

## **DIVISION 211000 – FIRE PROTECTION**

### **211300 – FIRE PROTECTION**

#### **1. Scope Of Work**

- a. Wet type sprinkler system with basic trim.
- b. Spare sprinkler heads
- c. Main drain valve, inspector's test connection
- d. Fire department/siamese connection
- e. Water flow detector switch and valve supervisory switch
- f. Underground piping, fittings, valves and hydrants
- g. Chlorination of new piping
- h. Automatic sprinkler riser
- i. Alarm bells
- j. Permit, tap, inspection, test and plan approval fees
- k. Flushing, testing and final inspection

#### **2. Piping**

- a. Designed for 175 psi cold water working pressure
- b. Joined by screwed joints, flanged joints or by mechanical grooved couplings. Grooves may be rolled or cut and shall be dimensionally compatible with the coupling
- c. Welding is an acceptable means of joining fire protection piping
- d. Screwed Fittings – Black cast iron, 125 pound class or malleable iron, 150 pound class.
- e. Flanged Fittings – Black cast iron, short body Class 125
- f. Weld Fittings – Black steel, standard weight
- g. Standard Grooved Couplings – Ductile iron, for maximum 300 psi working pressure
- h. Non-flex Grooved Couplings – Ductile iron, 300 psi working pressure
- i. Fittings for grooved end steel pipe shall be cast of ductile iron, malleable iron or forged steel.
- j. Pipe 1½" and Larger – May be Schedule 7 or 10 black steel
- k. Thin Wall Pipe – Grooves shall be rolled groove type only.
- l. Fittings – For joining plain end steel pipe may be used

#### **3. Sprinkler Valves**

- a. Ball Valve 2" and Smaller - Screwed, bronze body, bronze trim.
- b. Butterfly Valve 2 1/2" and Larger - Shall be UL listed, FM approved, cast iron, ductile iron, or steel body, nickel chrome plated disc, stainless steel shaft, EDPM seat, wafer lug, or grooved end type body, gear type actuator with indicator, hand wheel and tapping for monitoring switch.
- c. Check Valve 2 1/2" and Larger - Shall be swing type, iron body, bronze mounted, bronze faced disc, drain plug and top removable cover.
- d. Wafer Check Valve 4", 6" and 8" - Shall be galvanized cast iron body with bronze clapper, O-ring, plate and lifting lug.
- e. Detector Check Valve 4", 6" and 8" - Shall be cast iron body and cover and all internal parts are to be bronze.

- f. Double Check Valve Assembly 2 1/2" and Larger - Shall consist of two independently operated check valves, with positive drip tight closure against the reverse flow of liquid.
- 4. Sprinkler Head
  - a. Upright, sidewall or pendent type, glass bulb or standard brass of correct temperature rating for the condition at the installed location in accordance with regulations of the NFPA, IRI, FM, and State of Ohio.
  - b. Chrome-plated and centered in the ceiling tile.
- 5. Water Service Main Piping
  - a. Ductile cast iron pipe, centrifugally cast. Pipe may be either of the mechanical or slip joint type.
- 6. Water Main Gate Valves
  - a. Cast iron, bronze mounted, double-disc with parallel seats.

#### **211301 – Data Room Fire Protection**

- 1. General
  - a. All Data Rooms shall be provided with an FM-200 Chemtron fire protection system. System shall be complete with cylinder(s), piping, discharge heads and all control and alarm equipment. System shall be designed by the supplier of the system and Shop Drawings shall be provided for review prior to installation.