

Whitney Fire Protection District

NFPA 13 Sprinkler System Acceptance Inspection

2006 IFC and 2007 NFPA 13

This worksheet is for jurisdictions that permit the use of the 2007 NFPA 13 in lieu of IFC's referenced 2002 NFPA 13.

Date of Inspection: _____ Permit Number: _____

Business/Building Name: _____ Address of Project: _____

Contractor: _____ Contractor's Phone: _____

Reference numbers following worksheet statements represent an NFPA code section unless otherwise specified.

Pass | Fail | NA

1. | | Approved drawing and above-ground piping certification documents are on site.
2. | | Underground supply testing and flushing is witnessed and underground piping certification is provided. Flushing requirements shall be 880 GPM for 6 in., 1,560 GPM for 8 in., 2,440 GPM for 10 in., 3,520 for 12 in., have them pitot and calculate that flow and confirm the velocity is at least 10 ft/sec.
3. | | Hydrostatic test: wet system, 200 PSI for 2 hours and it should include the FDC piping.
4. | | Hydrostatic test: dry and double interlock system: 200 PSI for 2 hours and a 40 PSI air leak test for 24 hours with less than 1.5 PSI loss, 24.2.2.
5. | | Back flow prevention device is installed in accordance with the approved set of plans and forward flow tested, 24.2.5.
6. | | Systems subject to pressures greater than 150 PSI shall be hydrostatically tested at 50 PSI above system working pressure, 24.2.1.2.
7. | | Operational test of the dry-pipe valve is performed and the quick opening device (500+ gallon systems) is tested, 750+ gallon system must trip within 60 seconds.
8. | | Pressure reducing valves are tested at maximum and normal inlet pressures or as specified by the manufacturer, the supply pressure is recorded on the certificate, a relief valve is on the discharge side and gauges on each side of the valve, 24.2.4.

Riser

9. | | The main drain is routed to the exterior with a turned down elbow or an inside drain capable of handling the water flow. A flow test is performed. The main drain pipe is $\frac{3}{4}$ in. or greater for a riser up to 2 in., $1\frac{1}{4}$ in. or greater for a riser $2\frac{1}{2}$ in. to $3\frac{1}{2}$ in., 2 in. for a riser 4 in. or greater, 8.16.2.4.2, 24.2.3.4.
10. | | Water control valves and flow switches are electronically supervised and tested, IFC 903.4.
11. | | Paddle type water flow is not allowed for dry, preaction or deluge systems.
12. | | 24 hour monitoring service agency or remote supervising station or proprietary supervising station received signals, 903.4.1.
13. | | Water flow alarm is tested and initiates an alarm within 5 minutes, located in accordance with the approved set of plans, and it is properly signed, 24.2.3.1.
14. | | High-rise: each floor system shall have water flow device with a test connection and be connected to the fire alarm system.
15. | | Permanent system identification signs for each control valve and what portion of the building each valve serves is provided, 6.7.4.
16. | | A permanent hydraulic nameplate is attached to the riser, 24.5.1. A general information sign that indicates the design capabilities and limitations of the automatic sprinkler system shall be provided at each system riser, antifreeze loop and auxiliary system control valve. The sign shall contain the required information specified in Sections 24.6.2, 24.6.1
17. | | Riser is supported by hanger or attachment, for multistory at the lowest level, each alternate level, above and below offsets, and at the top, 9.2.5.4.
18. | | Gauges are above and below riser check valve, 7.1.1.2.

FDC

19. | | FDC capped and permanently signed with system type, the required pressure to support the system if the pressure demand is equal to or greater than 150 PSI, and area or building served, 8.17.2.4.7.
20. | | FDC has check valve and drip valve, 8.17.2.5.
21. | | FDC for wet single riser system connects to the system side, 8.17.2.4.

- 22. ___ | ___ | ___ FDC for wet multiriser system connects after the main system shut off valve, 8.17.2.4.
- 23. ___ | ___ | ___ FDC for dry system connects between the indicating and dry-pipe valves.
- 24. ___ | ___ | ___ FDC pipe complies with the size indicated on the plans, 18 in. to 48 in. above grade, and properly supported, 8.17.2, A.8.17.2.

