CITY OF NEWPORT BEACH

COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION

100 Civic Center Drive | P.O. Box 1768 | Newport Beach, CA 92658-8915
www.newportbeachca.gov | (949) 644-3200

FIRE SPRINKLER
ONE AND TWO-FAMILY DWELLINGS
PLAN REVIEW COMMENTS

Project Description:

Project Address: **Plan Check No.:**

Permit App. Date: Plan Check Expires:

Use: Occupancy: Const. Type:

No. Stories: Permit Valuation:

Architect/Engineer: Phone:

Owner/Tenant: Phone:

Applicant/Contact: Phone:

Plan Check Engineer: **Phone:**

X	1st Review: (date)		2nd Review: *Italic comments*		3rd Review: **By Appointment**

The project plans were reviewed for compliance with the following codes and standards:
2010 CBC; 2010 CPC; 2010 CRC, 2010 NFPA 13D, 2010 CFC

The code section references are from the 2010 CBC, unless otherwise stated.

- *TO EXPEDITE PROJECT APPROVAL:* Please provide a written response indicating how and where each comment was resolved on the plans.
- Resubmit all previously reviewed plans, updated plans and supporting documents with each subsequent review.
- *AFTER 2nd PLAN REVIEW*: Please call the plan check engineer listed above to schedule a plan review appointment, to expedite project approval.
- For clarification of any plan review comment, please call the plan check engineer listed above.
- Plan review status is available online at ***www.newportbeachca.gov***. Project status is also available using the interactive voice response system at 949-644-3255, or by speaking with a permit technician at 949-644-3288 during business hours.

1. Sprinkler Drawings must be prepared, stamped and signed by a licensed civil, mechanical, or fire protection engineer or by a licensed sprinkler contractor holding a valid C-16 license.

2. Specify the name, license number, address and phone number of the preparer of the sprinkler drawings.

3. See riser assembly details below. Riser assembly to include:

   a. Main control valve, which controls the sprinkler system & domestic water supply.

   b. Domestic water supply valve, which controls the domestic water supply only.

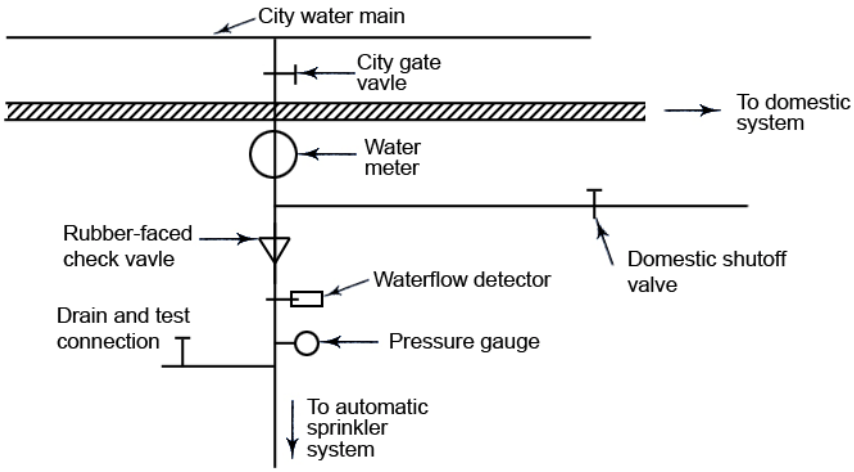
   c. Pressure gage

   d. Check valve

   e. Water flow switch

   f. Test/drain valve

SINGLE-FAMILY - SPRINKLER RISER ASSEMBLY



4. Obtain a certificate of available water flow information from the Utilities Division (949) 718-3410. Print the water flow certificate onto the plans.

   Exception: Alterations and additions to residences that are equipped with fire sprinklers installed in accordance with NFPA 13D, and the alteration/addition does not exceed 50% of the existing square footage of the residence within the immediate past 24 months. These projects would be exempt and may use the water pressure gauge value indicated on the existing fire sprinkler riser in lieu of obtaining a current water flow test.

5. Provide water supply test data and pressure/flow curve. Indicate on the plans the size of existing or proposed water meter. 1" minimum water meter required on combination system.

