



References (s): 06-IFC/907, 06-101/9.6

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A fire alarm system is a specialized system and requires knowledge and experience to properly design, install, inspect, and maintain. Only those individuals properly trained, educated and experienced shall work on these systems.

New Systems or Modifications

Before fire alarm systems in certain facilities can be installed or modified, plans must be submitted to the OSFM for approval. These facilities include:

- Educational: USD's, private schools, preschools, daycare and childcare centers, and Board of Regents universities.
- Healthcare: hospitals, adult care facilities, nursing homes, ambulatory care centers, and residential board and care facilities.
- Correction and detention

The submitted plans shall comply with standards set forth by the OSFM and shall include a copy of equipment cut sheets and floor diagrams. These should show the placement of detectors, fire alarm control panels, pull stations, annunciation devices, and other components. Specification sheets and any other information relevant to the fire alarm or smoke detection system should also be included.

The plans must be stamped by a physical engineer or a Kansas-licensed engineer with knowledge in fire alarm systems.

The design, installation, modification, inspection, and maintenance of fire alarm systems shall comply with all requirements of the applicable nationally promulgated codes and standards, regardless of whether or not the OSFM required a plan or whether or not plan approval was given by any jurisdiction, including the OSFM.

Existing Systems

Existing systems shall be maintained according to the applicable codes and standards. The edition of the standard may vary by occupancy type as shown below:

- Federal Healthcare: NFPA 72, 1999
- All other occupancies: NFPA 72, 2007

It is extremely important for facility owners and operators to be knowledgeable in their specific fire alarm system as well as ensuring they are utilizing good qualified individuals to work on and maintain the system. At a minimum, the facility owner and operator must be able to recognize when the system is impaired, how to perform a basic reset, and when to call for service.

FIRE FACT 060 – FIRE ALARM SYSTEM

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Existing Systems – Cont.

Here is an abbreviated list of fire alarm system requirements. You will need to obtain a copy of NFPA 72 (appropriate edition) to see the complete list of inspection, testing, and maintenance requirements.

Weekly

Visual inspection of panel for trouble signal

All staff should be trained to recognize alarm trouble signals as part of a continual monitoring

Quarterly

Visual inspection of all sprinkler devices connected: water flow and tamper valve switches

Semiannual

Test of sprinkler waterflow switches *

Test of sprinkler valve tamper switches *

Visual inspection of lead-acid battery

Test batteries

Annual

Important: The annual inspection documentation must meet the minimum documentation requirements as outlined in NFPA 72 (4 page form).

Test and visual inspection of panel

Test panel battery charger

Battery discharge test

Test and visual inspection of horns, strobes, chimes, bells, etc

Test and visual inspection of smoke, heat, and duct detectors

Test and visual inspection of electromechanical releasing devices

Test and visual inspection of voice evacuation equipment

Other

Replace panel batteries every 5 yrs or per manufacturer recommendations

Sensitivity testing of smoke detectors **

Recommend detector replacement after 10 yrs

* This may already be done as part of the inspection, testing, and maintenance requirements of the sprinkler system

** See NFPA code for timeframe requirements

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Inspection and Testing

Date	Time
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Service Organization	Property Name
Name	Name
Address	Address
Representative	Owner Contact
License No	Telephone
Telephone	

Monitoring Entity	Approving Agency
Contact	Contact
Telephone	Telephone
Monitoring Acct No.	

Type Transmission	Service
<input type="checkbox"/> McCulloh	<input type="checkbox"/> Reverse Priority
<input type="checkbox"/> Multiplex	<input type="checkbox"/> RF
<input type="checkbox"/> Digital	<input type="checkbox"/> Other:
Specify:	Specify:
<input type="checkbox"/> Weekly	<input type="checkbox"/> Semiannual
<input type="checkbox"/> Monthly	<input type="checkbox"/> Annual
<input type="checkbox"/> Quarterly	<input type="checkbox"/> Other:

Conrol Unit Manufacturer	Model No.
Circuit styles	
Number of circuits	
Software Rev	
Last date system service	
Last date system revised	

Alarm- Initiating Devices and Circuit Information

Quantity	Circuit Style	
		Manual Fire Alarm Box
		Ion Detector
		Photo Detector
		Duct Detector
		Heat Detector
		Waterflow Switches
		Supervisory Switches
		Other:

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Alarm Notification Appliances and Circuit Information

Quantity	Circuit Style
	Bells
	Horns
	Chimes
	Strobes
	Speakers
	Other:
No. of alarm notification appliance circuits	
Are circuits monitored for integrity? Yes No	

Supervisory Signal-Initiating Devices and Circuit Information

Quantity	Circuit Style
	Building Temp
	Site Water Temp
	Site Water Level
	Fire Pump Power
	Fire Pump Running
	Fire Pump Auto Position
	Fire Pump or Pump Controller Trouble
	Fire Pump Running
	Generator in Auto Position
	Generator in Controller Position
	Switch Transfer
	Generator Engine Running
	Other:

Signaling Line Circuits

Quantity and style (see NFPA 72, Table 3-6) of signaling circuits connected to system	
Quantity:	Style:

