

Fire Alarm System Guidelines

For Plan Review, Acceptance Testing, and Final Fire Alarm Inspection

MCALLEN FIRE DEPARTMENT

FIRE PREVENTION DIVISION



If you have any questions or comments regarding the information contained within, or if you need assistance interpreting these requirements, please contact:

McAllen Fire Marshal's Office
McAllen, Texas 78501
Tel: (956) 681-2500
Website: mcallen.net
Email: mcallenfpdocs@mcallen.net

Table of Contents

Minimum Requirements _____	2
Final Inspection and Acceptance Testing _____	3
Designer Qualifications _____	4
Installer Qualifications _____	5
Service Personnel Qualifications _____	5
Code References _____	5

Minimum Requirements

FIRE ALARM CONSTRUCTION DOCUMENTS SHALL BE SUBMITTED TO THE FIRE DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO SYSTEM INSTALLATION (2018 IFC SEC. 901 AND 907).

Designer Information: Plan drawings shall be prepared and signed/dated by a designer who meets qualification criteria specified in this pamphlet and NFPA 72. A minimum NICET III or acceptable equivalent required. In all cases, the designer of the system shall be clearly identified on the plans

Fire Alarm Plan submittal: Each submittal shall include a minimum two sets of complete plans and technical specification sheets. Digital Plans may be submitted and are preferred. The following items are also required (2016 NFPA 72 Sec 7.4.4 - 7.4.10):

- Fire Alarm System Permit application form
- Project narrative describing design assumptions and scope of work where applicable
- An electronic or original signature by the Alarm Planning Superintendent (APS). **(Automatic failure if missing)**
- Project information (name, address, contacts, etc.) **(Automatic failure if missing)**
- Code summary (i.e. applicable codes, occupancy type, construction type, occupant load, etc)
- Sequence of events matrix
- Device riser diagram and device descriptions
- Legend
- Accurate floor plan



- Point to point wiring
- All device locations
- **Battery type and capacity:** Calculations supporting the capacity shall be provided. Cut sheets from the battery manufacturer shall be provided with calculations. (Automatic failure if missing)
- **Wire size calculations:** All new construction submittals' shall include a statement by the designer that a wire size calculation has been performed and the proposed system meets the manufacturer specifications. Voltage drop calculations and supporting documentation may be required upon request from the authority having jurisdiction (AHJ).

Re-Submittals: Submittals requiring additional information will be placed “On Hold” until required information has been submitted. Plan information revisions shall be submitted with changes clouded. Changes in other documents shall be clearly identified.

Equipment Specification Sheets: Equipment utilized in the design shall be clearly identifiable in the submitted specification sheets either by highlight or marking. (Automatic failure if missing.)

Non-Required Systems: All proposed non-required fire alarm systems shall meet the same requirements for required systems and must meet locally adopted codes (i.e. International Fire Code, NFPA 72, etc.). The “Non-Required” fire alarm system shall be submitted for review and acceptance to the Fire Department (2016 NFPA 72 Sec 17.5.3.3.1, 2018 IFC 901.4.2).

IT IS THE RESPONSIBILITY OF THE DESIGNER/INSTALLER OF RECORD TO ASSURE ADHERENCE TO ALL APPLICABLE CODE REQUIREMENTS. FINAL ACCEPTANCE OF ANY FIRE ALARM SYSTEM INSTALLATION IS SUBJECT TO FIELD INSPECTION BY THE FIRE DEPARTMENT (2018 IFC Sec 105.4.4).

Pre-Test: A Full 100% pre-testing of the fire alarm system is required prior to scheduling the final fire alarm inspection. The system shall be functionally tested.

Pre-Test Letter: Required. Must be submitted in written form and signed by the fire alarm contractor (i.e. the system has been installed in accordance with "accepted as proposed" plans and tested in accordance with the manufacturers published instructions and NFPA requirements). Full device testing reports will not be accepted in lieu of this document, however may also be required by the AHJ at their discretion (2018 IFC 901.2.1, 2016 NFPA 72 Sec 7.5.2). Failure to submit will result in automatic failure.

Rescheduling / Canceling:

may be done via email or by phone call. This shall be done with the assigned inspector no later than four (4) hours prior to the inspection. Any cancellations / rescheduling received within the four (4) hours prior to inspection shall result in a failed inspection, and shall require a new inspection request and fee. Any changes in scheduling, not addressed with the assigned inspector, resulting in a ‘no show,’ shall result in a failed inspection and will require a new inspection request and fee.

Final Fire Alarm Inspection Scheduling:

Final Inspection requests for most projects will not be granted until the Fire Alarm and Fire Sprinkler contractor can both be available at the site, if water flow and/or tamper switches tied into the alarm need to be tested.

