

**INSTRUCTIONS
FOR
BUILDINGS WITH FIRE PROTECTION EQUIPMENT**

FIRE EXTINGUISHERS, SPRINKLER SYSTEMS AND FIRE ALARMS

Attachment #1 Inspection of Fire Extinguishers

Fire Extinguishers must be tested according to the requirements of NFPA 10 and Title 25 (see ***Attachment #1***)

Attachment #2 Sprinkler System Inspection and Testing

Sprinkler systems must be tested according to the requirements of NFPA 13 (see ***Attachment #2***) and **documentation submitted to the fire department.**

Attachment #3 System Design Placard

A system Design Placard must be located on the main sprinkler riser NFPA 13 (***see attachment #3***).

Attachment #4 Alarm System Inspection and Testing

Required fire alarms must be tested at the intervals established by NFPA 72. A record of completion form must be completed anytime changes are made to the original design of the alarm system (***see attachment #4***) and **documentation submitted to the fire department.**

ALL CONSTRUCTION MUST COMPLY WITH ALL CITY ORDINANCES, STATE LAWS AND FEDERAL REGULATIONS THAT APPLY.

ATTACHMENT #1

Title

25-12-3. Installation, inspection, servicing, or testing of portable fire extinguishers.

All fire suppression systems required by the Commissioner's rules and regulations or by other state or local fire safety rules or regulations must be installed, inspected, repaired, recharged, serviced, or tested only by a firm licensed under the provisions of the chapter, except as otherwise provided by this chapter.

Title

25-12-4. Installation, inspection, servicing, or testing of portable fire extinguishers.

All portable fire extinguishers required by the Commissioner's rules and regulations or by other state or local fire safety rules or regulations must be installed, inspected, repaired, recharged, serviced, or tested only by a firm licensed under the provisions of this chapter, except as otherwise provided by this chapter.

ATTACHMENT #2

A.18.1 Impairments. Before shutting off a section of the fire service system to make sprinkler system connections, notify the authority having jurisdiction, plan the work carefully, and assemble all materials to enable completion in the shortest possible time. Work started on connections should be completed without interruption, and protection should be restored as promptly as possible. During the impairment, provide emergency hose lines and extinguishers and maintain extra watch service in the areas affected.

When changes involve shutting off water from any considerable number of sprinklers for more than a few hours, temporary water supply connections should be made to sprinkler systems so that reasonable protection can be maintained. In adding to old systems or revamping them, protection should be restored each night so far as possible. The members of the private fire brigade as well as public fire departments should be notified as to conditions.

Maintenance Schedule. The items shown in Table A.18.1 should be checked on a routine basis.

Table A.18.1 Maintenance Schedule

Parts	Activity	Frequency
Flushing piping	Test	5 years
Fire department connections	Inspection	Monthly
Control valves	Inspection	Weekly — sealed
	Inspection	Monthly — locked
	Inspection	Monthly — tamper switch
	Maintenance	Yearly
Main drain	Flow test	Quarterly — annual
Open sprinklers	Test	Annually
Pressure gauge	Calibration test	
Sprinklers	Test	50 years
Sprinklers — high temperature	Test	5 years
Sprinklers — residential	Test	20 years
Waterflow alarms	Test	Quarterly
Preaction/deluge detection system	Test	Semiannually
Preaction/deluge systems	Test	Annually
Antifreeze solution	Test	Annually
Cold weather valves	Open and close valves	Fall, close; spring, open
Dry/preaction/deluge systems		
Air pressure and water pressure	Inspection	Weekly
Enclosure	Inspection	Daily — cold weather
Priming water level	Inspection	Quarterly
Low-point drains	Test	Fall
Dry pipe valves	Trip test	Annually — spring
Dry pipe valves	Full flow trip	3 years — spring
Quick-opening devices	Test	Semiannually

ATTACHMENT #3

A.14.3.2(a)

