



Rancho Santa Fe Fire Protection District

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SPRINKLER PLAN CHECK CORRECTION

Date: _____ RSF Plan Check # _____ Sprinkler Contractor _____ Phone # _____

Project Name: _____ Address: _____

Corrections circled are to be made on the plans before Fire Approval will be issued. The approval of plans and specifications does not permit the violation of any section of the Rancho Santa Fe Protection District Fire Code, County Ordinances, or State law. The following list does not necessarily include all errors and omissions.

To facilitate rechecking, please identify, next to each circled item, the sheet of the plans upon which the correction has been made.

RETURN THIS CORRECTION LIST WITH THE CORRECTED PLANS

Note: If new plans are provided when resubmitting, return at least one copy of the original stamped and checked set.

A. PLAN REQUIREMENTS

1. Two sets of sprinkler plans, calculations and cut sheets. Company must have a C-16 license number.
2. Due to the number and/or complexity of corrections, before Fire sign-off will be given, corrections should be made on the originals and run new prints.
3. Corrections can **NOT** be made on stamped plans.
4. Identify rooms and specify use.
5. Define all symbols and shaded areas etc. used on the plans.
6. See notes/remarks made on one set of plans. Return marked set with new/revised sets after you have complied with the requirements on the marked set of plans. Red marks on plans are part of this comments list.
7. The Fire District will require the following conditions be placed on the project: Detailed information regarding Fire District Ordinances can be found on the District's web site at: <http://www.rsf-fire.org/prevention>, under fire prevention.
8. Plans need third party review prior to being submitted to the Fire District.

B. PLOT PLAN & SITE REQUIREMENTS

1. **SITE INSPECTION** may reveal conditions which have changed since plan review. When such discrepancies arise, field inspection shall take precedence.
2. Water main connection _____ inches
3. Square footage of building(s) _____ sq. feet
4. Water main connection elevation, pad elevation
5. Meter size and configuration- The meter supplying the system must be capable of providing sufficient flow for the designed flow of the fire system and all other demands attached. This would include domestic and irrigation use. Contact the individual water provider to become aware of specific requirements they may have. A single meter

may be used to supply the main house and other accessory buildings when the meter is dedicated for fire service only.

6. Meter to main and meter to structure- Size of pipe, type of pipe, and length of pipe
7. Scale of drawing

C. FLOOR PLAN

1. Room occupancies indicated
2. Location of partitions
3. Size of all areas not requiring sprinklers
4. Ceiling construction and height
5. Location of all high temperature appliances and devices- Fireplaces, stoves, ranges, furnaces, space heaters, etc.
6. Spare head cabinet location should be in garage or guest house (no direct heat exposure)
7. Attached garages and covered walkways protected
8. Location of alarm bell(s) and size- Alarm bell must be audible above ambient noise level in the master bedroom, other bedrooms, and appropriate living areas along with the street in which the home is addressed. The size and configuration of the home may require more than one bell or other approved device.

D. FIRE SPRINKLER RISER

1. Must be located in garage- Exceptions would be guest houses, barns, pool houses, etc. In this case a separate riser and alarm bell will be required
2. Riser detail- Including the main drain valve, main drain size, type of material, flow switch, gauge, range, and pressure relief valve if pressure exceeds 150 PSI
3. No shutoff valves shall be allowed past the water meter

E. SPRINKLER PIPING

1. Type of material being used
2. All pipe sizes indicated- A minimum diameter of one inch is required for all systems utilizing CPVC piping
3. Inspectors test valve type and location- Should be located at the end of the system
4. Layout of piping indicated
5. Indicate areas of exposed piping (non-concealed)

F. WATER SUPPLY

1. Water department supplying the system- Including name, phone number, and contact person
2. Available water pressure and the date the information is obtained
3. Pressure relief valve if it exceeds 150 PSI

