature)		o	The unexpected, unlawful and forceful seizure of control aboard an aircraft by an individual or group of individuals resulting in passenger and crew endangerment, injury or death, and/or the redirection of flight destination[13]
Marine Incident (Theme)		p	An event involving a boat or ship and resulting in damage, bodily injury, death, or the disruption of transportation service
Marine Accident (Marine Incident Feature)		q	A sudden, unexpected event involving a boat or ship and resulting in vessel submerging, damage, bodily injury, death and/or the disruption of transportation service
Marine Hijacking (Marine Incident Feature)		r	The unexpected, unlawful and forceful seizure of control aboard a boat or ship by an individual or group of individuals resulting in passenger and crew endangerment, injury or death, and/or the redirection of destination[13]
Rail Incident (Theme)		s	An event involving a train and resulting in damage, bodily injury, death, or the disruption of transportation service
Rail Accident (Rail Incident Feature)		t	A sudden, unexpected event involving a wheeled or tracked vehicle resulting in derailment, damage, bodily injury, death, and/or the disruption of transportation service
Rail Hijacking (Rail Incident Feature)		u	The unexpected, unlawful and forceful seizure of control aboard a wheeled or tracked vehicle by an individual or group of individuals resulting in passenger and crew endangerment, injury or death, and/or the redirection of destination[13]
Vehicle Incident (Theme)		v	An event involving a wheeled or tracked vehicle and resulting in damage, bodily injury, death, or the disruption of transportation service

(continues)

Table 8.3.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Vehicle Accident (Vehicle Incident Feature)		w	A sudden, unexpected event involving a vehicle and resulting in damage, bodily injury, death, and/or the disruption of transportation service
Vehicle Hijacking (Vehicle Incident Feature)		x	The unexpected, unlawful, and forceful seizure of control aboard a vehicle by an individual or group of individuals resulting in passenger and crew endangerment, injury or death, and/or the redirection of destination[13]

Notes:
1. Source: Merriam-Webster Online Dictionary
2. Source: United Nations *Guiding Principles on Internal Displacement*
3. Source: 18 USC Section 2102
4. Source: www.dictionary.com; combined definitions of *criminal* and *activity*
5. Source: International military definition
6. Source: http://peace-officers.com glossary
7. Source: www.realdictionary.com
8. Source: Adapted from *forest fire* definition and the Forestry Resource glossary located at http://forestry.about.com/library/b/forgls.htm
9. Source: U.S. Department of Agriculture, Forest Service, www.fs.fed.us
10. Source: www.firewise.org
11. Note: All of these proposed definitions are from the following source: Office of Hazardous Materials Safety, Hazmat Regulations and Interpretations.
12. Source: Adapted from NATO definition, www.nato.int/docu/stanag/aap006/aap6.htm
13. Source: www.dictionary.com, definition of *hijack*

8.4 Natural Events Symbology.

8.4.1 A natural event is a phenomenon found in or created by naturally occurring conditions.

8.4.2 Use Table 8.4.2 to cross-reference the Natural Events symbols with their definitions.

Table 8.4.2 Natural Events Symbology Reference

Symbol Types and Terms	Symbols	Keystroke	Definition
Natural Events Stage 01 Background Symbol (Background)		!	The background fill shape for the Natural Events symbol, level 1
Natural Events Stage 01 Frame Symbol (Frame)		#	The frame shape for the Natural Events symbol, level 1
Geologic (Theme)	Reserved		
Aftershock (Geologic Feature)		A	An earthquake that follows a larger earthquake and originates at or near the latter's focus[1]