Hydraulic Calculations

For

Name _____

Street _____

City _____

Contract No. _____

Date _____

Design

Occupancy Classification _____

Density _____ gpm/ft²

Area of application _____ ft

Coverage per sprinkler _____ ft

Special sprinkler _____

No. of sprinklers calculated _____

In-rack demand _____

Hose streams _____

Total water required _____ gpm
Including hose streams

Name of contractor _____

Name of designer _____

Address _____

Authority having jurisdiction _____

ATTACHMENT # 4

4.5 Documentation.

4.5.1 Approval and Acceptance.

4.5.1.1* The authority having jurisdiction shall be notified prior to installation or alteration of equipment or wiring. At the authority having jurisdiction's request, complete information regarding the system or system alterations, including specifications, shop drawings, battery calculations, and notification appliance circuit voltage drop calculations shall be submitted for approval.

4.5.1.2 Before requesting final approval of the installation, if required by the authority having jurisdiction, the installing contractor shall furnish a written statement stating that the system has been installed in accordance with approved plans and tested in accordance with the manufacturer's specifications and the appropriate NFPA requirements.

4.5.1.3* The record of completion form, Figure 4.5.2.1, shall be permitted to be a part of the written statement required in 4.5.1.2. When more than one contractor has been responsible for the installation, each contractor shall complete the portions of the form for which that contractor had responsibility.

4.5.1.4 The record of completion form, Figure 4.5.2.1, shall be permitted to be a part of the documents that support the requirements of 4.5.2.4.

4.5.2 Completion Documents.

4.5.2.1* Preparation. The preparation of a record of completion, Figure 4.5.2.1, shall be the responsibility of the qualified and experienced person described in 4.3.3 and shall be in accordance with 4.5.2.1(A) and 4.5.2.1(B).

ATTACHMENT #4

CONTINUED

FIRE ALARM SYSTEM RECORD OF COMPLETION

Name of protected property: _____
Address: _____
Representative of protected property (name/phone): _____
Authority having jurisdiction: _____
Address/telephone number: _____

	<i>Organization name/phone</i>	<i>Representative name/phone</i>
Installer	_____	_____
Supplier	_____	_____
Service organization	_____	_____
Location of record (as-built) drawings:	_____	
Location of operation and maintenance manuals:	_____	
Location of test reports:	_____	
A contract for test and inspection in accordance with NFPA standard(s)	_____	
Contract No(s):	Effective date:	Expiration date:
_____	_____	_____

System Software

- (a) Operating system (executive) software revision level(s): _____
- (b) Site-specific software revision date: _____
- (c) Revision completed by: _____
(name) (firm)

1. Type(s) of System or Service

_____ NFPA 72, Chapter 6—Local
If alarm is transmitted to location(s) off premises, list where received: _____

_____ NFPA 72, Chapter 8—Remote Station
Telephone numbers of the organization receiving alarm:
Alarm: _____
Supervisory: _____
Trouble: _____
If alarms are retransmitted to public fire service communications centers or others, indicate location and telephone numbers of the organization receiving alarm: _____

Indicate how alarm is retransmitted: _____

_____ NFPA 72, Chapter 8—Proprietary
Telephone numbers of the organization receiving alarm:
Alarm: _____
Supervisory: _____
Trouble: _____
If alarms are retransmitted to public fire service communications centers or others, indicate location and telephone numbers of the organization receiving alarm: _____

Indicate how alarm is retransmitted: _____

_____ NFPA 72, Chapter 8—Central Station
Prime contractor: _____
Central station location: _____

ATTACHMENT #4

CONTIUNUED

Means of transmission of signals from the protected premises to the central station:

McCulloh Multiplex One-way radio
 Digital alarm communicator Two-way radio Others

Means of transmission of alarms to the public fire service communications center:

(a) _____

(b) _____

System location: _____

NFPA 72, Chapter 9—Auxiliary

Indicate type of connection: Local energy Shunt Parallel telephone

Location of telephone number for receipt of signals: _____

2. Record of System Installation

(fill out after installation is complete and wiring is checked for opens, shorts, ground faults, and improper branching, but prior to conducting acceptance tests.)

