

## PART 1 - GENERAL

### 1.01 Intent of Document

The information included in this section is intended to identify the **SPECIFIC ITEMS** required by Oklahoma State University in the design and construction of facilities on the campus. Items of "normal, code, industry or standard construction practice" are not included in this section.

### 1.02 Contractor Qualifications / Requirements

- A. Minimum of five years specialized experience in sprinkler system installation. Project foremen shall have a minimum of three years experience.
- B. Shop drawings: Submitted and approved by representatives of the Owner's Architecture Services and Environmental Health Services departments before installation.

### 1.03 Design Criteria

Scheduled system is preferred. Calculated system may be used if prior written approval is obtained from the Owner's Environmental Health Services department.

## PART 2 - MATERIALS

- A. **Above ground piping:** Schedule 40 black pipe without reducing bushings.
- B. **Sprinklers:** Exposed to public view shall be chrome plated semi-recessed type - **Star Sprinkler Corp. or approved equal.**
- C. **Spare Sprinkler Heads:** Six spare sprinkler heads for **each** temperature and style used, a sprinkler wrench and a stopper for **each type head;** install in metal box adjacent to the main sprinkler valve in accessible location not more than 5 1/2 feet above floor level.
- D. **Valve Cabinets: Potter - Roemer Series 1800, or approved equal,** steel with white prime coat finish, full recessed type, wire glass door. Drains shall be located in mechanical rooms or in accessible closets.
- E. **Hose Valves: Potter - Roemer, Elkhart Brass or approved equal,** single 2-1/2" polished chrome plated hose valve with 2-1/2" to 1-1/2" adapter with 1-1/2" cap and chain. The 2-1/2" Valve and adapter shall be provided with National Standard Hose Threads. Turn outlet to corridor and cover any exposed pipe with chrome sleeve. 1" minimum clearance between handwheel and cabinet.

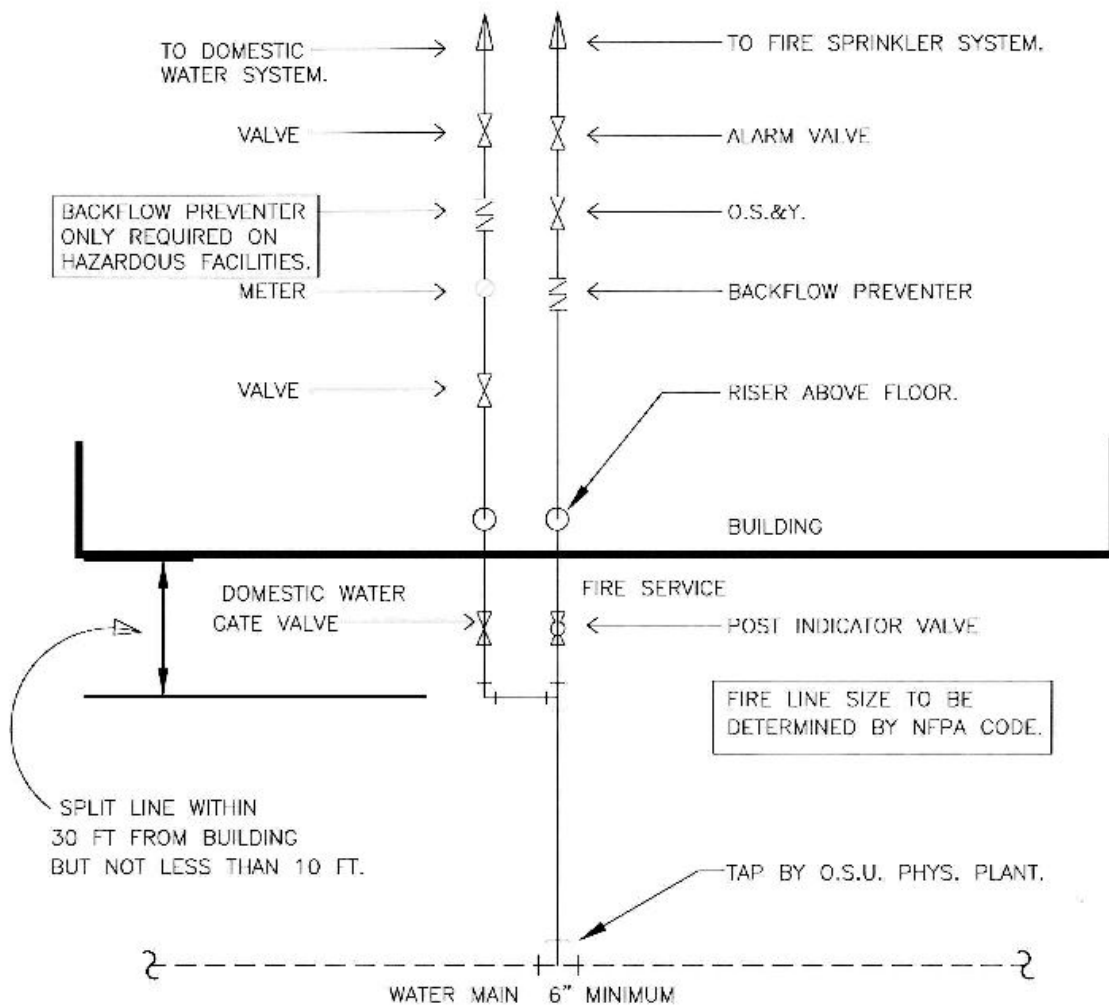
- F. **Flow Switches: Potter Electric Signal Co. Model VSR-D - NO SUBSTITUTES** with time delay set between 35 - 40 seconds, hose bibb in accessible location up stream of each switch required. Label hose bibb "**Test Valve - Keep Closed**" in white letters on a red background.
- G. **Exterior fire department siamese connection: J.W. Moon, Inc., Model 1380 Siamese with Powhattan Brass Company # 243 breakable caps or approved equal**, sidewalk or flush mount wall type, installed 3' - 0" to 4'- 0" above exterior grade, polished chrome plated, with escutcheon plate with "**Automatic Sprinklers**" cast in plate, individual clappers on each of two inlet connections. Each inlet shall have female switch with pin lugs, National Standard Hose threads, gasket, and breakable-type cap. Piping shall be pitched to automatic ball drop inside building or to approved exterior concrete valve pit with access cover.
- H. **Control valves: Stockham, Traverse City or approved equal**, 175 lbs. test, crank type with butterfly valves, indicator, lockable in the open position with a padlock.
- I. **Exterior post indicator valve: Demco, Incorporated or approved equal**, painted with two coats of **Rust-Oleum No. 1565, International Red, Quick Dry Gloss - NO SUBSTITUTES**.
- J. **Electrical Supervisory Switch : Potter Electric Signal Co., Model PIVS- U - NO SUBSTITUTES** installed on post indicator and control valve so that a trouble signal will be registered on designated circuit of fire alarm system if valve is closed more than 1-1/2 turns from full open position. Switch shall be wired so when switch is in trouble position, it will not prevent sounding of fire alarm on circuit.
- K. **Water-motor alarm: 10"**, Mechanical, installed at 3' - 0" above finish grade on building exterior.

