
FIRE ALARM ACCEPTANCE TEST PROCEDURES





Introduction

This manual is designed to provide you, the contractor, owner or design professional with a step-by-step guide to our process, beginning with plan submission and ending with the final approval signature.

Additional copies of this publication may be obtained from:

City of Columbus
Department of Building and Zoning Services
111 N. Front St.
Columbus, Ohio 43215

On-line at:
www.bzs.columbus.gov

Table of Contents

Step 1. Fire Alarm Contractor Registration and Plan Submission	4
Step 2. System Installation Phase	5
Step 3. System Completion Phase	8
Step 4. Specialty Systems	9
▪ Fire Pumps	
▪ Elevators	
Step 5. Final Fire Alarm Acceptance Test	11
▪ Manual Fire Alarm Systems	
▪ Smoke Detection Systems	
▪ Elevator Recall Activation	
▪ Smoke detector for air distribution systems	
▪ Smoke Dampers or Combination Fire/Smoke Dampers	
▪ Fire Suppression Systems	
▪ Special Locking, egress control & electric strike devices	
▪ Emergency Egress Requirements	
▪ Smoke Control Systems	
▪ Dry Chemical, Wet Chemical, Clean-Agent Systems & Carbon Dioxide Systems	
▪ Fire Shutters/Rolling Fire Door Activation	
▪ Fire Alarm System Monitoring	
Step 6. Final Approval	18



STEP 1: Fire Alarm Contractor Registration and Plan Submission

All fire alarm contractors must be licensed with the state Fire Marshal's Office and registered with the City of Columbus Department of Building and Zoning Services (BZS). Instructions for registration and plan submittal for Fire Alarm Permits are available at the BZS Customer Service counter and on-line at: www.bzs.columbus.gov – Documents Library



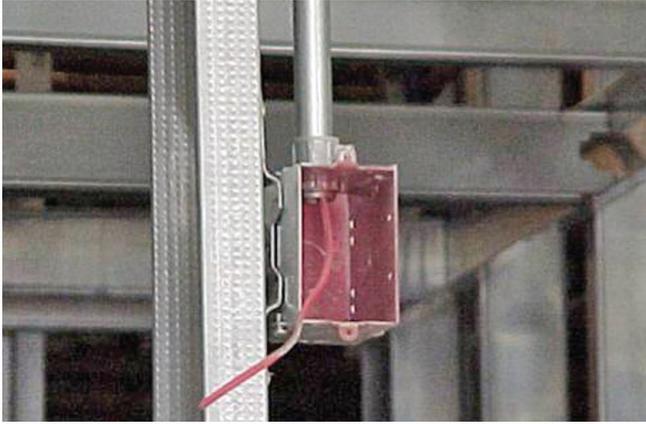
For non-Fire Division related questions call:
Information Line (614) 645-7433

To contact by email:

Fire Alarm structuralinfo@columbus.gov
Electrical electricalinfo@columbus.gov
HVAC Mechanical mechanicalinfo@columbus.gov

For Fire Division related questions call:
Fire Prevention Bureau (614) 645-7641

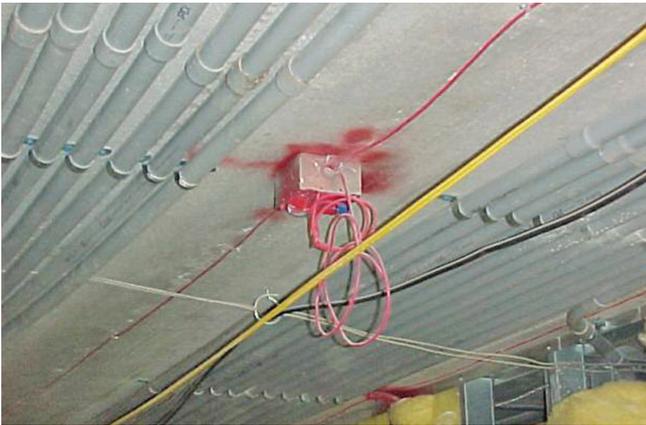




STEP 2: System Installation Phase

As the fire alarm system is being installed, specific inspections must be performed.

The following information will outline these procedures.





A. At the stage the contractor has installed the alarm device boxes and wiring in the rough walls (e.g. pull stations, horns, strobes, etc.) it will be necessary that these installations be inspected by the Electrical Inspector.