Table 8.4.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definition
Avalanche (Geologic Feature)		B	A large mass of snow, ice, soil, or rock, or mixtures of these materials, falling, sliding, or flowing very rapidly under the force of gravity[1]
Earthquake Epicenter (Geologic Feature)		C	The point on the earth's surface directly above the focus of an earthquake[1]
Landslide (Geologic Feature)		D	A general term for a wide variety of processes and landforms involving the down slope movement under the force of gravity of masses of soil and rock material[1]
Subsidence (Geologic Feature)		E	Sinking or downward settling of the Earth's surface[1]
Volcanic Eruption (Geologic Feature)		F	The ejection of volcanic materials (lava, pyroclasts, and volcanic gases) from a vent or fissure in the Earth's crust[1]
Volcanic Threat (Geologic Feature)		G	A vent or fissure in the Earth's crust where volcanic eruption is believed to be imminent[2]
Hydro-Meteorologic (Theme)	Reserved		
Drizzle (Hydro-Meteorologic Feature)		H	Sometimes called *mist*; very small, numerous, and uniformly dispersed water droplets that appear to float while following air currents and that, unlike fog droplets, fall to the ground
Drought (Hydro-Meteorologic Feature)		I	A period of abnormally dry weather sufficiently prolonged for the lack of water to cause a serious hydrologic imbalance across the affected area. Drought severity depends upon the degree of moisture deficiency, the duration, and (to a lesser extent) the size of the affected area. In general, the term should be reserved for periods of moisture deficiency that are relatively extensive in both space and time.

(continues)

Table 8.4.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definition
Flood (Hydro-Meteorologic Feature)		J	A relatively high stream flow that overtops the stream banks in any part of its course, covering land that is not normally under water[1]; a condition that occurs when water overflows the natural or artificial confines of a stream or other body of water, or accumulates by drainage over low-lying areas
Fog (Hydro-Meteorologic Feature)		K	A visible aggregate of minute water droplets suspended in the atmosphere near the earth's surface (According to international definition, fog reduces visibility to less than ⅝ mile (1 km). Fog differs from clouds only in that the base of the fog is at the Earth's surface, while clouds are above the surface.)
Hail (Hydro-Meteorologic Feature)		L	Precipitation in the form of circular or irregular-shaped lumps of ice[3]
Inversion (Hydro-Meteorologic Feature)		M	A departure from the standard decrease or increase with altitude of value of an atmosphere property; almost always used to mean temperature inversion
Rain (Hydro-Meteorologic Feature)		N	Precipitation in the form of liquid water drops that have diameters greater than 0.2 in. (0.5 mm)
Sand Dust Storm (Hydro-Meteorologic Feature)		O	A strong wind carrying sand through the air, the diameter of most of the particles ranging from 0.08 mm to 1 mm; in contrast to a dust storm, sand particles mostly confined to the lowest 2 ft (0.6 m) and rarely rising more than 50 ft (15.2 m) above the ground
Snow (Hydro-Meteorologic Feature)		P	Precipitation composed of white or translucent ice crystals, chiefly of complex branched hexagonal form and often agglomerated into snowflakes
Thunderstorm (Hydro-Meteorologic Feature)		Q	A consequence of atmospheric instability that constitutes an overturning of layers in order to achieve a more stable atmosphere; generally produces lightning, thunder, strong gusts of wind, heavy rain, and sometimes hail

Table 8.4.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definition
Tornado (Hydro-Meteorologic Feature)		R	A violently rotating column, or funnel, of air in contact with the ground and extending from the base of a thunderstorm[3]
Tropical Cyclone (Hydro-Meteorologic Feature)		S	The general term for a cyclone that originates over the tropical oceans
Tsunami (Hydro-Meteorologic Feature)		T	A great sea wave produced by an earthquake or volcanic eruption, characterized by high speed of propagation, long wavelength, long period, and low observable amplitude on the open ocean[1]; can reach enormous dimensions and has sufficient energy to travel across entire oceans; no connection with tides, as can be inferred from the commonly used term *tidal wave*
Infestation (Theme)	Reserved		
Insect Infestation (Infestation Feature)		U	A harassing or troublesome invasion of insects
Microbial Infestation (Infestation Feature)		V	A harassing or troublesome invasion of microbes
Reptile Infestation (Infestation Feature)		W	A harassing or troublesome invasion of reptiles
Rodent Infestation (Infestation Feature)		X	A harassing or troublesome invasion of rodents

Notes:
1. Source: *Dictionary of Geological Terms, Third Ed.*
2. Source: logical extension of *volcanic eruption*
3. Source: Adapted from National Weather Service glossary, www.nws.noaa.gov/glossary.htm

8.5 Infrastructures Symbology.

8.5.1 Infrastructure is the basic facilities, services, and installations needed for the functioning of a community or society, such as transportation and communications systems, water and power lines, and public institutions, including schools, post offices, and prisons.

