



SINGLE FAMILY DWELLING FIRE SPRINKLER STANDARD

Arcadia Fire Prevention Bureau
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A residential fire sprinkler system shall be designed by either a California licensed Fire Protection Engineer, a California licensed Fire Protection Contractor (C-16), or an Owner-Builder (SFD only). A C-16 contractor may not install a design by another C-16 contractor.

1. PLAN SUBMITTAL REQUIREMENTS

All fire sprinkler plans submittals shall include:

- 3 sets of plans (hard copy) or 1 set (electronic copy, pdf format only)
- Hydraulic calculation for each design area.
- Water flow data (within 6 months) from the water purveyor.
- Manufacturer's material information sheets for the fire sprinkler heads, piping, and horn/strobe device, flow switch and hangers.

Specific fire sprinkler plan submittal requirements:

All systems shall be based on NFPA 13D with the following additions:

- Sprinkler system design, including hose demand, shall be limited to 90% of the available water supply.
- Systems shall undergo a hydrostatic test at 200 psi for two hours at time of rough inspection.
- Detached garages over 1,000 square feet and all attached garages shall be sprinklered and designed for an Ordinary Hazard Group 1 occupancy. All garages shall be designed for the 2 most hydraulically demanding heads flowing. Only commercial type intermediate temperature quick response heads shall be used in the garage area.
- A hydraulic verification test shall be performed for all dwellings. Structures under 5,000 square feet in combined area (residential and garage), shall be designed for 2 heads flowing for the residential area. Structures over 5,000 square feet in combined area (residential and garage), shall be designed for 4 heads flowing for the residential area. See note 2 for garage design requirements.
- Attached common use areas in condominium complexes such as utility rooms or enclosed trash receptacle areas shall be sprinklered. Only intermediate temperature quick response heads shall be used in these areas.
- Attics and basements used for storage purposes shall be fully sprinklered with residential type heads.

2. SYSTEM COMPONENTS

- Arcadia Water Division, (626) 254-2700, requires a listed backflow preventer on the sprinkler supply side of the system.
- A single exterior bell activated by the waterflow switch shall be provided at an approved location.
- A remote inspector's test shall be provided.
- A representative sample of spare heads shall be provided at an approved location.