



CLOVIS FIRE DEPARTMENT

Standard #45

NFPA 13R Systems for Apartments

Referencing: NFPA 13, NFPA 13-R, NFPA 24, CBC

An Automatic sprinkler system shall be installed throughout every apartment house three or more stories in height or containing 5 or more dwelling units, every congregate residence three or more stories in height or having an occupancy load of 11 or more, and every hotel three or more stories in height or containing 6 or more guest rooms.

NFPA 13-R fire sprinkler systems are allowed to be installed for the protection against fire hazards in residential occupancies up to and including four stories in height.

Because standard NFPA 13-R allows the omission of sprinklers in certain areas, it is not suited for residential occupancies that are designated to house occupants who require an extended period of time to evacuate or may need to be protected in place. NFPA 13-R fire sprinkler systems shall not be allowed in apartments designated for the housing of population groups who are not capable of self preservation or capable of an expedient evacuation.

When it is determined that certain building characteristics contribute to the delay in the evacuation of the selected group occupants, i.e. multiple-floors, stairs, FD access delays.

NFPA 13-R fire sprinkler systems should not be installed in any non-residential building, located within a residential apartment project requiring sprinklers, i.e., recreation centers, detached garages, etc.

Exception: In buildings not required to be sprinkered, with the approval of Clovis Fire Department.

Shall provide sprinkler coverage in the laundry equipment area closets where fuel-fire equipment will be located. Electric and gas fueled heating and cooling equipment located in attic areas shall be protected by two (2) sprinkler heads at opposing sides.

An approved audible sprinkler flow alarm shall be provided on the **exterior** of the building in an approved location. An approved audible flow alarm to alert the occupants shall be provided in the **interior** of the building in a normally occupied location.

It is deemed that the living room area in each unit will be this “normally occupied location”. In multi-level units, the interior notification device(s) should be located at the bottom and top of the interior stairs. A listed horn/strobe notification device(s) is acceptable.

For fire alarm systems employing automatic fire detectors or **water-flow detection devices**, at least one fire alarm pull-box shall be located where required by Clovis Fire Department. Generally, the fire alarm pull-boxes will be located at each required exit door to the community room building. Where no community room exists, the manual fire alarm pull-boxes may be omitted with the approval of Clovis Fire Department.

Shall install a visible sign at each building fire sprinkler riser that identifies the risers coverage. This sign shall be located near the exterior alarm bell. The sign size shall be a minimum of 12" x 12", red lettering on contrasting background.

Fire Department Connections (FDC) shall be located and arranged so that hose lines can be readily and conveniently attached to the inlets without interferences from any nearby objects, including buildings, fences, posts, or other fire department connections or components. A minimum distance of 36 inches shall be maintained in between above-ground system components. The FDC should not be positioned where obstructed by the parking of vehicles.

Attached garages with finished ceiling shall be sprinklered with residential sprinklers.

Covered patios and patio decks shall be sprinklered so as to provide protection from outside patio fires. Sprinklers shall be installed in spaces under all combustibile ground floors, exterior docks, and platforms.

All bathrooms shall be sprinklered, with the exception of toilet closets.

Sprinklers shall be installed in enclosed usable space below or over a stairway.

All fire sprinkler piping shall be covered with insulation when not within a wall assembly.

Each floor shall be equipped with individual control valves allowing the isolation of each floor for servicing while not rendering the entire sprinkler system inoperative.

Fire sprinkler systems in multi-level buildings shall be equipped with floor control valves at appropriate points in order to permit sectionalizing the system to each floor in the event of a break or making repairs or extensions. These vales shall be monitored for tampering.

Fire Sprinkler System underground piping:

The minimum size fire service line accepted for sprinklers systems is of 4 inches in diameter, and designed exclusively for fire service demand.

The FDC for NFPA **13-R** systems shall consist of a single 2½" inlet with a minimal 4" pipe size.

Tracer Wire or Tracer Tape - All non-metallic pipe installed on underground fire sprinkler service lines shall have a tracer wire or tracer tape installed along the length of the pipe. Tracer wire shall be of 14 gage minimum, copper single-conductor wire certified for direct burial and shall be continuous along the pipeline passing through the inside of each valve box and terminating at the bottom of riser and FDC.

After installation, all metal underground components shall be cleaned and thoroughly coated with a bituminous or other acceptable corrosion-retarding material. All galvanized piping shall be corrosion resistant treated or wrapped with plastic tape.

The underground fire service line shall be flushed at full-pipe diameter and immediately connected to riser or capped, in the presence of a Clovis Fire Inspector. The flushing

process shall include the piping for the FDC. The FDC shall be capped immediately upon flushing. Only listed metal caps shall be used.

Clovis Fire Inspector shall inspect all underground piping thrust blocks prior to back-filling.

Underground piping shall be hydrostatic tested at 200 psi for 2 hours in the presence of a CFD Inspector.

The testing pressure pump will not be allowed to remain connected to the system being tested during the test.

The test shall include the underground pipe section from the detector check valve to the bottom of riser and will be conducted with the PIV in an opened position.

The street valve to the fire service line shall be closed to prevent back-flow into the domestic water system in the event of a detector check valve failure.

The blow-off valve shall have been activated prior to testing so as to present a lower pressure than the testing section.

When non-indicating underground valves (street valves) are installed on fire service lines, they shall be required to be identified with the wording "FIRE" stamped on the cover.