901.6 Inspection, testing and maintenance.

Fire detection, alarm and extinguishing systems shall be maintained in an operative condition at all times, and shall be replaced or repaired where defective.

Nonrequired fire protection systems and equipment shall be inspected, tested and maintained or removed.

Table 901.6.1

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NFPA 25
Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems
2008 Edition

NFPA 72
National Fire Alarm Code
Fire Alarm System
2007 Edition

§F901.7
Systems out of service
Where a required fire protection system is out of service, the fire department and the code enforcement official shall be notified immediately and, where required by the code enforcement official, .......

Fire Code of New York State
Does not discuss a time period (i.e. after 4 hours) for implementing fire watch or other protective measures. Instead requires fire code official to make decision on what is required (i.e. fire watch) immediately.

FIRE WATCH REQUIREMENTS
Office Building
The protection afforded by a required fire protection system must not be diminished in any existing building except for the purpose of conducting tests, maintenance or repairs. The length of service interruptions must be kept to a minimum. The fire department and the fire code official must be notified of any service interruptions.

They must carefully evaluate the continued operation or occupancy of buildings and structures where protection is interrupted. Whenever possible, all unaffected portions of the system should be kept in service. Until protection is restored, hazardous processes or operations should be suspended and alternative special protection should be considered in addition to an approved fire watch.

The code text only addresses when a required system is placed out of service. However, if a system is in place, even though it is not required by the code or the IBC, it would be an appropriate courtesy to the fire department to inform it of the discontinuance or temporarily taking out of service of any fire protection system.

If the nonrequired system is to be placed out of service for an extended period of time, the fire code official has the authority to address the condition under Section 901.4.4 and require that the system be either placed back into operation or removed so as not to create a false impression of protection.

Where utilized, fire watches shall be provided with at least one approved means for notification of the fire department and their only duty shall be to perform constant patrols of the protected premises and keep watch for fires.

The code enforcement official is permitted to waive the requirement for evacuation or a fire watch where there is not a substantial risk to life safety or where alternatives to maintain an equivalent level of safety are prescribed.
§F901.7.1 Impairment coordinator

The building owner shall assign an impairment coordinator to comply with the requirements of this section.

In the absence of a specific designee, the owner shall be considered the impairment coordinator.

Impairment Coordinator

Impairment Coordinator is the person who manages the impairment while system work is being performed.

NFPA 25

Chapter 4 General Requirements

- 4.1 Responsibility of the Property Owner or Occupant.
- 4.1.3 Notification of System Shutdown. The property owner or occupant shall notify the authority having jurisdiction, the fire department, if required, and the alarm-receiving facility before testing or shutting down a system or its supply.

NFPA 25

- 4.1.3.1 The notification of system shutdown shall include the purpose for the shutdown, the system or component involved, and the estimated time of shutdown.
- 4.1.3.2 The authority having jurisdiction, the fire department, and the alarm-receiving facility shall be notified when the system, supply, or component is returned to service.

NFPA 25

- 4.1.4* Corrections and Repairs. The property owner or occupant shall promptly correct or repair deficiencies, damaged parts, or impairments found while performing the inspection, test, and maintenance requirements of this standard.
- 4.1.4.1* Corrections and repairs shall be performed by qualified maintenance personnel or a qualified contractor.

qualified maintenance personnel or a qualified contractor.

Qualified

Having knowledge of the installation, construction, or operation of apparatus and the hazards involved.
NFPA 25

15.4 Impaired Equipment.

15.4.1 The impaired equipment shall be considered to be the water-based fire protection system, or part thereof, that is removed from service.

15.4.2 The impaired equipment shall include, but shall not be limited to, the following:

1. Sprinkler systems
2. Standpipe systems
3. Fire hose systems
4. Underground fire service mains
5. Fire pumps
6. Water storage tanks
7. Water spray fixed systems
8. Foam-water systems
9. Fire service control valves

NFPA 25

15.5.2 Before authorization is given, the impairment coordinator shall be responsible for verifying that the following procedures have been implemented:

1. The extent and expected duration of the impairment have been determined.
2. The areas or buildings involved have been inspected and the increased risks determined.

3. Recommendations have been submitted to management or the property owner/manager. Where a required fire protection system is out of service for more than 10 hours in a 24-hour period, the impairment coordinator shall arrange for one of the following:

(a) Evacuation of the building or portion of the building affected by the system out of service
(b)* An approved fire watch
(c)* Establishment of a temporary water supply
(d)* Establishment and implementation of an approved program to eliminate potential ignition sources and limit the amount of fuel available to the fire.

