



# CITY OF NEWPORT BEACH

## BUILDING DEPARTMENT

3300 NEWPORT BLVD.  
P.O.BOX 1768, NEWPORT BEACH, CA  
(949) 644-3275

### NON-RESIDENTIAL FIRE SPRINKLER CORRECTIONS

Project Description:

Project Address:

Plan Check No.:

Date Filed:

No. Stories:

Use:

Occupancy:

Const. Type:

Architect/Engineer:

Phone:

Owner:

Phone:

Submitted Valuation:

Checked by:

Phone: (949) 644-32

Permit Valuation:

1<sup>st</sup> Check

2<sup>nd</sup> Check

3<sup>rd</sup> Check

4<sup>th</sup> Check\*

**\*NOTE: Do not resubmit after the 3<sup>rd</sup> plan check. Call plan check engineer for an in-person recheck appointment.**

**WARNING: PLAN CHECK EXPIRES 180 DAYS AFTER SUBMITTAL.**  
**THIS PLAN CHECK EXPIRES ON: \_\_\_\_\_**

**Approval of plans and specifications does not permit violation of any section of the Building Code or other City ordinances or State law.**

**This plan check is according to NFPA 13, 2002 Edition.**

- Make all corrections listed below.
- Return this correction sheet and check prints with corrected plans.
- Indicate how each correction was resolved.

1. Designer to have License Classification marked below:

C-16 (underground & overhead)

C-34 (underground only)

C-36 (underground only)

"A" (Gen. Engineering)

Note: Contractors may only design sprinkler systems, which they will install. Fire Protection Engineer and Civil Engineer may design both underground and overhead portions.

2. Specify the following:

Job address:

Owner's name and address:

Designer's name and license number:

3. Two wet-signed and stamped sets are required for permit issuance.
4. Architect to coordinate deferred sprinkler drawings submittal with architectural drawings and certify sprinkler drawings prior to submittal to plan check.
5. Specify type of sprinkler system. 1-4.3.
  - Wet pipe
  - Dry pipe
  - Pre-action
  - Circulating closed loop
  - Deluge
  - Anti-freeze
  - Combined dry pipe and pre-action
  - Combined Standpipe/Sprinkler System
  - Gridded
  - Looped
6. Specify the occupancy classification per section 2-1 and area per sprinkler (per section 5-6.2.2).
  - Light hazard
  - Ordinary hazard group I
  - Ordinary hazard group II
  - Ordinary hazard group III
  - Extra hazard group I
  - Extra hazard group II
  - High piled stock
7. Specify if the construction is obstructed or unobstructed 1-4.6.
  - Smooth ceiling
  - Beam and Girder
  - Bar joist
  - Wood joist
  - Wood Truss Construction
8. Provide fire hydrant flow test data. Contact the Public Works Department (949) 644-3311.
9. Incorporate the water flow test data into your drawings.
10. Write a note on drawings "Double Check Back Flow Prevention Valve Assembly is Required. Contact the Newport Beach Public Works Department at (949) 644-3311 for the applicable Public Works construction standard detail."
11. Provide system calculations.
12. Provide Fire Department connection (FDC) with check valve on the front side (street side) of the building. Provide a sign in accordance with Newport Beach Fire Department Standard # 305.01.
13. FDC to contain (2) 2 ½" inlet. FDC to be within 150 ft. from public hydrant.
14. All connections from the private main to a building to have a listed indicating valve, show location. 3-3.1

