

FACILITIES STANDARD

NAME : Natural Gas Piping - 2" & Smaller
NUMBER : 15225

ORIGINAL DATE : 03-01-94
REVISION DATE : 03-11-99

PURPOSE:

1. The general purpose of each Facilities Standard is to provide minimal criteria for construction materials at University facilities regarding code compliance, warranty, approved products, execution and uniformity.
2. To protect the health and safety of patients, visitors, students, faculty and staff, in addition to protecting non-project UAB property, all construction must be in accordance with: NFPA 241 safeguarding construction, alteration and demolition operations; Standard Building Code, Chapter 33, regarding site work, demolition and construction; NFPA 101 Life Safety Code.
3. Construction safety is the responsibility of the contractor in accordance with the regulations and codes of the agency having jurisdiction, and according to the guidelines adapted by OSHA.
4. The **Natural Gas Piping – 2" and Smaller Facilities Standard** establishes a series of guidelines for specifying this particular item on any construction project at the University. ***This Facilities Standard is not to be regarded as a specification.***

GENERAL:

- A. Work shall conform to Standard Gas Code (Latest Edition).

PRODUCTS:

- A. Above Grade Steel Pipe: Schedule 40 standard weight seamless black steel pipe complying with ANSI B36.10 and ASTM A53 or ASTM A106.
- B. Below Grade Steel Pipe: Shall be the same as above grade pipe except the pipe shall be mill wrapped or X-Tru Coat type.

- C. Above Grade Steel Pipe Fittings: Standard weight, screwed, malleable iron fittings complying with ANSI B2.1.
- D. Below Grade Steel Pipe Fittings: Shall be the same as above ground pipe fittings except the fittings shall be mill wrapped or X-Tru Coat type.
- E. Pipe Joints: TFE pipe thread sealant or Teflon tape. Apply to male threads only.
- F. Valves: Gas-Cocks shall be a lubricated assembly consisting of a square head with brass plug and washer in compliance with ANSI ZX21.15, ANSI Z21.21 or ANSI B16.33. Specify Crane #250 or approved equal.
- G. Electrically Actuated Solenoid Valves: Gas valves serving equipment/appliance interlocked with a fire alarm/suppression system shall be solenoid type interlocked with the fire alarm/suppression system to automatically shut off the gas supply to the equipment/appliance.
- H. Above Grade Stainless Steel Flexible Hose: Conform with AGA under the ANSI Z21.69 Standard. Hose shall be braided stainless steel with a polyolefin heat-shrink tubing with high flame-retardant qualities. Hose shall be equipped with malleable iron unions and spring loaded brass quick-link couplings. An easily accessible manual shut-off valve shall be installed ahead of all hose connections. Specify T&S Brass "Safe-T-Link" or approved equal.

EXECUTION:

- A. Piping shall not be installed in solid floor slabs.
- B. Piping installed in solid walls shall not be permitted unless installed in a chase or casing.
- C. Piping inside any building shall not be run in or through an air duct, clothes chute, chimney or vent, ventilating duct, dumbwaiter, or elevator shaft.
- D. Low pressure and/or high pressure system gas piping shall be provided for all equipment or device requiring gas service.

- E. All gas piping shall be laid out and graded in order to reduce the number of low points. Where low points occur provide 6" deep scale pockets with removable cap fitting accessible for cleaning.

- F. After pipe is roughed in, but before connection to equipment main or to Gas Company, an air pressure test equal to 15 PSIG for a minimum of 4 hours without a drop in pressure shall be performed.

- G. Piping through foundation walls from below grade outside to above grade inside shall be encased in a sleeve. The sleeve shall be sealed to prevent water entry.

- H. Piping installed below slab on grade or in return air plenums shall be encased in a Schedule 40 steel pipe sleeve one inch (1") larger in diameter than pipe with tightly sealed joints. The encasing shall extend at least two inches (2") beyond the point where the pipe penetrates the floor. Provide a vent off of the piping encasement of full size to a point outside of building as approved by the owner.

END OF STANDARD

Prepared by: _____ Revised by: _____

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