This system has been installed in accordance with the NFPA standards as shown below, was inspected by on _____, includes the devices shown in 5 and 6, and has been in service since _____.

NFPA 72, Chapters 1 2 3 4 5 6 7 8 9 10 11 (circle all that apply)

NFPA 70, National Electrical Code, Article 670

Manufacturer's instructions

Other (specify): _____

Signed: _____ Date: _____

Organization: _____

3. Record of System Operation

Documentation in accordance with Inspection Testing Form, Figure 10.6.2.3, is attached _____.

All operational features and functions of this system were tested by _____ date _____ and found to be operating properly in accordance with the requirements of:

NFPA 72, Chapters 1 2 3 4 5 6 7 8 9 10 11 (circle all that apply)

NFPA 70, National Electrical Code, Article 760

Manufacturer's instructions

Other (specify): _____

Signed: _____ Date: _____

Organization: _____

4. Signaling Line Circuits

Quantity and class of signaling line circuits connected to system (see NFPA 72, Table 6.6.1):

Quantity: _____ Style: _____ Class: _____

ATTACHMENT #4

CONTIUNUED

5. Alarm-Initiating Devices and Circuits

Quantity and class of initiating device circuits (see NFPA 72, Table 6.5):

Quantity: _____ Style: _____ Class: _____

MANUAL

(a) Manual stations Noncoded _____ Transmitters _____ Coded _____ Addressable _____

(b) Combination manual fire alarm and guard's tour coded stations _____

AUTOMATIC

Coverage: Complete _____ Partial _____

Selective _____ Nonrequired _____

(a) Smoke detectors _____ Ion _____ Photo _____ Addressable _____

(b) Duct detectors _____ Ion _____ Photo _____ Addressable _____

(c) Heat detectors _____ FT _____ RR _____ FT/RR _____

(d) Sprinkler waterflow indicators: Transmitters _____ Noncoded _____ Coded _____ Addressable _____

(e) The alarm verification feature is disabled _____ or enabled _____, changed from _____ seconds to _____ seconds.

(f) Other (list): _____

6. Supervisory Signal-Initiating Devices and Circuits (use blanks to indicate quantity of devices)

GUARD'S TOUR

(a) _____ Coded stations

(b) _____ Noncoded stations

(c) _____ Compulsory guard's tour system comprised of _____ transmitter stations and intermediate stations

Note: Combination devices are recorded under 5(b), Manual, and 6(a), Guard's Tour.

SPRINKLER SYSTEM

Check if provided

(a) _____ Valve supervisory switches

(b) _____ Building temperature points

(c) _____ Site water temperature points

(d) _____ Site water supply level points

Electric fire pump:

(e) _____ Fire pump power

(f) _____ Fire pump running

(g) _____ Phase reversal

Engine-driven fire pump:

(h) _____ Selector in auto position

(i) _____ Engine or control panel trouble

(j) _____ Fire pump running

ENGINE-DRIVEN GENERATOR:

(a) _____ Selector in auto position

(b) _____ Control panel trouble

(c) _____ Transfer switches

(d) _____ Engine running

Other supervisory function(s) (specify): _____

ATTACHMENT #4

CONTIUNUED

7. Annunciator(s)

Number: _____ Type: _____ Location: _____

8. Alarm Notification Appliances and Circuits

NFPA 72, Chapter 6—Emergency Voice/Alarm Service

Quantity of voice/alarm channels: _____ Single: _____ Multiple: _____

Quantity of speakers installed: _____ Quantity of speaker zones: _____

Quantity of telephones or telephone jacks included in system: _____

Quantity and the class of notification appliance circuits connected to system (see NFPA 72, Table 6.7):

Quantity: _____ Style: _____ Class: _____

Types and quantities of notification appliances installed:

(a) Bells _____ With visible _____

(b) Speakers _____ With visible _____

(c) Horns _____ With visible _____

(d) Chimes _____ With visible _____

(e) Other: _____ With visible _____

(f) Visible appliances without audible: _____

9. System Power Supplies

(a) Fire Alarm Control Panel: Nominal voltage: _____ Current rating: _____

Type: _____ Current rating: _____

Location: _____

(b) Secondary (standby):

Storage battery: _____ Amp-hour rating: _____

Calculated capacity to drive system, in hours: _____

Engine-driven generator dedicated to fire alarm system: _____

Location of fuel storage: _____

(c) Emergency system used as backup to primary power supply: _____

Emergency system described in NFPA 70, Article 700: _____

10. Comments

Frequency of routine test and inspections, if other than in accordance with the referenced NFPA standard(s): _____

System deviations from the referenced NFPA standard(s) are: _____

(signed) for installation contractor/supplier

(title)

(date)

(signed) for alarm service company

(title)

(date)

(signed) for central station

(title)

(date)

Upon completion of the system(s) satisfactory test(s) witnessed (if required by the authority having jurisdiction):

(signed) representatives of the authority having jurisdiction

(title)

(date)

ATTACHMENT #4
CONTINUED

FIGURE 4.5.2.1 Continued

(A) Parts 1, 2, and 4 through 10 shall be completed after the system is installed and the installation wiring has been checked. Part 3 shall be completed after the operational acceptance tests have been completed.

(B) A preliminary copy of the record of completion shall be given to the system owner and, if requested, to other authorities having jurisdiction after completion of the installation wiring tests. A final copy shall be provided after completion of the operational acceptance tests.

4.5.2.2 Revision. All fire alarm systems that are modified after the initial installation shall have the original record of completion revised to show all changes from the original information and shall include a revision date.

4.5.2.3 Documentation Required. Every system shall include the following documentation, which shall be delivered to the owner or the owner's representative upon final acceptance of the system:

- (1)* An owner's manual and installation instructions covering all system equipment
- (2) Record drawings
- (3) For software-based systems, a record copy of the site-specific software

4.5.2.4* Verification of Compliant Installation. Where required, compliance of the completed installation with the requirements of this standard, as implemented via the referring code(s), specifications, and/or other criteria applicable to the specific installation, shall be certified by a qualified and impartial third-party organization acceptable to the authority having jurisdiction.

4.5.2.4.1 At a minimum, the verification shall ensure that the installed system includes all required components and functions, that those components and functions are installed and operate as required, that the system has been 100-percent acceptance tested in accordance with Chapter 10, and that all required documentation has been provided to the system owner. For supervising station systems, the verification shall also ascertain proper arrangement, transmission, and receipt of all signals required to be transmitted off-premises.

Exception: Where the installation is an extension, modification, or reconfiguration of an existing system, the verification shall be required for the new work only and reacceptance testing in accordance with Chapter 10 shall be acceptable

4.5.2.4.2 Verification shall include confirmation that any required corrective actions have been completed.

ATTACHMENT #4

CONTINUED

4.5.3 Records.

4.5.3.1 A complete, unalterable record of the tests and operations of each system shall be kept until the next test and for 1 year thereafter.

4.5.3.2 The record shall be available for examination and, if required, reported to the authority having jurisdiction. Archiving of records by any means shall be permitted if hard copies of the records can be provided promptly when requested.

4.5.3.2 If off-premises monitoring is provided, records of all signals, tests, and operations recorded at the supervising station shall be maintained for not less than 1 year.

4.6* Impairments..

4.6.1 The system owner or their designated representative shall be notified when a fire alarm system or part thereof is impaired. Impairments to systems shall include out-of-service events.

4.6.2 A record shall be maintained by the system owner or designated representative for a period of 1 year from the date the impairment is corrected.

4.6.3* Where required, mitigating measures acceptable to the authority having jurisdiction shall be implemented for the period that the system is impaired.

4.6.4 The system owner or owner's designated representative shall be notified when an impairment period is completed or discontinued.