8.5.2 Use Table 8.5.2 to cross-reference the Infrastructures symbols with their definitions.

Table 8.5.2 Infrastructure Symbology Reference

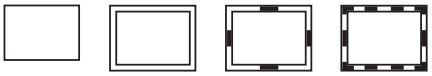
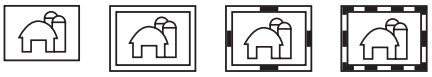
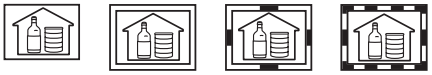
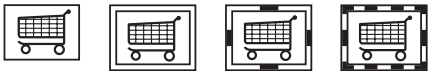
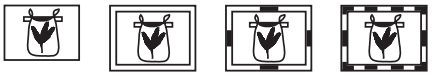
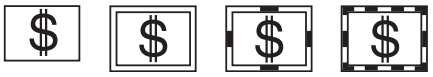
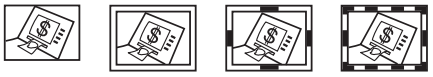
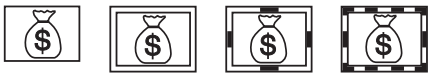
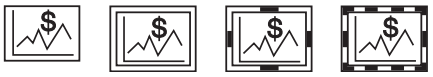
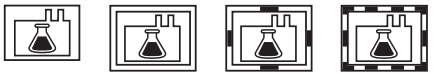
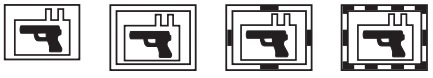
Symbol Types and Terms	Symbols	Keystroke	Definitions
Infrastructures Background Symbol (Background)		!	The background fill shape for the Infrastructures symbol, level 1
Infrastructures Frame Symbol (Frame)		#	The frame shape for the Infrastructures symbol, level 1
Agriculture and Food Infrastructure (Theme)		$	Production and retail services of foodstuffs
Agricultural Laboratory (Agriculture and Food Feature)		%	Facilities used for scientific research in farming
Animal Feedlot (Agriculture and Food Feature)		&	Area designated for feeding livestock
Commercial Food Distribution Center (Agriculture and Food Feature)		(	Facility used for the disbursement of marketable foodstuffs
Farm/Ranch (Agriculture and Food Feature)		)	A piece of land on which crops or animals are raised
Food Production Center (Agriculture and Food Feature)		*	The locus where foodstuffs are produced
Food Retail (Agriculture and Food Feature)		+	Facility where foodstuffs are sold for a profit
Grain Storage (Agriculture and Food Feature)		’	Facility used for the housing of cereal seeds such as corn, wheat, or barley