15. Control valves to be clearly identified and secured.
16. Specify type of underground piping. All UG piping listed for fire protection service and in compliance with AWWA standards and suitable for:
  - Fire resistance
  - Maximum working pressure
  - Laying conditions
  - Soil conditions
  - Rated for at least 150 PSI
17. Specify type of joints and fittings for UG. pipe. All joints and fittings to be approved, compatible with pipe used.
18. Underground ferrous metal pipe to be lined, coated, wrapped and sleeved with 8 MIL polyethylene sleeve (local requirement 7-2).
19. Connection bolts to be stainless steel (local requirement 8.5.3).
20. Private fire service main to be 6" min. 7-6.1
21. Show location of sectional valve(s) for private fire service main water supply. 3-5.1
22. UG. pipe to a minimum of 30" below grade (36" below grade in paved areas). 8-1.1
23. UG. pipe not to pass under building. 8-3.1
24. Specify method of U.G. pipe restraint. Provide details. 8-6.2
25. Specify that underground pipe to be flushed per 9-1.1.
26. Provide hydrostatic test notes. UG pipe to be tested per section 9-2.
27. Show location of fire hydrants on site plan. 4-2
28. Provide a riser detail (elevation).
29. Specify clearance around riser and all pipe penetrating rigid walls and floors. 1" for pipes  $\leq 3$  1/2"@ and 2" for pipes  $\geq 4$ " @, provide caulking for mains and cross main. 6-4.4.1
30. Provide a system drain. Size per table 5-14.2.4.2
31. Provide a test drain valve.
32. Show what each system test drain line empties to in order to prevent water damage.
33. System has more than 20 heads, provide a flow switch and local water flow alarm. 5-15.1.1
34. Water flow alarm to be monitored in high-rise buildings (5-15.1.6) or if the system has more than 100 sprinkler heads (more than 20 heads in I Div. 1 occupancy) (CFC 1003.3.1). Provide alarm drawings.
35. Provide a pressure gage on riser near the system main drain (5-15.3.1).
36. Specify type of OH. pipe to be used in accordance with Table 3-3.1.
37. Specify type of OH. pipe fittings to be used in accordance with Tables 3-5.1 and 3-5.2.
38. Flexible coupling should be installed for pipes with sections greater than 2 1/2"  $\phi$  at the following locations: (6-4.2)
  - a. within 24" from top and bottom of risers
  - b. within 12" above and within 24" below the floor in multi-story buildings
  - c. on both sides of concrete walls within 1' of the wall surface
  - d. at or near expansion joints
  - e. within 24" of the top and bottom of drops to hose lines and mezzanines

- f. at seismic separation
  - g. within 24" of top of drops exceeding 15 ft. supplying more than one sprinkler
  - h. above and below any intermediate points of support for a riser or any vertical pipe
39. Place the following notes on drawings:
- a. pipe welding to be done by a certified welder
  - b. welded pipe to be inspected by City inspector prior to hanging
  - c. all welds to be stamped by welder
40. Hangers to be selected from Section 6-1.
41. If hangers are designed for the system main piping, they should support 5 times the weight of the water filled pipe plus 250#. (6-1.1). Hangers selected from tables shall support the weight of water filled pipe plus 250#. Provide hanger listing and detail.
42. Show location of riser supports. Anchor at top and bottom and at 25' in between, and at each section of pipe (6-2.5.3).
43. Spacing of pipe hangers to be per Table 6-2.2.
44. Each pipe segment on branch line to have one hanger min. (6-2.3.1)
45. Maximum cantilevered pipe with end sprinkler to be 3' for 1" @ pipe, 4' for 1 1/4" @ pipe and 5' for 1 1/2" @ pipe. (6-2.3.3)
46. The maximum length of unsupported arm over pipe to a sprinkler to be 2' for steel pipe, 1' for copper pipe. (6-2.3.4)
47. Design longitudinal and lateral bracing per 6-4.5.6
48. Longitudinal bracing shall be spaced at a maximum of 80 feet. 6-4.5.4
49. Provide a four way brace at the top of all risers. 6-4.5.5
50. Lateral bracing shall be spaced for main and cross main at a maximum of 40 feet. 6-4.5.3  
 Exception #2 for 6 inch rods  
 Exception #3 for U-hooks
51. Provide specs and drawing for sway bracing or specify the NFPA standard bracing from tables 6-4.5.8; 6-4.5.9
- a. Specify sprinkler head and listing. Orifice size to be 1/2" nominal.
  - b. Dry preaction system requires upright sprinkler heads or pendant heads listed for dry use.
  - c. Specify quick response sprinkler heads for new light hazard occupancies.
52. Provide spare sprinklers per 3-2.9.3:
- | <u>System Spare Sprinklers</u> |    |
|--------------------------------|----|
| 0 – 300                        | 6  |
| 300 – 1000                     | 12 |
53. Sprinklers to be spaced per Table 5-6.2.2(a), (b), (c); Minimum distance between sprinklers to be 6 feet, 5-6.3.4
54. Sprinklers in concealed attic space shall be of intermediate temperature classification. 5-3.1.4.2(6)
55. Sprinkler head to be at \_\_\_\_\_ ft. from wall and not more than 9' from wall in small rooms (800 ft<sup>2</sup>). 5-6.3.2.1
56. Min. distance to wall 4". 5-6.3.3

