

**RESIDENTIAL FIRE SPRINKLER
PLAN REVIEW CHECKLIST**

1. Legal Owner

- a. Name _____
- b. Address _____
- c. Phone No. _____

2. Installing Contractor/Designer

- a. Name _____
- b. Address _____
- c. Phone No. _____

CIRCLED ITEMS EITHER REQUIRE CLARIFICATION, MODIFICATION, CHANGE, AND/OR A NOTE ON THE PLANS.

Inspector Test Valve location: _____

Sprinkler Riser location: _____

Spare Head Box Location: _____

Shut off valve location: _____

Thomas Register Map Number and Grid: _____

3) Job Site

- a) Location (Including street address) _____

4) Site Plan

- a) Water main connection _____
- b) Water main connection elevation _____
- c) Finished floor elevation _____
- d) Meter size (min. 1") _____
- e) Size of Underground
 - 1) Meter to main (1" max. by Water Dept.) _____
 - 2) Meter to residence _____
- f) Underground material
 - 3) Meter to main (Copper type "K") _____
 - 4) Meter to residence _____
- g) Scale of drawing _____
- h) North arrow _____
- i) Length of underground
 - 3) Meter to main _____
 - 4) Meter to residence _____

5) Vicinity Map

- a) North arrow _____
- b) Scale _____
- c) Cross Street _____
- d) Job site identified _____

6) Floor Plan (for each level) (include options)

- a) Scale _____
- b) North arrow _____
- c) Room occupancies indicated _____
- d) Location of partitions _____
- e) Size of all areas not requiring sprinklers _____
- f) Ceiling construction and height
 - 1) Beams – maximum beam depth that can be drilled for a fire sprinkler head is **8 inches or as per manufacturer sprinkler head cut sheet**
 - 2) Fans _____
 - 3) Fixtures _____
 - 4) Obstructions _____
- g) Any room under stairway (include baths) shall be protected. _____
- h) Location of all high temperature appliances and devices (i.e. fireplaces, stove, ranges, ovens, dryers, furnaces, space heaters, water heaters, etc.) _____
- i) Show heat zones per manufacturer's Specifications _____
- j) Spare head cabinet location noted _____
- k) Garages within 10' (airspace) or attached covered walkways shall be protected _____
- l) Square footage of area to be protected _____

*******Required Plan Submittals*******

- a) **Minimum 4 copies of plans**
- b) **Minimum 3 copies of calculations**
- c) **Cut sheets of sprinklers and any new material (1 set)**

7) Fire Sprinkler Riser

- a) Location (shall be inside the garage unless approved by the Fire Prevention Bureau)
- b) Riser detail (see attached Riser Detail)
- c) Check valve (resilient seated swing check)
- d) Pressure relief valve set @ 150 psi
- e) Main drain valve (½ “)
- f) Exterior aboveground shut-off (ball valve)
- g) Riser/Pipe material type _____
- h) Flow switch
- i) Gauge and range
- j) Location of alarm bell(s) and size (min. 8”)

- k) An additional 8” min. bell or interior horns required on dwellings with 5,000 or more sq.ft.

8) Sprinkler Piping

- a) Material _____
- b) All pipe sizes indicated (1” min. pipe diameter)
- c) Inspector’s test valve type and location keyless, remote from riser, exterior access with sign and splash block located 4’ to 6’ above grade

9) Water Supply

- a) Water department name
- b) Water department phone number
- c) Water department contact person
- d) Available water pressure and elevation (By Water Dept. w/copy of e-mail or letter)
- e) Date of information obtained _____
- f) Fire approved pressure regulator required when static pressure is above 150 psi (see attached)

10) Sprinklers

- a) Manufacturer and type of heads

- b) Calculated spacing noted on plans _____
- c) Total quantity to be installed _____
- d) Special high temperature heads, garage, etc.
- e) Dimensions to walls
- f) Dimensions to adjacent sprinklers
- g) Sprinklers per manufacturer’s listing providing total protection
- h) FAU’s in attic shall be protected
- i) Enclosed patios/porches shall be protected
- j) Quick response commercial heads required in garages with a maximum 150 sq. ft. spacing per head.

11) Full Height Cross Section

- a) Location where section is taken
- b) Scale _____
- c) Piping and heads shown
- d) Elevation of building finished floor _____
- e) Elevation of piping and heads shown _____

12) Hydraulic Calculations

- a) Two most hydraulically demanding heads
- b) Three (3) most hydraulically demanding heads for vaulted or sloped and lofts ceilings unless head is listed for sloped ceilings
- c) Four (4) most hydraulically demanding heads when dwelling is 10,000 or more sq. ft.
- d) Hydraulic reference points indicated
- e) Source pressure indicated
- f) Source elevation indicated
- g) Elevation at remote heads
- h) Proper Hazen-Williams coefficient used
- i) Loss through all fittings calculated
- j) Systems demand 10% below available supply
- k) Proper sprinkler head data used (GPM, PSI, K-factor)
- l) Plans note the required demands (GPM and required pressure at source)

13) General Notes and Information on Plans

- a) Legend
- b) All material and installation to conform to the standards of NFPA-13D
- c) Sprinkler heads omitted from bathroom due to non-combustible fixtures and not exceeding 55 square feet
- d) Waterflow alarm(s) shall be clearly audible in all living spaces over background noise with all doors closed
- e) Exterior exposed steel piping painted
- f) Storage in attic and crawl spaces is not allowed unless protected with sprinklers
- g) Access to areas under stairwells shall be protected (closets, baths, etc.)
- h) 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
- i) Pipe hangers shall be in accordance with NFPA-13D
- j) Drilling or notching of structural members shall be performed in strict accordance with the current UBC
- k) Three heads of each type used PLUS head wrench shall be provided in spare head cabinet
- l) Head guards to be provided on all garage heads
- m) As-Built plans and/or calculations shall be required when the following occur:
 - (1) Change the type of heads
 - (2) Change spacing of heads
 - (3) Change the location of the riser (approved location)
 - (4) Change of major pipe runs
- n) As-Built plans and calculations shall be approved prior to inspection approval and will require payment of a new plan check fee.

*****Required Plan Submittals*****

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- b) **Minimum 3 copies of calculations**
- c) **Cut sheets of sprinklers and any new material (1 set)**

