



CITY OF ABILENE FIRE DEPARTMENT



FIRE PREVENTION 250 GRAPE ST ABILENE, TX 79601 (325) 676-6434

FIRE SPRINKLER SUBMITTAL GUIDELINE

The following comments are provided to assist the proponent. Additional requirements may apply.

New Installation/Modification Plan Submittals

- Allow at least 10 business days to process all submittals and required permits.
- Fire sprinkler systems shall be designed and installed in accordance with the Abilene Fire Code and State of Texas rules and regulations. Compliance with FM, UL, NFPA or other recommended practice does not supersede any Abilene Fire Code requirement.
- Plans shall be stamped by a State of Texas licensed Responsible Managing Employee (RME) or a State of Texas licensed Professional Engineer. At least one set submitted for review shall bear an original stamp.
- Submit at least 3 sets of scaled drawings, hydraulic calculations, sprinkler component cut-sheets and a completed Abilene Fire Department permit application for review.
- Provide manufacture's statement of compatibility with other piping components when using CPVC piping.
- All submittals shall be reviewed and a fire permit issued prior to start of any work on the fire sprinkler system, including underground piping from city main.
- Fire permit and Fire Department stamped drawings shall be at job site during all work related to the permitted fire sprinkler system.
- Only fire protection contractors licensed for such work by the State of Texas shall perform fire sprinkler system work.
- Submittals will not be accepted by parties that have credit suspensions with the City of Abilene Finance Department.

Modifications to Existing Systems

- During work involving an existing sprinkler system, the involved area shall be isolated from the remainder of the system to maintain protection to the building.
- Whenever possible, the entire sprinkler system shall be restored to service at the end of each workday.
- A fire watch shall be posted if the sprinkler system is not restored.

Modifications Not Requiring a Permit

- Work involving required maintenance, repairing or restoring of the fire system and associated equipment.
- Replacing components with "like" components that do not change the system's original design, specifications and/or performance.
- Modifications involving less than 20 sprinkler heads.
- Non-permitted modifications do not require acceptance testing.

Sprinkler System Design Criteria

- Sprinkler system hydraulic design required pressure shall include a safety factor of 10 percent or 5 psi, whichever is greater.
- The proponent, prior to design of the sprinkler system, shall conduct a water flow test. Water flow data may be obtained by contacting the Water Distribution department at 325-437-4523.
- Sprinkler and standpipe risers may be combined in accordance with NFPA.
- Provide control valve, drain and water flow indicator at each floor-to-riser connection.
- Eaves, canopies, or other projections or overhangs shall be provided with sprinklers in accordance with NFPA.
- Water flow signal shall be a fire alarm system audible and visible signal device located above fire department connection. Location shall be approved by the Fire Marshal or designee.
- Dry system trip test connection shall be provided at the end of the most remote branch line of the system.
- Wet system alarm test connection may be provided at riser in lieu of remote inspectors test connection.

Sprinkler System Off-Site Monitoring and Transmission Channel Requirements

- Sprinkler systems with 20 or more heads shall have all water control valves and water flow switches electrically monitored and signals transmitted to an approved supervising station.
- Sprinkler system water flow shall initiate activation of the fire alarm system, if one is present.

Standpipe System Design Criteria

- Standpipe required if highest floor level > 30 ft. above fire department access point and/or area > 10,000 sq. ft./floor and travel distance > 200 ft. from fire department access point to interior portion.
- Standpipe hose connections shall be provided at each intermediate stair landing and top floor landing.

Fire Department Connection

- Fire department connection shall be located on the front- or street- side of building.
- Fire department connection Location shall be approved by the Fire Marshal.
- Fire department connection for NFPA 13 shall have a minimum of two 2 ½-inch inlets for system with up to 1,000 GPM required flow (less outside hose streams). Provide one additional inlet for each 500 GPM increase in required flow or fraction thereof.

Anti-Freeze Systems

- Abilene Fire Department accepts installation of new antifreeze systems and maintenance of existing antifreeze systems that are in compliance with all requirements of the Abilene Fire Code and the Texas State Fire Marshal's Office.
- Refer to the adopted edition of the Abilene Fire Code, State Fire Marshal Office rules and regulations and State Fire Marshal Office notice September 2013 regarding antifreeze to determine requirements for the system in question.
- Abilene Fire Department recommends contractors follow current industry standards and best practices in addition to adopted codes when installing and servicing antifreeze sprinkler systems.