Sprinklers

- 25. ___ | ___ | ___ Spare sprinklers – Provide at least 6 spare sprinklers for systems designed with 300 or less sprinklers; 12 spare sprinklers for system designed using 300 to 1000 sprinklers, and 24 spare sprinklers for systems designed using more than 1000 sprinklers, 6.2.9.
- 26. ___ | ___ | ___ Replacement wrench(s) are provided, 6.2.9.
- 27. ___ | ___ | ___ Sprinklers shall be a minimum of 4 in. from the wall and be properly spaced, 8.6.3.3.
- 28. ___ | ___ | ___ Sprinkler heads have a guard if subject to damage.
- 29. ___ | ___ | ___ Sprinkler heads are not painted or covered.
- 30. ___ | ___ | ___ ESFR upright deflectors are a minimum 7 in. above the top of the pipe, 8.12.5.3.2.1.
- 31. ___ | ___ | ___ EFSR sprinklers are at least 1 ft. horizontally from the bottom edge of bar joist or open truss and at least 3 ft. above the top of the storage level, 8.12.6.
- 32. ___ | ___ | ___ Proper type and temperature sprinklers are used and match plans.
- 33. ___ | ___ | ___ Escutcheon plates are installed.
- 34. ___ | ___ | ___ Sprinklers are not obstructed, 8.5.5-8.12.5.

Pipe: Hangers, Seismic, and Penetrations

- 35. ___ | ___ | ___ Piping layout and size are the same as on the approved set of plans.
- 36. ___ | ___ | ___ Pipe penetrations have proper clearance 2 in. for pipe 1 in. to 3½ in., 4 in. for pipe 4 in. and larger, 9.3.
- 37. ___ | ___ | ___ When flexible couplings are used in risers, above and below floor penetrations of multi-story structures, near penetrations of concrete or masonry walls, and near expansion joints, their location is in accordance with Section 9.3.2.1-4
- 38. ___ | ___ | ___ Minimum clearance around pipes penetrating construction elements listed in 9.3.4.1 is in accordance with 9.3.4.2 unless the requirements of 9.3.4.3 – 9.3.4.7 are met.
- 39. ___ | ___ | ___ A seismic separation assembly is provided at building seismic joints, 9.3.3.
- 40. ___ | ___ | ___ Lateral sway bracing is provided and spaced is in accordance with the approved set of plans for all mains, cross mains, and branch lines 2½ in. and larger.
- 41. ___ | ___ | ___ Longitudinal sway bracing is provided and spaced is in accordance with the approved set of plans for feed mains and cross mains, 9.3.5.4.
- 42. ___ | ___ | ___ A 4-way sway brace is provided at least every 25 ft. and at the top of each riser, 9.3.5.5.
- 43. ___ | ___ | ___ Longitudinal and lateral bracing is provided for each run of pipe between the change of pipe direction unless the pipe run is less than 12 ft., 9.3.5.11.3.
- 44. ___ | ___ | ___ Riser nipples greater than 4 ft. are restrained from lateral movement, 9.3.6.6.
- 45. ___ | ___ | ___ Seismic bracing wire, wrap-around u-hooks, or lateral sway bracing shall not exceed 30 ft. spacing and are used to restrict sprinkler movement that could impact the building, equipment or finishing materials, 9.3.6.
- 46. ___ | ___ | ___ Restraining straps are on all C-clamps and the strap is bolted through if there is not a lip on the beam, 9.3.7.1.
- 47. ___ | ___ | ___ Branch lines have one hanger per section of pipe, 9.2.3.2.
- 48. ___ | ___ | ___ Mains and cross mains have one hanger between each branch line and at the end of the main, 9.2.4.
- 49. ___ | ___ | ___ The maximum distance between the end sprinkler and hanger is 36 in. for 1in. pipe, 48 in. for 1¼ in., and 60 in. for 1½ in. pipe and greater, 9.2.3.4.
- 50. ___ | ___ | ___ Risers in multistory buildings have supports at the lowest level, at each alternate level, below offsets, and at the top, 9.2.5.4.
- 51. ___ | ___ | ___ Hangers are not within 3 in. of upright sprinklers, 9.2.3.3.

Dry and Preaction Systems

- 52. ___ | ___ | ___ Dry system compressor, fill line, pressure gauges, check valve and shutoff valve and relief valve are installed in accordance with the approved set of plans and 7.2.6.2. The system fills the system within 30 minutes, 7.2.6.2.2.
- 53. ___ | ___ | ___ Preaction and deluge systems are tripped by activation of the detection system.
- 54. ___ | ___ | ___ Riser room is heated, 7.2.5.
- 55. ___ | ___ | ___ Air pressure is set according to the manufacture instruction document or at least 20 PSI above the trip pressure, 16.2.2.

