Design and Construction Standards

Division 21 Fire-Suppression

General

In general, follow the guidelines below when designing, specifying and installing fire suppression systems. Unless specifically indicated otherwise, these guidelines are not intended to restrict or replace professional judgment.

1. All computations with head and equipment are to minimize the amount of network resources used.
2. All wiring shall be in accordance with the NEC and all other applicable codes.

Section 21 10 00 Water-Based Fire-Suppression Systems

1. All valves must be monitored by the fire alarm system and locked.
2. Heads should be centered in ceiling tiles whenever possible.
3. A valved discharge line to a test header located outside the building shall be provided for demonstration and operating tests.
4. Rapid Protection Zones (RPZ) shall not be allowed
5. System shall include back flow protection on the domestic water line as required to be consistent with the requirements of the local water department.
6. All pumps, valves and similar devices shall be painted red. All piping shall be painted red or permanently banded red.
7. All pressure switches, pumps, valves and similar devices shall be installed with isolating valves to facilitate replacement of devices.
8. All actual devices for low suction pressure, fire pump interruption, tamper switches, and pump room flow switches shall be wired into the main fire alarm panel as distinct zone annunciation. Specify and show which devices are to be furnished by the Electrical contractor, installed by the Fire Protection Contractor, and wired by the Electrical contractor.
9. Test valves shall be as remote as possible for each zone, have piped-in drainage to allow for testing without the use of hoses or special adapters, be located in stairwells or some common, easily accessible location and contain a sight glass for visual inspection of the flow. Each sprinkler zone shall include one drain and one test station. If the test station drain is on an interior drain line, the drain line shall be sized to accommodate the Inspector's station flow rate. The locations shall be coordinated with the associate and the University.
10. Provide a low pressure switch on all systems to detect a gradual loss of air pressure. Connect switch to fire alarm system as a distinct zone.
11. Air Compressor shall be on a dedicated electrical circuit.

Section 21 12 00 Fire-Suppression Standpipes

1. Only provide 2 1/2" connections for fire department use.
2. Hose cabinets are not required.

Section 21 13 00 Fire-Suppression Sprinkler System

1.

Section 21 21 00 Carbon Dioxide Fire-Extinguishing Systems

1.

Section 21 22 00 Clean-Agent Fire-Extinguishing Systems

1.

Section 21 23 00 Wet Chemical Fire-Extinguishing Systems

1.

Section 21 24 00 Dry Chemical Fire-Extinguishing Systems

1.

Section 21 30 00 Fire Pumps

1.

End of Division 21 Fire-Suppression – Construction Standards