### **PART 3 - INSTALLATION & ACCEPTANCE**

- A. System shall be zoned into two zones per floor with sectional valves, water flow switches and tamper switches. Valves shall be capable of locking in open position.
- B. Install **ALL CONTROL VALVES AND FLOW SWITCHES** in accessible locations between 4 - 6 feet above finished floor.
- C. Underground piping shall be inspected for compliance by representatives of Owner's Architecture Services and Environmental Health Services departments before being covered.

- D. Underground piping shall be thoroughly flushed before piping is connected to building sprinkler system. Flushing shall be witnessed by representatives of Owner's Architecture Services and Environmental Health Services departments. Provide 48 hours prior notice.
- E. Prior to placing piping in service, flush entire system as required to remove foreign substances. Continue flushing until water is clear, and check to ensure that debris has not clogged sprinklers. This flushing shall be witnessed by representatives of Owner's Architecture Services and Environmental Health Services departments. Provide 48 hours prior notice.
- F. Test entire system hydrostatically at 200 psi for a period of two hours. (Prior partial tests will not be recognized for acceptance purposes.) Test shall be scheduled **NOT LESS THAN 24 HOURS IN ADVANCE** and shall be completed prior to prefinal inspection. Test shall be witnessed by representatives of Owner's Architecture Services and Environmental Health Services departments. Leaks shall be corrected and re-tests made until system is deemed acceptable. Record results on standard NFPA #13 test form. Three signed copies shall be furnished to Owner's Environmental Health Services department before acceptance.
- G. Prior to prefinal inspection of system, contractor shall furnish three copies (one sepia and two prints) of complete set of permanent plans showing entire system as installed. Plans shall show all pipe sizes, runs, valves, head temperatures, head counts, etc. and shall be made in neat and legible manner suitable for use as permanent record for future maintenance of system. No acceptance or inspection will be made without plans. Pre-final test shall include testing of all water flow and tamper switches.





FIRE SPRINKLER SERVICE