

21 12 00 FIRE SUPPRESSION STANDPIPE

PART 1 PRODUCTS

1.01 Drains and Test Piping

- A. Drains must be plumbed to the exterior of the building.

1.02 Standpipe Systems

- A Provide galvanized pipe, fittings, and hangers for all dry standpipe systems.
- B. Drain shall be provided at the bottom of all Stand Pipe Risers

PART 2 EXECUTION

2.01 System Acceptance Testing and Commissioning

- A. Perform acceptance tests according to NFPA 13 and SHSU Third Party Testing Guidelines that apply to fire sprinkler system testing with a representative of SHSU Fire Prevention Services and FSSS (Fire Safety System Specialist) present. Prior to acceptance, accurate records must be submitted and required training for SHSU personnel completed. Provide copies of test reports to the SHSU AHJ and FSSS, as tests are completed. Provide a complete set of all test results to the University at the completion of the project and a copy in each O&M Manual.

21 13 00 FIRE SUPPRESSION SPRINKLER SYSTEM

PART 1 GENERAL

1.01 Related Work:

- A. Sprinkler pipes & sprinkler heads shall not pass through or be installed in an Electrical or Data closet

PART 2 PRODUCTS

2.01 Pipe

- A. Aboveground Pipe

- 1. All wet sprinkler system piping shall be a minimum of schedule 40 steel. All dry and pre

located in areas without suspended
sized pipe as necessary, such as priming,
be painted red

B. Underground Pipe:

1. Tracer wire shall be installed with all underground piping
2. No underground pipe shall be covered until a joint inspection SHSU Plumbing and SHSU FSSS.

2.02 Mechanical Grooved Couplings

- A. When grooved couplings are used, rolled-grooved joints are required with fittings and couplings designed for a working pressure of 300 psi. Malleable iron housing clamps: ASTM A47; UL labeled; engage and lock, designed to permit some angular deflection, contraction, and expansion (Firelock fittings not acceptable).

2.03 Valves

- A. All valves in the sprinkler system shall be UL listed and/or FM approved butterfly type indicating valves except for the following, which shall be O.S. & Y:
1. All indicating valves on the suction side of a fire pump.
 2. Where indicated on the contract drawings.
- B. All butterfly valves shall have a built in tamper resistant switch for supervision of the open position. The switch shall be contained within a NEMA Type 1, general purpose indoor rated housing. Either unauthorized removal of the switch housing (when the valve is open) or closing the valve, (h s)3.6

1. Gate valve on incoming water service shall be operable by a UL listed post indicator valve with tamper switch monitored by the associated building fire alarm panel.
- G. All valves controlling water supply for sprinklers shall be readily accessible for use by emergency and maintenance personnel.
- H. Except for underground water supply valves located in roadway boxes, all valves controlling water supply to sprinklers shall be chained and locked.
- I. A control valve shall be installed at the base of each riser. (Put into Section: Standpipe: 5.21.10; Locate standpipe isolation control valves within the stair enclosure and exposed for maintenance purposes.)

2.04 Piping Accessories

- A. Sleeves for underground pipe shall have mechanical rubber seals and be watertight.

2.05 Drains and Test Piping

- A. There shall be an auxiliary drain from the furthest point from supply.
- B. Every waterflow switch shall have an inspector's test connection located downstream and piped to the outside of the building designed to handle full flow from the drain.

2.06 Express Drains:

- A. A remote express drain line is required for all buildings with floor control assemblies in addition to the main / inspector's test drain. This drain line shall be installed in the remote stairwell from the supply standpipe. The drain line shall be piped to the outside of the building.

2.07 Sprinklers

- A. Where required by the project, sprinklers shall be centered in two directions in ceiling tiles. Pendent sprinklers required to be placed in the center of ceiling tiles, shall be supplied from a return bend that connects to an outlet at the top of the fire sprinkler branch line piping.

2.08 Dry Pipe System

- A. In areas subject to freezing that cannot be protected by dry type sprinklers on a wet sprinkler system, a dry pipe system shall be installed. Antifreeze loops are not permitted.
- B. Provide a non-riser mounted tank type air compressor
- C. All dry pipe valves shall not be externally resettable
- D. Install permanent, typed, local labels at devices showing "HIGH AIR" setting, "LOW AIR" setting, "COMPRESSOR ON" setting, "COMPRESSOR OFF" setting, and "TRIP PRESSURE" setting.