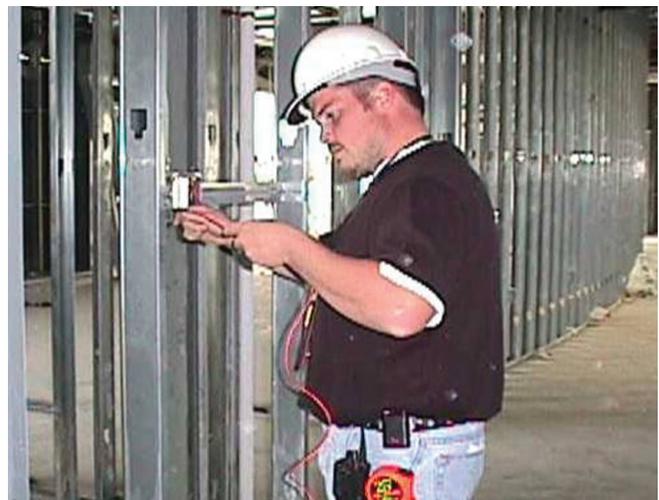
Inspection can be scheduled by calling the Electrical Inspection Line at 645-8235. The type of inspection is “Fire Alarm - Rough Walls”.

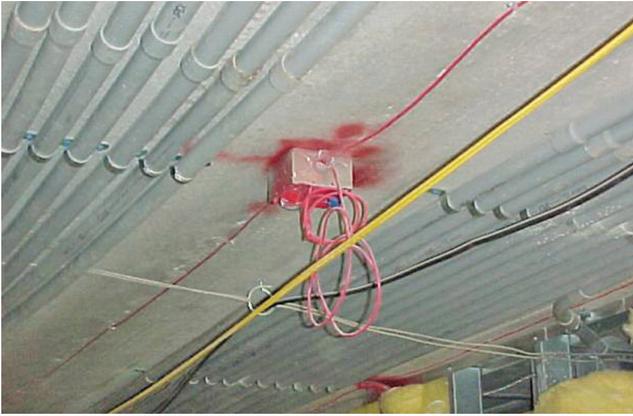
The items inspected will include but not be limited to:

- System components installed according to approved plans
- System components proper for this type of installation
- Device boxes in the proper location to meet all applicable codes

NOTE:

Inspector will indicate approval on the Building Permit/Inspection Record under Fire Alarm – Rough





B. At the stage that the contractor has installed the alarm device boxes and wiring in the rough ceiling (e.g. smoke alarms, heat detectors, etc.) it will be necessary that these installations be inspected by the Electrical Inspector.

Inspection can be scheduled by calling the Electrical Inspection Line at (614) 645-8235. The type of inspection is “Fire Alarm-Rough Ceiling .”

The items inspected will include but not be limited to:

- System components installed according to approved plans?
- System components proper for this type of installation?

NOTE:

Inspector will indicate approval on the Building Card under Fire Alarm - Rough



STEP 3: System Completion Phase

At this stage the installation contractor(s) are ready to perform a 100% pretest of all system components according to the guidelines set forth in NFPA 72.

As the test is performed, the NFPA 72 "Record of Completion" forms are to be filled out completely by the licensed installation contractor(s).

NOTE:

Completed NFPA72 Record of Completion form shall be provided at time of Witness Test as part of Acceptance Test required by the Ohio Building Code.





A return call will be made by Inspection Clerical Staff within two (2) working days upon the receipt of fax to confirm date, time, etc.

STEP 4: Specialty Systems

Specialty systems must be tested and approved prior to the final fire alarm witness test.

A. Fire Pumps

To schedule inspection, submit completed Fire Protection Inspection Request Form by fax to (614) 645-2434 or email to BZSCFD InspectionRequests@Columbus.gov

Inspectors needed:

1. Electric
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications.

B. Elevators

Prior to performing witness test for elevator recall a certificate of operation or temporary certificate of operation must be obtained from Ohio Division of Industrial Compliance. https://www.com.ohio.gov/documents/elev_RequestforTemporaryCertificateofOperation.pdf

Building and Zoning Services personnel will notify the Columbus Division of Fire of the date and time of tests conducted. Contractors must notify the Columbus Division of Fire of all cancellations scheduled after normal business hours at (614) 645-7641.

STEP 5: Final Fire Alarm Acceptance Test

The rough fire alarm approval and the testing and approval of all specialty systems must be completed prior to scheduling the Final Fire Alarm Acceptance Test. Failure to do so will result in a failed test and loss of the Building and Fire Department inspection fees.

To schedule inspection, submit completed Fire Protection Request Form by fax to (614) 645-2434 or mail to BZSCFDInspectionRequest@Columbus.gov

A return call will be made by Inspection Clerical Staff within two (2) working days upon the receipt of fax to confirm date, time, etc.

Building and Zoning Services personnel will notify the Columbus Division of Fire of the date and time of tests conducted. Contractors must notify the Columbus Division of Fire of all cancellations scheduled after normal business hours at (614) 645-7641.

The Acceptance Test

The acceptance test will consist of a random inspection of device activation at a minimum of 10% of all devices (as determined by the inspector) except as otherwise noted on in

this manual. The inspection must include at least one device for each system component (i.e., elevator recall, smoke detector, horn-strobe, etc.)





Fire Alarm Acceptance Test Procedures

Manual Fire Alarm Systems

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

Minimum 10% random test of all devices for circuit trouble and 100% for audibility.



