

## **PART 1: GENERAL**

### 1.01 Requirements:

- A. Provide zone valves on each floor easily accessible for maintenance personnel for isolation and testing.
- B. Provide protective bollards for gas meter installations

## **PART 2 PRODUCTS**

### 2.01 Pipe and pipe fittings:

- A. Unless otherwise specifically required, all steel pipe provided for gas piping systems shall be provided with plain ends and assembled with weld fittings on all pipe larger than 2". All pipe 2" and smaller shall be threaded. No pipe smaller than 3/4", except as detailed for laboratory furniture, shall be used. From the emergency shutoff valve to the outlets, the pipe shall be assembled with threaded fittings provided all joints are exposed or within the confines of the laboratory furniture.

### 2.02 Valves:

- A. Gas Cocks 2" and smaller shall be AGA approved 150 PSI non-shock WOG, bronze straightway cock, flat or square head with threaded ends.
- B. Gas cocks 2-1/2" and larger shall be AGA approved 125 PSI non-shock WOG, iron body bronze mounted, straightway cock, square head with flanged ends.
- C. Control station shall be pushbutton station mounted in 2-gang box, one normally open key operated contact, and one normally closed pushbutton operated contact. Faceplate shall be inscribed with "Gas Valve Control" on top, "Open" over keyhole, and "Closed" over pushbutton.
- D. Pressure regulating valves shall be single stage, steel jacketed, corrosion-resistant gas pressure regulator. Provide with elevation compensator and atmospheric vent routed to outdoors, full size of outlet, and terminated in weather proof hood. Provide with threaded ends for 2" and smaller, flanged ends for 2-1/2" and larger. Size for required inlet and outlet gas pressures, specific gravity and volume flow. Provide gas shutoff valve upstream of each pressure regulating valve.
- E. Provide AGA plug valves for shut-off and to isolate equipment, part of systems, and vertical risers.

### 2.03 Flanges:

- A. In all instances in which flanges are required for the installation of flanged fittings for gas lines, the Contractor shall provide Crane or Walworth weld neck pattern, Class 150 forged steel flanges

### 2.04 COCKS:

- A. Near the point at which each outgoing line leaves the gas header, the Contractor shall install an AGA gas stop valve or gas cock. These wrench operated valves shall each be provided with an appropriate wrench. Cocks of the same type shall, moreover, be installed at each point indicated on the Drawings.

2.05 UNDERGROUND PIPING

- A. All underground piping shall be fusion welded HDPE.  
TRACER WIRE IS REQUIRED FOR ALL UNDERGROUND PIPING

**PART 3 EXECUTION**

3.01 TESTING:

- A. Natural gas piping shall be tested in accordance with International Fuel Gas Code requirements.
  
- B. SHSU REQUIRES A 4 HOUR TEST WITH A CERTIFIED DIAPHRAGM GAUGE. LOW PRESSURE = 7 POUNDS PSI. HIGH PRESSURE = 1 ½ TIMES OPERATING PRESSURE

END OF STANDARD