



GOLDER RANCH FIRE DISTRICT

GRFD Fire Code Standard 906 NFPA Standard 13D Amendments

Where Required

Approved automatic sprinkler systems shall be provided throughout all one- and two-family dwellings and townhouses used as model homes with sales or construction offices and one- and two-family dwellings and townhouses hereafter constructed within or moved into the jurisdiction when the required fire-flow is not available in accordance with Table B105.1.

Approved automatic sprinkler systems shall be provided throughout all isolated or rural one- and two-family dwellings, townhouses, and accessory structures requiring a permit, hereafter constructed within or moved into the jurisdiction where the development of full fire flow is impractical in accordance with Table B105.1.

Existing Building Fire Area Increase

Approved automatic sprinkler systems shall be provided throughout an entire fire area, both existing and new, when the fire-flow is not available at the rate prescribed by Table B105.1 for the total square footage and construction type being considered.

Design and Installation Requirements

When approved, automatic sprinkler systems installed in one- and two-family dwellings shall be installed throughout in accordance with NFPA 13D the latest adopted edition and GRFD Standard 906.

Plan Submittals

NFPA 13D automatic sprinkler systems plans shall be submitted to the fire code official for review and approval prior to installation. A minimum of three copies shall be submitted for review purposes. One copy of plans will be retained by GRFD for the occupancy file. One set of fire code official approved plans shall be on the job site for each inspection. Automatic sprinkler system plans submitted to the code official for review and approval shall be by qualified persons with experience and manufactures training in residential fire sprinkler systems who possess a National Institute for the Certification of Engineering Technologies (NICET) Level III certification. Contents of plan submittals shall comply with GRFD Standard 903. **A slope legend indicating rise and run for all ceilings shall be added to all plans. All beam depths and special design features shall be noted on the plan. Water meter size shall be contractor verified and the size indicated on the plans. Water meters shall be a ¾ inch, full flow type meter at minimum and capable of flowing at least 35GPM.**

Work Commencing Before Permit Issuance

Any person who commences work, activity, or operation regulated by this code before obtaining the necessary permits shall be subject to 500 percent of the usual permit fee, which shall be in addition to the required permit fees. See the *Golder Ranch Fire District Construction Permit and Fire Code Operational Services Fee Schedule*.

As-Built Plans

Installation shall be by the approved plans. Changes shall have prior approval of the fire code official. When approved changes have been made during installation, As-Built plans shall be submitted prior to Certificate of Occupancy issuance. Minor changes can be hand drawn on a copy of the original approved plans and a minimum of three copies submitted for re-approval and re-stamping. Major changes shall be re-drafted and new plans submitted for approval. The fire code official shall have the discretion to establish the level of changes, minor or major.



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Hydraulic Calculations

Automatic sprinkler system water supply data for hydraulic calculations shall be based on a curve that is 90 percent of the available water supply curve as determined by flow test information. All flow tests shall be performed by or witnessed by a fire code official.

Contractor Installation

The layout, calculation, and installation of systems installed in accordance with this standard shall only be performed by people knowledgeable and trained in such systems. Contractors are required to possess a current L-16 or K-16 State of Arizona Contractor license to install sprinkler systems. The installer shall follow all manufacturer guidelines for installation.

Sprinkler Risers

Risers shall be installed within a building. The riser access door shall be conspicuously labeled with a permanent sign; letters minimum 1 inch with contrasting background. Underground riser supply lines shall be visually inspected, pressure tested, and flushed prior to connection to the riser and overhead piping. Inspections shall be witnessed by the fire code official. All riser assemblies shall contain a minimum of a rubber faced check valve, and a pressure gauge.

Fire Department Connections (FDC)

Systems which are not supplied from a municipal or private water purveyor shall have a single snoot 1½ inch fire department connection (FDC) or an automatic temporary backup power supply for the system water pump. FDC's shall be installed on the fire department access side of buildings, fully visible and recognizable from the fire department access or as otherwise approved by the fire code official. FDC's shall be located not less than 18 inches or more than 48 inches above the level of the adjoining ground, sidewalk, or grade surface. Immediate access to fire department connections shall be maintained at all times and without obstruction by fences, bushes, trees, walls or any other object for a minimum of 3 feet.

Water-Flow Alarm

Approved audible water-flow alarm notification devices shall be connected to every automatic sprinkler system. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. The alarm device shall be provided on the exterior of the building. The water flow alarm is not a building evacuation alarm; however, building owners can choose to react to water flow alarms as evacuation alarms.

Fire Protection Systems – Remain In Service

Fire protection systems shall be maintained in accordance with the original installation standards for that system and NFPA 25 the latest adopted edition. Systems shall be extended, altered, or augmented as necessary to maintain and continue protection whenever the building is altered, remodeled or incorporates additions. Alterations to fire protection systems shall be done in accordance with applicable standards and have prior written approval of the fire code official.



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Specific Amendments to NFPA 13D

Alarms: Approved audible water-flow alarm notification devices shall be connected to every automatic sprinkler system.

Sprinklers: Sprinklers shall be installed in accordance with the coverage criteria specified by the listing. A slope legend indicating rise and run for all ceilings shall be added to all plans. All beam depths and special design features shall be noted on the plan.

Sprinkler Locations: Sprinklers shall be installed in all bathrooms; including all enclosed toilet rooms. Sprinklers shall not be required in any porches, patios, and similar structures where open on two or more sides or where the covering does not exceed four feet in width. Sprinklers are required in all garages. Sprinklers shall not be required in attic, crawl spaces and other concealed spaces that are not used or intended for living purposes or storage and do not contain fuel-fired equipment. A sprinkler shall protect the direct area of fuel fired equipment.