G. SPRINKLERS

1. Manufacturer and type of head

2. Total number of sprinkler heads to be installed- If there are 100 heads or more then the system must be monitored and a stamp should be placed on the plans by the plan checker
3. Special high temperature heads in the garage, patios, etc.
4. Dimensions to walls and adjacent sprinkler heads
5. Sprinklers per manufacturer's listing
6. Total area protected
7. Special Areas of Coverage
 - a. **Exterior-** coverage shall be required under all eaves, patios, etc. when the distance from the outer surface of the exterior wall of the dwelling to the end of the eave overhang is greater than 10 feet.
 - b. **Attic-** coverage shall be required in attic spaces whenever access is provided by an opening sufficient to provide access to and for stored goods, and when the floor surface of the attic area has been prepared with material sufficient for storage.
 - c. **Heating, Ventilating, Air Conditioning (HVAC) Equipment-** coverage by at least one sprinkler head is required whenever the HVAC equipment is located in an overhead space, under floor area or other enclosed space. Extra heads may be required based on duct and vent configurations.
 - d. **Under Stairways-** coverage is required when access has been provided to the area beneath the stairways.
 - e. **Bathrooms-** sprinkler heads are not required in bathrooms where the area does not exceed 55 sq. feet unless there is a door exiting directly to the outside, and the walls and ceilings including behind fixtures, are of noncombustible or limited combustible materials providing a 15 minute thermal barrier.
 - f. **Closets-** sprinklers are not required in clothes closets, linen closets, and pantries within the dwelling units where the area of the space does not exceed 24 sq. feet and the least dimension does not exceed 3 feet and the walls and ceilings are surfaced with noncombustible or limited combustible materials as defined by NFPA 220, Standard on Types of Building Construction, unless the closet contains mechanical or electrical equipment/panels.
 - g. **Electrical Rooms-** coverage by a sprinkler head is required when the electrical metering equipment is located in an enclosed space.
 - h. **Outdoor Heaters and Fireplaces-** heads should be located no closer than 5-7 feet from heating devices.
 - i. **Utility Rooms-** coverage is required for all attached utility rooms.
 - j. **Attached Garages-** coverage is required.
 - k. **Saunas, Wine Rooms, Etc.-** coverage is required.

H. FULL HEIGHT CROSS SECTION

1. Location where section is taken
2. Piping shown
3. Heads shown
4. Elevation of building finished floor

I. HYDRAULIC CALCULATIONS

1. Single most hydraulically demanding head (if required)

2. Most hydraulically demanding multiple heads (2, 3, and 4) _____sq. feet

| Up to 6,999 sq feet | 7,000 to 9,999 sq feet or Beam & Sloped Celings | Over 10,000 sq feet |
|---------------------|--|---------------------|
| 2 head calculation | 3 head calculation | 4 head calculation |

3. Hydraulic reference points indicated
4. Source pressure indicated
5. Source elevation indicated
6. Elevation at remote heads
7. Proper Hazen-Williams coefficient used
8. Loss through tees on run calculated
9. System demand 10% below available supply
10. Proper sprinkler head data used (flow, GPM, K Factor)
11. Domestic demand added
12. A booster pump may be required if the flow pressure is lower than the calculated residual pressure at acceptance testing.

J. GENERAL NOTES AND INFORMATION

1. All material and installation to conform to the standards of NFPA-13D
2. Sprinkler heads omitted from bathrooms due to noncombustible fixtures and less than 55 sq. feet
3. Exterior exposed steel piping painted
4. Water flow alarm(s) shall be clearly audible in all living spaces over background noise with all intervening doors closed
5. Storage in attic is not allowed if sprinkler heads have not been provided in these areas
6. Access to areas under enclosed stairwells has not been provided and sprinklers have not been provided for these areas
7. All penetrations through firewalls such as walls and ceilings between attached garage and residence will be sealed in an approved manner to maintain the integrity of the firewall
8. Pipe hangers shall be in accordance with NFPA-13D and the written instructions of the pipe manufacturer
9. Drilling or notching of structural members shall be performed in strict accordance with the current CBC
10. Three replacement heads of each type used PLUS a head wrench shall be provided in the spare head cabinet
11. Head guards shall be placed on sprinkler heads in the garage unless they are semi-recessed