57. Sprinklers adjoining ceiling mounted obstructions must comply with Tables 5-6.4.1.2 and 5-6.5.2.3 for floor mounted obstructions.
58. Sprinkler deflector to be 1" to 12" below smooth ceiling. (1" to 6" below structural members. 22" max. below deck for obstructed condition.) 5-6.4.1.1 and 5-6.4.1.2
59. Sprinkler deflector to be parallel to sloped ceiling. 5-6.4.2
60. Minimum clearance below sprinkler is 18". 5-5.6
61. Sprinklers to be provided in kitchen exhaust duct serving the hood at (4-9.3; 4-9.4; 4-9.5):
  - a. duct entrance
  - b. at top of each vertical riser
  - c. at the midpoint of each offset
  - d. at 10 ft. on center in horizontal ducts
  - e. hood exhaust plenum chambers shall have a sprinkler at 10' on center maximum spacing
  - f. (4-9.3; 4-9.4; 4-9.5)
62. Sprinklers in hood exhaust duct and plenum shall be extra high temperature classification (325°F to 375°F) orifice to be 1/4" to 1/2" diameter. (4-9.6)
63. Side wall sprinkler head is required at 2' (max) above floor of hydraulic elevator pit. (5-13.6.1)
- 64.
- 65.

*Newport Beach Fire Department Standard Fire Prevention Specifications handout (See attached)*

# NEWPORT BEACH FIRE DEPARTMENT STANDARD FIRE PREVENTION SPECIFICATIONS

## STANDARD #F-1

Description: Signs on Fire Department Connections.

### Authority

Fire Code Section: NFPA 13, NFPA 14  
C.A.C. Title 19  
U.F.C.10.105(b)

### General

Proper identification of Fire Department Connections (F.D.C's) is essential for successful fire fighting operations in buildings with built-in fire protection. In order to simplify department operations, it is important for signs on F.D.C's to clearly indicate the location of the system being served, the type of system and the proper pump pressure needed if necessary.

- I. Requirements for Identification Signs at Fire Department Connections.
  - A. Signs shall be constructed of a durable material, preferably metal.
  - B. Signs shall be a minimum of four inches high by eight inches wide.
  - C. Lettering on the sign shall be at least one inch in height on a clearly contrasting background.
  - D. Signs are to be permanently mounted on the building adjacent to or directly on the F.D.C. and must be visible from the adjacent roadway.
  - E. In addition to other requirements in this specification, all signs must state the address of the building being served.
  
- II. Identification signs for automatic sprinkler systems not combined with standpipe systems.
  - A. For systems serving an entire building:

Sprinkler System  
1100 Irvine Ave.

- B. For systems serving a portion of a building, state the area served:

Partial Sprinkler System  
3<sup>rd</sup> and 4<sup>th</sup> Floor  
4340 Von Karman

- C. For systems on a loop or multiple systems in a complex served by a single F.D.C.:

Sprinkler System  
4311 Jamboree  
All Risers

III. Identification signs for automatic sprinkler systems combined with standpipes or yard hydrants.

- A. For systems in which the riser serves both as a standpipe and sprinkler supply, including buildings with fire pumps calculated to serve the sprinkler demand only. (Consult with Fire Prevention for assistance.)

Sprinkler Systems  
& Standpipes  
3333 W. Coast Hwy.

- B. For systems in which the F.D.C. serves both the sprinkler system and yard hydrants:

Sprinkler System  
& Yard Hydrants  
445 E. Coast Hwy.

For systems in which the riser serves both the standpipe and sprinkler systems and supply is provided by an on-site fire pump calculated to supply both the sprinkler and standpipe demand. (Consult with Fire Prevention for assistance.)

Sprinkler System &  
Standpipes  
Pump † PSI  
4675 MacArthur Court

\* To determine the pump pressure stated on the sign; 1) Determine the operational pressure of the on-site fire pump, 2) Adjust for the difference in elevation between the F.D.C. and the fire pump at .434 psi/ft., 3) Add 25 psi for system friction loss.

Example:

- |    |   |         |
|----|---|---------|
| 1. | Pressure stated on the test plate on the on-site pump = 180 psi.              |         |
| 2. | If the pump is below the F.D.C., subtract .434 pounds per foot of difference. | 180     |
|    | $10' \times .434 = 4.34 \text{ psi}$  | - 4.5   |
| 3. | Add 25 psi for friction loss in the F.D.C.                                    | + 25.0  |
|    |   | 200     |
|    | Total amount to be stated on sign:  | 200 psi |

IV. Identification signs for standpipe systems.

A. For F.D.C's which serve risers in all stairways:

Dry Standpipe  
All Stairways  
4910 Birch

B. For F.D.C.s which serve individual risers or risers in a single stairway:

Dry Standpipe  
North Stairway  
3000 Park Newport

V. Identification Signs for Dock Systems:

A. For F.D.C.s which serve boat docks, the inspecting officer shall determine the appropriate address of the docks. An address range may also be stated on the sign:

Dock System  
400-3446 Via Oporto