Backflow Prevention Device Installation/Testing

- This information is applicable to the installation and testing of backflow devices that are a component of a fire protection system, such as a fire sprinkler system, standpipe system or private fire protection water main.
- All work involving a fire protection system, including installation or testing of backflow devices, shall be performed by persons employed by a fire sprinkler firm that is registered with the State of Texas Department of Insurance - State Fire Marshal Office.
- Persons performing work involving a backflow device shall be registered with the City of Abilene for that type of work.
- Persons planning to install a fire protection system backflow device shall apply for a plumbing permit at Building Inspections to install the device. This permit is in addition to Fire Department permit(s) required for installation or modification of a fire protection system.
- A plumbing inspection by Building Inspections is required for the backflow device installation. The backflow device shall be tested and test papers provided to Building Inspections at or before the plumbing inspection. Contact Building Inspections at (325) 676-6232 for more information.

NFPA 13R and NFPA 13D

- Fire department connection for NFPA 13R shall have a minimum of one 2 ½-inch inlet for system with up to 500 GPM required flow (less outside hose streams).
- NFPA 13-R: Fire hydrants and fire flow as prescribed for nonsprinklered construction type and area shall be provided.
- R-1 Occupancy: If no fire alarm system is present, sprinkler system water flow shall initiate a local alarm to notify all occupants. Local alarm shall be accepted by the Fire Marshal of designee.
- R-2 Occupancy: Exterior patios and balconies shall be provided with sprinklers in accordance to NFPA.

Elevator

- Provide sprinklers at top of elevator hoist ways.
- Provide sprinklers at bottom of elevator hoist ways or demonstrate compliance with NFPA 13.8.15.5.2.

Acceptance Testing

- Contact Fire Prevention at least 24 hours in advance to witness tests and inspect installation.
- Inspection times are normally Monday-Friday from 9:00am to 11:00am and 1:30pm to 3:00pm.
- The Abilene Fire Department does not schedule after hours inspections.
- Aboveground piping shall be exposed during pressure tests.
- Underground piping joints and thrust blocks shall be exposed during pressure tests.
- Hydrostatic testing of all piping shall be conducted for 2 hours at 200 PSI.
- Acceptance testing will require testing of all system activation devices monitoring any suppression system and verification of all transmission signals.

Special Considerations

- A fire hydrant capable of providing the required flow shall be located within 500 feet driving distance of the fire department connection.
- Exterior areas when protected by dry-type sprinklers on a wet system shall have a minimum exposed barrel length of 14 inches based on an ambient temperature of -10 degrees.
- Sprinkler contractor shall insure that all CPVC sprinkler piping is isolated and free of other work, trades, and their related equipment.



CITY OF ABILENE FIRE MARSHAL'S OFFICE



FIRE SPRINKLER/STANDPIPE PERMIT SUBMITTAL

250 Grape St. Abilene, TX 79601 (325) 676-6434 Fax: (325) 676-6673 afdprev@abilenetx.gov

Complete and return to the Abilene Fire Marshal's Office at least ten (10) working days prior to project start date. All submittals must include 3 sets of drawings, 1 copy of hydraulic calculations and manufacturer's equipment specifications.

Fire sprinkler company:

Mailing / Billing address:

City: State: Zip:

RME Name: License #:

Phone: Email:

I understand the Abilene Fire Marshal's Office reviews plans for compliance with the Abilene Fire Code (2009 International Fire Code), local policies, NFPA and State of Texas rules and regulations. I understand statements made herein are true and correct to the best of my knowledge. I understand and agree to notify the City of Abilene Fire Marshal's Office of any changes in the written information in this application within five (5) working days from the date such change occurs. Furthermore, I agree to pay all permit fees associated with this application.

Signature: Date:

Business name where system is to be installed:

Address:

Residential: Commercial: New Installation: Modification: Square Footage:

System designed to - NFPA 13: NFPA 13R: NFPA 13D: NFPA 14:

See abilenetx.gov/fees for permit fee. Enclosed: Invoice:

DO NOT WRITE BELOW THIS LINE

Date Received: Submittal Approval: Yes No

Plans Examiner: Date Permit Issued :