The fire alarm contractor may call for final inspections when the project only involves a fire alarm system and not a fire sprinkler system. Requests for inspections require a minimum 24 hours notice. **NOTE: Only 10% of total devices will be tested on the final fire alarm inspection.** This will result in a pass/fail inspection. Re-inspections will require a new pretest and Record of Completion to be submitted prior to conducting the re-inspection.

Alarm Monitoring: Must be set up prior to final fire alarm inspection. Include the entity name and contact information for the listed supervising or remote station. An approved means of communication must be established such as a cellular communicator, two phone lines, etc. (2018 IFC Sec 907.6.6).

Permits On-Site: An accepted as proposed set of plans, including comments and conditions of approval by the AHJ, shall be made available on-site while work is being completed.

Contractor Personnel: A minimum of two technicians is recommended to be on-site during all final Inspections (one at panel, one with inspector for radio contact purposes). Exceptions may be made for smaller projects.

Acceptance Testing: Upon completion of the installation and pretesting, the fire alarm system and all fire alarm components shall be acceptance tested in accordance with NFPA 72. **This test will not be witnessed by the fire inspector.** The fire inspector will conduct the Final Fire Alarm Inspection once all prior testing has been completed by the licensed installer and Record of Completion is submitted.

Record of Completion: Document shall be submitted to the Fire Code Official prior to conducting the final fire alarm inspection (2018 IFC Sec 907.7.2). A copy of the “Fire Alarm System Record of Completion” may be found in NFPA 72 (2016 NFPA 72 Sec 7.5.6.2) or <https://mcallen.net/>.

As-Built Plans: Significant deviations from the approved design during the installation of the fire alarm system may require a new submittal or submittal of “as built” plans to the AHJ. This requirement is at the discretion of the AHJ (2018 IFC Sec 105.4.5, 2018 IFC Sec 907.7.3, 2016 NFPA 72 Sec 7.5.3). **Must be submitted prior to scheduling inspection.**



Designer Qualifications

Design personnel shall be qualified in the area of fire alarm systems design as defined by NFPA 72, Sec 10.5.1.1. (2016 ed), Texas Dept. of Insurance (TDI) / Texas State Fire Marshal's Office , and the Texas Administrative Code (TAC). The term qualified personnel shall include the following:

1. Personnel who are factory trained and certified for fire alarm system design of the specific type and brand of system being designed.
2. Personnel who are registered, licensed or certified by a state or local authority.

Installer Qualifications

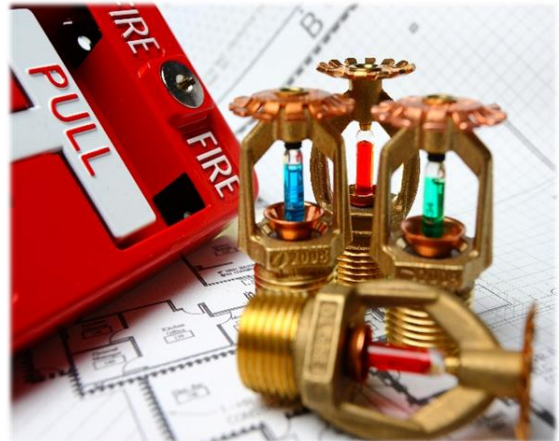
Installation personnel shall be supervised by persons qualified and experienced in the installation, inspection or testing of fire alarm systems as defined by NFPA 72, Sec. 10.5.2.3 (2016 ed), Texas Dept. of Insurance (TDI) / Texas State Fire Marshal's Office , and the Texas Administrative Code (TAC). The term qualified personnel shall include the following:

1. Personnel who are factory trained and certified for fire alarm system design of the specific type and brand of system being designed as per NFPA 72, Sec. 10.5.2.3 (2016 ed), Texas Dept. of Insurance (TDI) / Texas State Fire Marshal's Office , and the Texas Administrative Code (TAC).
2. Personnel who are certified by a recognized fire alarm certification organization acceptable to the AHJ
3. Personnel who are registered, licensed or certified by a state or local authority.

Service Personnel Qualifications

Personnel shall be “qualified and experienced” in the inspection, testing, and maintenance of fire alarm and fire monitoring system as defined by NFPA 72, Sec. 10.5.3.4 (2016 ed), Texas Dept. of Insurance (TDI) / Texas State Fire Marshal's Office , and the Texas Administrative Code (TAC). The term qualified personnel shall include the following:

1. Personnel who are factory trained and certified for fire alarm system service of the specific type and brand of system.
2. Personnel who are certified by a nationally recognized fire alarm certification organization acceptable to the AHJ. Personnel who are registered, licensed or certified by a state or local authority.
3. Personnel who are employed and qualified by an organization listed by a recognized testing laboratory for the servicing of fire alarm systems.



Code References

International Fire Code (2018 Edition)

NFPA 72 (2016 Edition)

NFPA 70 (2017 Edition)

Local and State Regulations Standards/

Codes adopted by reference