NFPA 72

National Fire Alarm Code
2007 edition
NFPA 72

Code Section 4.6.1 requires the contractor to notify the system owner or representative when a fire alarm is impaired. And impairments include out-of-service events. Another important code requirement that contractors must address with owners is that an impairment record must be maintained by the system owner or their designated representative for a period of one year from the correction date.

The Life Safety Code
Section 9.6.1.6

“Where a required fire alarm system is out of service for more than four hours in a 24-hour period, the authority having jurisdiction [AHJ] shall be notified, and the building shall be evacuated or an approved fire watch shall be provided for all parties left unprotected by the shutdown until the fire alarm system has been returned to service.”

§F901.7.2 Tag required

A tag shall be used to indicate that a system, or portion thereof, has been removed from service.

§F901.7.3 Placement of tag.

The tag shall be posted at each fire department connection, system control valve, fire alarm control unit, fire alarm annunciator and fire command center, indicating which system, or part thereof, has been removed from service.

The code enforcement official shall specify where the tag is to be placed.
§F901.7.3 Placement of tag.
The tag shall be posted at each fire department connection, system control valve, fire alarm control unit, fire alarm annunciator and fire command center, indicating which system, or part thereof, has been removed from service. The code enforcement official shall specify where the tag is to be placed.
§F901.7.3 Placement of tag.

§F901.7.4 Preplanned impairment programs

Preplanned impairments shall be authorized by the impairment coordinator.

Before authorization is given, a designated individual shall be responsible for verifying that all of the following procedures have been implemented:

1. The extent and expected duration of the impairment have been determined.
2. The areas or buildings involved have been inspected and the increased risks determined.
3. Recommendations have been submitted to management or building owner/manager.
4. The fire department has been notified.

Planned impairment

When a fire protection system is out of service due to work that has been planned in advance, such as revisions to the water supply or sprinkler piping system.

§F901.7.4 Preplanned impairment programs

5. The insurance carrier, the alarm company, building owner/manager, and other authorities having jurisdiction have been notified.
6. The supervisors in the areas to be affected have been notified.
7. A tag impairment system has been implemented.
8. Necessary tools and materials have been assembled on the impairment site.

§F901.7.5 Emergency impairments

When unplanned impairments occur, appropriate emergency action shall be taken to minimize potential injury and damage.

The impairment coordinator shall implement the steps outlined in §F901.7.4.

When unplanned impairments occur, appropriate emergency action shall be taken to minimize potential injury and damage.

The impairment coordinator shall implement the steps outlined in §F901.7.4.
An emergency impairment is a condition in which the water-based fire protection system or a portion thereof is out of service due to an unexpected occurrence. Such an impairment may also be necessary following a successful system operation during a fire.

Following a fire, sprinklers that have operated must be replaced and the system returned to service. The replacement of sprinklers illustrates the importance of the sprinkler cabinet inspections required by Chapter 5, since the impairment time can be substantially reduced if replacement sprinklers are on site.

§F901.7.6
Restoring systems to service

When impaired equipment is restored to normal working order, the impairment coordinator shall verify that all of the following procedures have been implemented:

1. Necessary inspections and tests have been conducted to verify that affected systems are operational.
2. Supervisors have been advised that protection is restored.
3. The fire department has been advised that protection is restored.
4. The building owner/manager, insurance carrier, alarm company and other involved parties have been advised that protection is restored.
5. The impairment tag has been removed.

§F901.7.6
Restoring systems to service

1. Necessary inspections and tests have been conducted to verify that affected systems are operational.
2. Supervisors have been advised that protection is restored.

INSPECTION
Passed ✅
Failed ☑

§F901.7.6
Restoring systems to service

2. Supervisors have been advised that protection is restored.
§F901.7.6
Restoring systems to service

3. The fire department has been advised that protection is restored.

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4. The building owner/manager, insurance carrier, alarm company and other involved parties have been advised that protection is restored.

§F901.7.6
Restoring systems to service

5. The impairment tag has been removed.

NFPA 72

Section 10.2.1.2.2 of the code also requires system defects and malfunctions be corrected. Although that may seem like a nonsensical requirement, some owners will put off repairs until a later time, often until the defect or malfunction has been reported a number of times. It is extremely important that contractors document any defects or malfunctions found and put their findings in writing to the owner.

NFPA 72

In fact, Section 10.2.1.2.3 requires: “If a defect or malfunction is not corrected at the conclusion of system inspection, testing or maintenance, the system owner or the owner’s designated representative shall be informed of the impairment in writing within 24 hours.” This requirement is as much for the protection of the contractor as it is for the owner.