6. Show location of fire alarm bell(s) and provide the following items as notes on the plans:

   a. On exterior of building (NBMC Section 903.3.1.3.2, local amendment to NFPA 13-D, Section 7.6)

   b. Within the building. Alarm to be audible in all rooms inside the dwelling. Sound level in sleeping rooms with all intervening doors closed shall be a minimum of 15 dBA above average ambient sound level but not less than 75 dBA.
      Exception: When a low voltage fire alarm system is installed, smoke detectors may be used to sound all alarms concurrently (NBMC Section 903.3.1.3.2, local amendment to NFPA 13-D, Section 7.6).

7. Specify all system components:
   a. Pipe, NFPA 13-D tables 5.2.1.1 and 5.2.2.2,
   b. Fittings, NFPA 13-D tables 5.2.5 and 5.2.9.2.
   c. Provide the specifications and listing for sprinkler heads, hangers and braces.

8. Provide a sprinkler layout plan for each floor. Specify:
   a. Pipe size
   b. Sprinkler location
   c. Hanger location

9. Provide sections through rooms with sloping ceiling showing the location of sprinkler heads. Verify sprinkler head is listed for sloped ceiling.

10. Provide sprinkler legend on the plans. Legend shall include symbol, count, type, finish, temperature, K-factor, manufacturer, model, and sprinkler identification number (S.I.N.)

11. Print sprinkler head technical sheets onto the plans.

12. Sprinklers installed where maximum ambient ceiling temperatures do not exceed 100 F. shall be ordinary temperature–rated sprinklers. (135-170F.)(NFPA 13-D section 7.5.5.1)

13. Sprinklers installed where maximum ambient ceiling temperatures are between 101 F. and 150 F. shall be intermediate–rated sprinklers (175-225F.) (NFPA13-D Section 7.5.5.2. Examples are skylights and unventilated attics.)

14. Using computer methods (NFPA 13-D Section 8.4.4), provide hydraulic design calculations for water flow and pressure demand. The fire sprinkler system shall be designed to provide a margin for future loss by reducing both the static and residual design pressures by either of the following methods.(''a'' or ''b'' below):
   a. 10% of the static pressure when the static pressure does not exceed 100 p.s.i.
   b. The pressure indicated by the Fire Sprinkler Water Availability Reduction Graph if the static pressure exceeds 100 p.s.i. (See Fire Department Guideline – F.02)
   c. Typical reductions would be 14%@110 p.s.i., 18%@120 p.s.i., 22%@130 p.s.i., 26%@140 p.s.i., and 30%@150 p.s.i. and over.

15. Where a water supply serves both domestic and fire sprinkler systems, 5 gpm shall be added to the sprinkler system demand at the point where the systems are connected unless a device is installed to prevent flow into the domestic water system upon operation of a fire sprinkler. (NFPA 13-D Section 6.2.3 as amended in 2010 CFC.)

16. For sprinklers that <u>are listed</u> with specific discharge criteria, the system shall provide a minimum discharge density of 0.05 gpm/sq.ft. (NFPA 13-D, 8.1.1.2.2)

17. Minimum pipe size to be (NFPA 13-D Section 8.4.3.1 / 8.4.3.2.):
   a. 1" ∅ for steel
   b. 3/4" ∅ for Copper (Cu), chlorinated polyvinyl chloride (CPVC), and polybutylene (PB)

18. Provide sprinkler in bathrooms where the area exceeds 55 sq. ft. (NFPA 13-D Section 8.6.2)

19. Provide sprinkler in storage closet, linen closets and pantries where the least dimension is larger than 3ft., or the area is larger than 24 sq.ft. (NFPA 13-D section 8.6.3)

20. Sprinklers not required in detached garages, open attached porches, carports with no habitable space above, and similar structures. NFPA 13-D Section 8.6.4 as amended in the 2010 CFC.

21. Add the following note to the plans: “The fire sprinkler installer shall provide to the owner/occupant instructions on inspecting, testing and maintaining the system” (NFPA 13-D, Section 4.1.1)

22. Write the following notes from [NFPA 13-D Section 6.5.3] on the plans:

    “A sign shall be affixed adjacent to the main shut-off valve that states in minimum ¼-inch letters, WARNING - The water system for this home supplies fire sprinklers that required detain flows and pressures to fight a fire. Devices that restrict the flow or decrease the pressure or automatically shut off the water to the fire sprinkler system, such as water softeners, filtration systems, and automatic shut off valves, shall not be added to this system without a review of the fire sprinkler system by a fire protection specialist. Do not remove this sign.”

23. When fuel-fired equipment is present, at least one quick-response intermediate temperature sprinkler shall be installed above the equipment (NFPA 13-D Section 8.6.5.1)