

Description:

The purpose of the section is to highlight the current applicable UMCP Design Standards for basic design and installation of plumbing equipment.

Related Sections:

- TBD

Effective Date:

December 2, 2002

Applicable Standards:

- WSSC – Washington Suburban Sanitary Commission

General Requirements:

- Generally, the provisions of WSSC apply, as well as industry standard good design practice for educational institutions. The plumbing designer must reflect the University's need, to the greatest extent practical, to perform maintenance and repair to system components without interruption to educational activity.
- Provide at least one Electric Water Cooler (EWC) on each floor in accordance with ADA requirements.
- Examples of maintenance sensitive design practices include, but are not limited to:
 - location of cleanouts, access panels
 - layout of distribution systems
 - location of isolation valves, etc.
- The University has the right to reject design drawings and/or shop drawings which violate the intent. For example, unacceptable plumbing design - subject to rejection is a layout is such that an entire multi-floor riser has to be secured to isolate one toilet room.
- Hardware standards apply.
 - Piping:
 - Gas lines 5 psi or over 2" shall be of all welded black steel construction inside of the building, connected to emergency shut-off valves.
 - Valves are to be clearly labeled.
 - Gas lines from valve to lab table or appliances may be screwed black steel with screw type fittings for 3/4" and smaller.
 - All building gas piping must be labeled (below ceiling).
 - The University standard for DWV piping within buildings is cast iron.
 - Connection method is the contractor's option, but no-hub is prohibited underground.
 - Piping shall not be:
 - Buried beneath the lowest floor level (except for soil pipe.)
 - Run in concrete floors. If pressure piping placement under slab is unavoidable then the piping must be run in a steel pipe sleeve so leakage can be channeled off, and clearance provided so repairs can be made
 - Direct burial of steam piping is not acceptable. A conduit system shall be provided.

Plumbing

22.00.00

- Color code all piping valves and fixtures in accordance with the University's color schedule (depicted elsewhere in this document).
- Provide flexible copper tubing with removable key cut-off valves at all lavatories and sinks.
- Valves:
 - All control valves shall be listed in a schedule on the drawing showing identification number, body size, port size, if applicable, whether normally open or closed, spring range, and CV.
 - HVAC and plumbing system valves less than 2-1/2" shall be ball type, and greater than 2-1/2" shall be OSY.
 - All valves installed at heights greater than six feet shall have chain activators provided.
 - Butterfly valves shall be used only for automatic isolation, temperature control, and automation functions. Use Globe, Angle and "Y" valves for throttling services. Gate valves are not acceptable.
 - All valves in copper piping systems 2-1/2" or smaller shall be ball, single piece type unless otherwise noted.
 - Chilled water and heating water valves in underground systems shall have as an enclosure a concrete valve box with sufficient space to maintain and operate valves.