Table 8.5.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Banking, Finance, and Insurance Infrastructure (Theme)		–	The management of money and other assets and their protection[1]
ATM (Banking, Finance, and Insurance Feature)		·	An unattended machine commonly located at a bank's exterior that dispenses money when a personal coded card is inserted[2]
Bank (Banking, Finance, and Insurance Feature)		/	A business establishment in which money is kept for saving for commercial purposes or is invested, supplied for loans, or exchanged[1]
Bullion Storage (Banking, Finance, and Insurance Feature)		0	A facility used to deposit and warehouse gold or silver bars or ingots[3]
Federal Reserve Bank (Banking, Finance, and Insurance Feature)		1	One of twelve regional banks that monitor and act as depositories for banks in their region[2]
Financial Exchange (Banking, Finance, and Insurance Feature)		2	A marketplace in which shares, options, and futures on stocks, bonds, commodities, and indexes are traded[4]
Financial Service Other (Banking, Finance, and Insurance Feature)		3	A business establishment, other than a bank, for the provision of financial or monetary-related products and services; a location that deals with money management business
Commercial Infrastructure (Theme)		4	The locus of where a business enterprise is undertaken[2]
Chemical Plant (Commercial Infrastructure Feature)		5	An industrial site where chemical substances and/or compounds are produced[2]
Firearm Manufacturer (Commercial Infrastructure Feature)		6	A location where hand weapons of explosive force when shot are mass produced[5]
Firearm Retailer (Commercial Infrastructure Feature)		7	A location where hand weapons of explosive force when shot are sold[6]

(continues)

Table 8.5.2 *Continued*

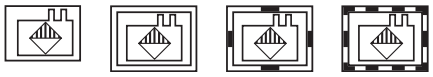
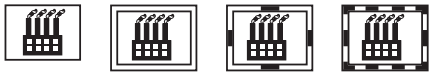
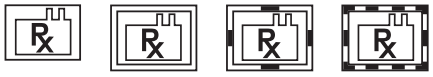
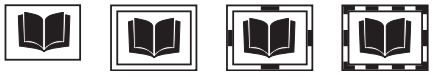
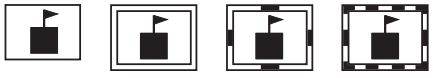
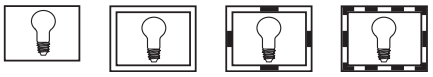
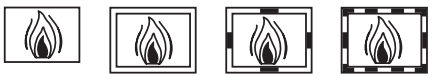
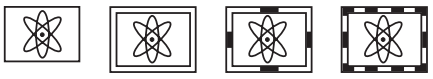
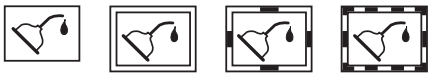
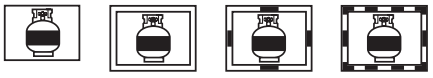
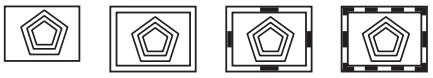
Symbol Types and Terms	Symbols	Keystroke	Definitions
Hazardous Material Production (Commercial Infrastructure Feature)		8	The locus of where hazardous chemicals and/or substances are produced and stored under regulated conditions
Hazardous Material Storage (Commercial Infrastructure Feature)		9	A storing location for a substance or combination of substances that, because of quantity, concentration, or physical, chemical, radiological, explosive, or infectious characteristics, poses a potential danger to humans and/or the environment[7]
Industrial Site (Commercial Infrastructure Feature)		:	The locus of an industrial facility or facilities used for the commercial production and selling of manufactured goods[1]
Landfill (Commercial Infrastructure Feature)		;	An area of land or an excavation in which wastes are placed for permanent disposal, and which is not a land application unit, surface impoundment, injection well, or waste pile[8]
Pharmaceutical Manufacturer (Commercial Infrastructure Feature)		=	The location where medicinal drugs are mass produced[9]
Superfund Site National Priorities List (Commercial Infrastructure Feature)		?	A location in the United States that has been contaminated by hazardous waste and identified by the Environmental Protection Agency as a candidate for clean-up because it poses a risk to human health and/or the environment[10]
Toxic Release Inventory (Commercial Infrastructure Feature)		@	The location according to a publicly available database of chemical and other toxic waste releases[10]
Educational Facilities Infrastructure (Theme)		A	A building or collection of buildings or places in which knowledge is provided[11]
College/University (Educational Facilities Feature)		B	An institution of higher learning offering courses of studies leading to bachelor's, master's, or doctoral degrees[12]
School (Educational Facilities Feature)		C	A facility for the primary and secondary education of children[13]

