

Fire Alarm Testing Procedures



Electrical Inspection Requirements for Fire Alarm Wiring

Once the fire alarm permit is issued, an electrical inspection of all fire alarm wiring, panels, devices and equipment is required prior to a functional/witness test.

This inspection is independent of the functional/witness test performed by the building inspector and fire prevention officer, and must be performed and finalized **before** the functional/witness test is scheduled.

The electrical inspection includes but is not limited to:

- Rough wall inspections for any fire alarm wiring that is being concealed.
- Rough hard ceiling inspections for any wiring that is being concealed.
- Rough grid ceiling inspections for any wiring that is being concealed.
- Underground inspections for any wiring that is being concealed.
- Final inspection of the fire alarm system wiring, which includes device removal (but not activation) and inspection of wiring terminations throughout the fire alarm system on the premises.

The inspection standards are based on the National Electrical Code (NFPA 70), and the National Fire Protection Association NFPA 72.

Once the fire alarm wiring has been inspected and a green approval sticker issued by the electrical inspector, the function test may be scheduled.

If a green approval sticker for the fire alarm system wiring is not present upon arrival by the building inspector and fire prevention officer, the function test will be cancelled and will not be rescheduled until proof of electrical approval is submitted to this office.

These inspections can be scheduled online by the permit holder.

Mechanical Inspection Requirements for Fire Alarm Testing

Any duct detectors installed on the job must be inspected for proper installation before the fire alarm function test. Manufacturer's written installation instructions must be provided and access. Duct detectors which cannot be installed per the manufacturers written installation instructions shall be tested to meet the required air differential limitations of the manufacturer. An affidavit of this test must be provided to the mechanical inspector. Air balancing of the HVAC system must also be completed.

If smoke dampers are installed on the project, their proper installation must be confirmed by the mechanical inspector prior to the function test.

These inspections can be scheduled online by the permit holder.

Fire Alarm Function Test

The following are required for a function test:

- Approved (third party) set of plans. For “part for part” replacement/maintenance where no plans or third party review are required, please provide a scope of work and spec sheet for the work to be performed. Refer to 2015 IFC 907.1.1 and 1101.4.1 for additional information.
- As-builts if changes to approved plans have been made.
- NFPA 72 certificate of completion.
- Two-way communication between testing group and the panel
- Canned smoke (permitted for testing by manufacturer)
- Representation from the fire alarm installing company.
- Required personnel to activate sprinkler valves (if applicable).
- Required personnel to manipulate HVAC equipment (restarting AHU’s, accessing smoke dampers, etc. – if applicable).
- Any door locking devices, door releases, etc. are required to be installed before the function test.
- Access to all devices – ladders, lifts, etc.

What to Expect

The fire alarm function test includes but is not limited to:

- Testing of fire suppression valve/flow monitoring.
- Testing of all initiating devices (smoke, heat detectors, pull stations).
- Testing of duct detectors and associate AHU shut-down.
- Verification of all annunciation devices.
- Verification of proper operation of any smoke dampers.
- Proper reporting to panel and to supervisory central station.
- Testing of primary and secondary phone lines.
- Verification of proper operation of any door locking devices, door releases, etc.
- Connections to fire alarm from fire pumps and/or emergency/back-up generators if applicable.

Functional test dates and times can be requested by emailing FPS@sterlingheights.net or calling 586-446-2970. We will attempt to accommodate your requested time and date. Please include the address and permit number and contact information. We will confirm by email.

For more information on Electrical requirements, call 586-446-2381.

For more information on Mechanical requirements, call 586-446-2363.

For more information on Fire Alarm requirements, call 586-446-2970.