System Power Supplies

a. Primary (Main)	Nominal Voltage	Amps:
Overcurrent Protection	Type	Amps:
Location of Primary Supply Panelboard		
Disconnecting Means Location		
b. Secondary (Standby)		
Storage Battery:	Amp Hr Rating	
Calculated capacity to operate system, in hours		
Engine driven generator dedicated to fire alarm system		
Location of fuel storage		

Battery Type

<input type="checkbox"/> Dry Cell	<input type="checkbox"/> Nickel-Cadmium	<input type="checkbox"/> Sealed lead-acid	<input type="checkbox"/> Lead-acid	<input type="checkbox"/> Other:
c. Emergency or standby system used as a backup to primary power supply, instead of using secondary power supply				
Emergency system described in NFPA 70				
Legally required standby described in NFPA 70				
Optional standby system described in NFPA 70				

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Prior to Any Testing

Notifications are made	Who	Time
Monitoring Entity	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Building Occupants	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Building Management	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Other	<input type="checkbox"/> Yes <input type="checkbox"/> No	
AHJ (notified of any impairments)	<input type="checkbox"/> Yes <input type="checkbox"/> No	

System Tests and Inspections

Type	Comments
Control Unit	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Interface Eq.	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Lamps/LED	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Fuses	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Primary Power Supply	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Trouble Signals	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Disconnect Switch	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Ground-Fault Monitoring	<input type="checkbox"/> Visible <input type="checkbox"/> Functional

Secondary Power

Battery Condition	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Load Voltage	<input type="checkbox"/> Functional
Discharge Test	<input type="checkbox"/> Functional
Charger Test	<input type="checkbox"/> Functional
Specific Gravity	<input type="checkbox"/> Functional
Transient Suppressors	<input type="checkbox"/> Visible
Remote Annunciators	<input type="checkbox"/> Visible <input type="checkbox"/> Functional

Notification Appliances

Audible	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Visual	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Speakers	<input type="checkbox"/> Visible <input type="checkbox"/> Functional
Voice Clarity	<input type="checkbox"/> Functional

Initiating and Supervisory Device Test and Inspections

Loc. & S/N	Device Type	Visual	Functional	Factory Setting	Meas. Setting	Pass	Fail
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>

Comments:

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Emergency Communication Equipment			Comments
Phone Set	<input type="checkbox"/> Visual	<input type="checkbox"/> Functional	
Phone Jacks	<input type="checkbox"/> Visual	<input type="checkbox"/> Functional	
Off-Hook Indicator	<input type="checkbox"/> Visual	<input type="checkbox"/> Functional	
Amplifier(s)	<input type="checkbox"/> Visual	<input type="checkbox"/> Functional	
Tone Generator(s)	<input type="checkbox"/> Visual	<input type="checkbox"/> Functional	
Call-in Signal	<input type="checkbox"/> Visual	<input type="checkbox"/> Functional	
System Performance	<input type="checkbox"/> Visual	<input type="checkbox"/> Functional	

Interface Equipment

Specify:	<input type="checkbox"/> Visual	<input type="checkbox"/> Device Operation	<input type="checkbox"/> Simulated Operation
Specify:	<input type="checkbox"/> Visual	<input type="checkbox"/> Device Operation	<input type="checkbox"/> Simulated Operation
Specify:	<input type="checkbox"/> Visual	<input type="checkbox"/> Device Operation	<input type="checkbox"/> Simulated Operation

Special Hazard Systems

Specify:	<input type="checkbox"/> Visual	<input type="checkbox"/> Device Operation	<input type="checkbox"/> Simulated Operation
Specify:	<input type="checkbox"/> Visual	<input type="checkbox"/> Device Operation	<input type="checkbox"/> Simulated Operation
Specify:	<input type="checkbox"/> Visual	<input type="checkbox"/> Device Operation	<input type="checkbox"/> Simulated Operation

Special Procedures:

Comments:

Supervising Station Monitoring	Time	Comments
Alarm Signal <input type="checkbox"/> Yes <input type="checkbox"/> No		
Alarm Restoration <input type="checkbox"/> Yes <input type="checkbox"/> No		
Trouble Signal <input type="checkbox"/> Yes <input type="checkbox"/> No		
Supervisory Signal <input type="checkbox"/> Yes <input type="checkbox"/> No		
Supervisory Restoration <input type="checkbox"/> Yes <input type="checkbox"/> No		

Notification that Testing is Complete	Who	Time
Building Management <input type="checkbox"/> Yes <input type="checkbox"/> No		
Monitoring Agency <input type="checkbox"/> Yes <input type="checkbox"/> No		
Building Occupants <input type="checkbox"/> Yes <input type="checkbox"/> No		
Other <input type="checkbox"/> Yes <input type="checkbox"/> No		

The following did not operate correctly:

System restored Date: _____ Time: _____

This testing was performed in accordance with applicable NFPA standards

Name of Inspector _____

Signature _____

Name of owner or representative _____

Date _____ Time _____

Signature _____