Table 8.5.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Energy Facilities Infrastructure (Theme)		D	A building or collection of buildings and/or places that generates and provides electrical power
Generation Station (Energy Facilities Feature)		E	A facility equipped with special equipment used for the production of heat or electricity[14]
Natural Gas Facility (Energy Facilities Feature)		F	A location equipped with special equipment used to generate natural gas power
Nuclear Facility (Energy Facilities Feature)		G	A location equipped with special equipment used to generate nuclear power
Petroleum Facility (Energy Facilities Feature)		H	A building or place that provides and distributes petroleum gas
Propane Facility (Energy Facilities Feature)		I	A building or place that provides and distributes propane gas
Government Site Infrastructure (Theme)		J	The locus of where executive, legislative, and/or judicial activities take place in the service of the government
Military Infrastructure (Theme)		K	Refers collectively to the four major branches of the United States' armed forces as associated with armed services as contrasted with civilians
Military Armory (Military Feature)		L	A military structure where arms and ammunition and other military equipment are manufactured and stored, and also where training is given in the use of arms[2]
Military Base (Military Feature)		M	The locus of where military personnel, weapons, and supplies are located and also where attacks and other operations are coordinated and launched

(continues)

Table 8.5.2 *Continued*

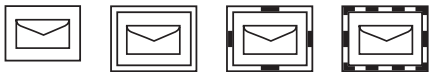
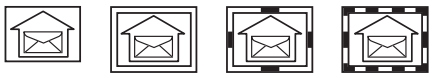
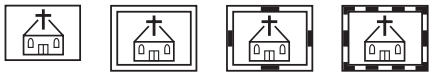
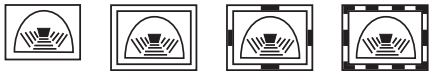
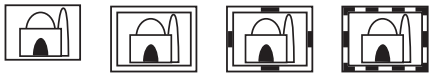
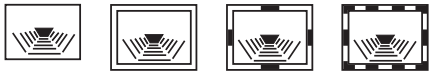
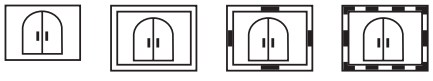
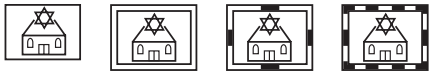
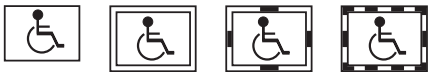
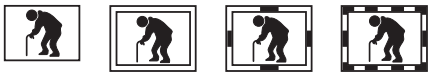
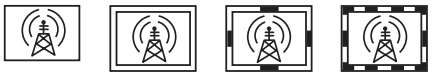
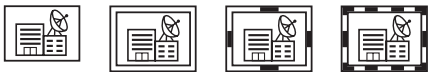
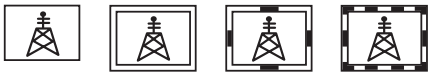
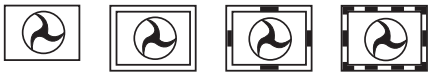
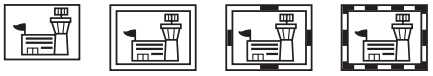
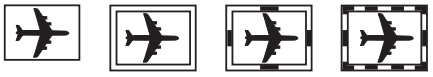
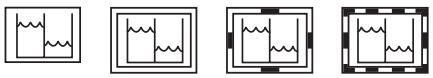
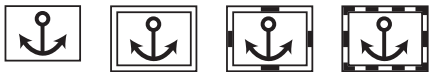
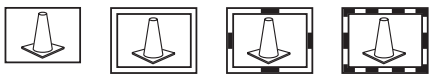
Symbol Types and Terms	Symbols	Keystroke	Definitions
Postal Service Infrastructure (Theme)		N	The system whereby letters and other parcels are transmitted and delivered via the post office
Postal Distribution Center (Postal Feature)		O	A U.S. Postal Service (USPS) facility where mail is sorted and routed
Post Office (Postal Feature)		P	A U.S. Postal Service (USPS) facility that directly delivers postal services to the public
Public Venue Infrastructure (Theme)		Q	An unrestricted place or places and events for a large gathering of people[1]
Church (Public Venues Feature)		R	A building for public and especially Christian worship[13]
Enclosed Facility (Public Venues Feature)		S	A roofed facility with walls
Mosque (Public Venues Feature)		T	A building used for public worship by Muslims[13]
Open Facility (Public Venues Feature)		U	An open air facility with or without walls, for example, stadium or parking lot
Recreational Area (Public Venues Feature)		V	A place dedicated to the refreshment of strength and spirits after work[13]
Religious Institution (Public Venues Feature)		W	Any place of worship where religious services are held or prayers are said by a congregation loyal to a belief
Synagogue (Public Venues Feature)		X	The house of worship and communal center of a Jewish congregation[13]
Temple (Public Venues Feature)		Y	A building for Mormon sacred ordinances[13]