Smoke Detection Systems

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

Minimum 10% random test of all devices in accordance with the manufacturers' recommended testing method for alarm and circuit trouble.

Elevator Recall Activation

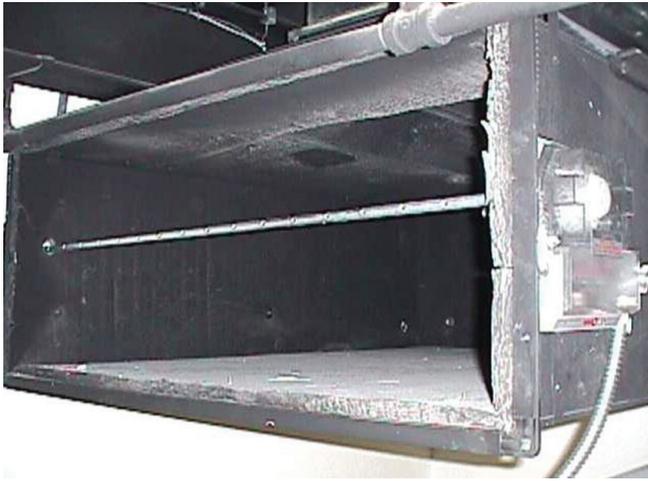
Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

The designated and alternate floor levels as well as the elevator machine room must be checked. The remainder of the test can be a random check of devices.





Smoke Detector for Air Distribution Systems

Inspectors needed:
Structural

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications and all applicable code provisions.

The items inspected will include but not be limited to:

- Inspection of installation as per the approved plans, manufacturers specifications, and all applicable codes.
- Verification of unit shutdown upon activation or switch to smoke control mode of operation.
- Verification of system circuit trouble.



Smoke Dampers or Combination of Fire/Smoke Dampers

Inspectors needed:
Structural

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications and all applicable code provisions.

The items inspected will include but not be limited to:

- Inspection of installation as per the approved plans, manufacturers specifications, and all applicable codes.
- Verification of unit operation upon activation of the system
- Verification of damper operation upon activation.



Fire Suppression Systems (riser flow and tamper devices)

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of riser/standpipe systems for flow alarm and tamper. Inspectors will verify the required residual pressure at system riser for all new systems. Post indicator valves and system circuit trouble shall be checked.



Special locking, egress control and electric strike devices

(i.e., hold-open devices, magnetic locks etc.)

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications.



Emergency Egress Requirements

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of all egress components including signage, lighting, and path of travel.



D. Smoke Control Systems

To schedule inspection, fax completed Fire Protection Inspection Request Form to BZS Inspection, (614) 645-8358.

Inspectors needed:

1. Structural or HVAC
2. Fire Official

Testing procedures:

100% test of all devices, equipment, components and sequences in accordance with the manufacturer's specifications and all applicable code provisions.



E. Dry Chemical, Wet Chemical, Clean Agent Systems and Carbon Dioxide Systems.

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications and all applicable code provisions.

Items inspected will include, but not be limited to:

- Inspection of installation as per the approved plans, manufacturer's specifications and all applicable code provisions.



Fire Shutters/Rolling Fire Doors Activation

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications.

Fire Alarm System Monitoring

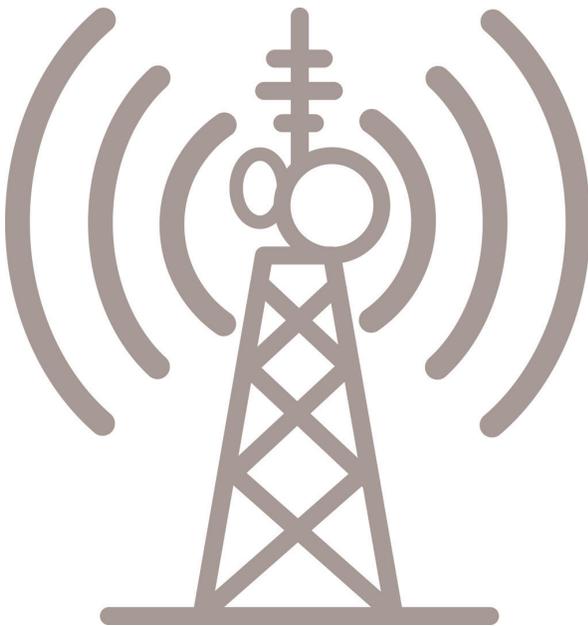
(including sub and booster panels/
Automatic Telephone-dialing Devices)

Inspectors needed:

1. Structural
2. Fire Official

Testing procedures:

100% test of all device activation in accordance with the manufacturers specifications.



NFPA 72 "Record of Completion" forms are to be filled out by a licensed alarm contractor and placed at the fire alarm panel prior to the final inspection.



STEP 6: Final Approval

The Structural Inspector will complete a Fire Alarm Acceptance Test Form and will indicate approval on the Inspection Record under “Fire Alarm – Final”