

City of Jacksonville Beach Fire Sprinkler System Permit Plan Review Checklist



Jacksonville Beach Planning and Development
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Fire Sprinkler Permit checklist (NFPA 13, 2010 ed.): The following information shall be included on all fire sprinkler plans submitted for permit review. Please include hydraulic calculations and equipment specification sheets.

NFPA 13-14.1.3 Working plans shall be drawn to an indicated scale, on sheets of uniform size, with a plan of each floor, and shall show those items from the following list that pertain to the design of the system:

1. Name of owner and occupant
2. Location, including street address
3. Point of compass
4. Full height cross section, or schematic diagram, including structural member information if required for clarity and including ceiling construction and method of protection for nonmetallic piping
5. Location of partitions
6. Location of fire walls
7. Occupancy class of each area or room
8. Location and size of concealed spaces, closets, attics, and bathrooms
9. Any small enclosures in which no sprinklers are to be installed
10. Size of city main in street and whether dead end or circulation; if dead end, direction and distance to nearest circulating main; and city main test results and system elevation relative to test hydrant
11. Other sources of water supply, with pressure or elevation
12. Make, type, model, and nominal K-factor of sprinklers including sprinkler identification number
13. Temperature rating and location of high-temperature sprinklers
14. Total area protected by each system on each floor
15. Number of sprinklers on each riser per floor
16. Total number of sprinklers on each dry pipe system, pre-action system, combined dry pipe –preaction system, or deluge system
17. Approximate capacity in gallons of each dry pipe system
18. Pipe type and schedule of wall thickness
19. Nominal pipe size and cutting lengths of pipe (or center-to-center dimensions). Where typical branch lines prevail, it shall be necessary to size only one typical line
20. Location and size of riser nipples
21. Type of fittings and joints and location of all welds and bends. The contractor shall specify on drawing any sections to be shop welded and the type of fittings or formations to be used
22. Type and locations of hangers, sleeves, braces, and methods of securing sprinklers when applicable
23. All control valves, check valves, drain pipes, and test connections
24. Make, type, model, and size of alarm or dry pipe valve
25. Make, type, model, and size of preaction or deluge valve
26. Kind and location of alarm bells
27. Size and location of standpipe risers, hose outlets, hand hose, monitor nozzles, and related equipment
28. Private fire service main sizes, lengths, locations, weights, materials, point of connection to city main; the sizes, types and locations of valves, valve indicators, regulators, meters, and valve pits; and the depth that the top of the pipe is laid below grade
29. Piping provisions for flushing
30. Where the equipment is to be installed as an addition to an existing system, enough of the existing system indicated on the plans to make all conditions clear
31. For hydraulically designed systems, the information on the hydraulic data nameplate
32. A graphic representation of the scale used on all plans
33. Name and address of contractor
34. Hydraulic reference points shown on the plan that correspond with comparable reference points on the hydraulic calculation sheets
35. The minimum rate of water application (density), the design area of water application, in-rack sprinkler demand, and the water required for hose streams both inside and outside
36. The total quantity of water and the pressure required noted at a common reference point for each system

37. Relative elevations of sprinklers, junction points, and supply or reference points
38. If room design method is used, all unprotected wall openings throughout the floor protected
39. Calculation of loads for sizing and details of sway bracing
40. The setting for pressure-reducing valves
41. Information about backflow preventers (manufacturer, size, type)
42. Information about antifreeze solution used (type and amount)
43. Size and location of hydrants, showing size and number of outlets and if outlets are to be equipped with independent gate valves. Whether hose houses and equipment are to be provided, and by whom, shall be indicated. Static and residual hydrants that were used in flow tests shall be shown
44. Size, location, and piping arrangements of fire department connections



FLORIDA ADMINISTRATIVE CODE

6IG15-32.004

DESIGN OF WATER BASED FIRE PROTECTION SYSTEMS

1. Water Based Fire Protection Systems include, but are not limited to, automatic sprinkler systems of wet, dry, fine water spray (mist), manual, and deluge valve controlled types, pumping systems, standpipes, fire water mains and dedicated fire protection water sources.
2. To ensure minimum design quality in Fire Protection System Engineering Documents, said documents shall include as a minimum the following information when applicable:
 - A. The Point of Service for the fire protection water supply as defined by 633.021(17) F.S.
 - B. Applicable NFPA standard to be applied, or in the case where no such standard exists, the engineering study, judgments, and/or performance based analysis and conclusions.
 - C. Classification of hazard occupancy for each room or area.
 - D. Design approach, which includes system type, densities, device temperature rating, and spacing for each separate hazard occupancy.
 - E. Characteristics of water supply to be used, such as main size and location, whether it is dead-end or circulating; and if dead-end, the distance to the nearest circulating main, as well as its minimum duration and reliability for the most hydraulically demanding design area.
 - F. When private or public water supplies are used, the flow test data, including date and time of test, who conducted test or supplied information, test elevation, static gauge pressure at no flow, flow rate with residual gauge pressure, hydrant butt coefficient, and location of test in relation to the hydraulic point of service.
 - G. Valve and alarm requirements to minimize potential for impairments and unrecognized flow of water.
 - H. Microbial Induced Corrosion (MIC). The Engineer of Record shall make reasonable efforts to identify water supplies that could lead to Microbial Induced Corrosion (MIC). Such efforts may consist of discussions with the local water purveyor and/or fire official, familiarity with conditions in the local area, or laboratory testing of water supplies. When conditions are found that may result in MIC contamination of the fire protection piping, the engineer shall design corrective measures.
 - I. Backflow prevention and metering specifications and details to meet local water purveyor requirements including maximum allowable pressure drop.
 - J. Quality and performance specifications of all yard and interior fire protection components.
3. Contractor submittals which deviate from the above minimum design parameters shall be considered material deviations and require supplemental engineering approval and documentation.
4. In the event the Engineer of Record provides more information and direction than is established above, he or she shall be held responsible for the technical accuracy of the work in accordance with applicable codes, standards, and sound engineering principles.

Specific Authority 471.008, 471.033(2), FS

Law Implemented 471.005(7),471.033(2), FS

History-New 5-19-93, Formerly 21H-32.004, Amended 4-2-2000, 6-26-01