Table 8.5.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Special Needs Infrastructure (Theme)		Z	Of or relating to people who have specific needs, such as those associated with a disability[1]
Adult Day Care (Special Needs Feature)		[	The locus of a nonresidential facility that provides supervision and assisted living services to adults, typically during the daylight hours
Child Day Care (Special Needs Feature)		]	A service involving care for other people's children[1]
Elder Care (Special Needs Feature)		^	The locus of a nursing home or a residential assisted-living facility in which full-time care is provided for the chronically ill, disabled, and elderly
Telecommunications Infrastructure (Theme)		‘	The electronic systems used in transmitting messages, as by telegraph, cable, telephone, radio, television, or computer[1]
Telecommunications Facility (Telecommunications Feature)		a	Any facility housing telecommunications equipment, studios, control rooms, or personnel
Telecommunications Tower (Telecommunications Feature)		b	A structure typically higher than its diameter and high relative to its surroundings to which telecommunications antennae are affixed[13]
Transportation Infrastructure (Theme)		c	Infrastructure, means of transport, and equipment necessary for the movement of passengers and/or goods
Air Traffic Control Facility (Transportation Feature)		d	A facility operated by the appropriate authority to promote the safe, orderly, and expeditious flow of air traffic[8]
Airport (Transportation Feature)		e	An area of land or other hard surface, excluding water, that is used or intended to be used for the landing and takeoff of aircraft and includes its buildings and facilities, if any[8]

(continues)

Table 8.5.2 *Continued*

Symbol Types and Terms	Symbols	Keystroke	Definitions
Bridge (Transportation Feature)		f	A structure built over a gap to connect and maintain transportation flow between both sides of the gap[15]
Bus Station (Transportation Feature)		g	A terminal that serves bus passengers[2]
Ferry Terminal (Transportation Feature)		h	The location of a vehicle-carrying and commuter boat line terminus[1]
Helicopter Landing Site (Transportation Feature)		i	A site within a landing zone that contains one or more points for helicopters to land[16]
Lock (Transportation Feature)		j	An enclosed part of a canal or river equipped with gates for raising or lowering the level of water so that boats and other vessels may pass[15]
Maintenance Facility (Transportation Feature)		k	A location where vehicles, machines, or any other mechanical devices are serviced for inspection or repair[2]
Port (Transportation Feature)		l	A location on a waterway with facilities for loading and unloading ships and other vessels[1]
Rail Station (Transportation Feature)		m	A depot where tracked transport vehicles or trains load and/or unload passengers or goods[17]
Rest Stop (Transportation Feature)		n	A roadside facility at which motorists may purchase refreshments, use restrooms, and/or acquire area information
Ship Anchorage (Transportation Feature)		o	A location suitable for securely anchoring ships and other vessels[1]
Toll Facility (Transportation Feature)		p	A gate or booth at which money is collected before and/or after motorists enter or exit a toll road (turnpike)[15]
Traffic Control Point (Transportation Feature)		q	The location of absolute signals controlled by an operator to regulate and maintain transportation flow