22 00 00: GENERAL

1.01 General Requirements

A. Building utilities are required to be metered & compatible with current SHSU BAS System including but not limited to domestic water and gas. Locate metering equipment inside a mechanical room. Meter runs shall be constructed in accordance with SHSU details. Provide isolation valves to accommodate meter service. Install bypass on water meters. For buildings with mixed occupancy (E&G and non-E&G), provide sub- metering to property allocate utility costs between organizations. Coordinate sub-metering requirements with the University.

B. For hot water systems that require sub metering individual systems shall be isolated from each other.

C. 2-1/2", 3-1/2 and 5 inch pipe diameters ARE NOT ALLOWED

D. Do not locate plumbing piping or equipment in transformer vaults, elevator hoist-ways, elevator equipment rooms, electrical rooms, or telecommunications rooms.

E. Provide sufficient unions, flanges, and isolation valves to permit removal of equipment.

F. Provide one-piece (preferred) or split hinge stainless steel escutcheons for piping entering floors, walls, and ceilings in exposed spaces.

G. For equipment providing critical services provide N+1 redundancy for all restaurant and laboratory buildings, to be evaluated during programming.

H. In all Residence Life Buildings provide a clean-out for each lavatory and /or kitchen drain above flood plane located in wall above counter. Cleanout plug flush with wall so a mirror or access cover can be mounted.

I. For sanitary piping clean outs must be provided at each change of direction and located at a suitable place for ease of maintenance and clean up. CLEANOUTS SHALL BE 2-WAY & LOCATED AND ACCESSIBLE ON THE EXTERIOR OF THE BUILDING AT ALL CHANGES IN PIPE DIRECTION GEATER THAN 1/8 BEND.

J. Pro-Press type fitting are acceptable

K. PIPING SHALL BE DOMESTICALLY MANUFACTURED.

22 05 00: COMMON WORK RESULTS FOR PLUMBING

1.01 Requirements:

A. Valves:

1. Full throat ball valves only

2. Provide valves with extended stems to be accessible on outside of insulation. Valve body and stem shall be insulated.

3. Provide means of access where valves are not exposed.

4. Provide valve vaults or boxes, as conditions demand, to provide access to valves installed

22 07 00: PLUMBING INSULATION

1.01 Requirements:

A. Provide pipe insulation continuous through walls, partitions, ceiling openings and sleeves. For penetrations that require link seal insulation no insulation shall be installed in the seal area.

B. Provide aluminum jackets for exterior & interior pipe and equipment insulation covers, as well as for exposed piping in mechanical rooms subject to wear or abuse. Locate seams on bottom side of horizontal pipe

C. Provide insulation protection shields fabricated from galvanized steel at all pipe hangers. All insulation at the shields shall be high density appropriate for the load.

D. Insulate valves, fittings and similar items in each piping system with equivalent thickness and composition of insulation as applied to adjoining pipe run. Install factory molded, precut units.

E. All equipment requiring insulation, the insulation jacket shall be designed to be removable and reused.

22 10 00 PLUMBING PIPING

than 3/4" shall not be all

B. Domestic Hot Water retu all be

C. Pipe sizes 3" to 6" shall be pper with soldered silver phosphate connections. Copper piping 4" and larger may be g roll grooved fittings or Pro Press. 2 ½", 3 ½ & 5" Pipe NOT ALLOWED

PART 3: EXECUTION

2.01 Pipe Testing Procedures:

A. Domestic water 24 hour test at 1-1/2 times working pressure. Flush water piping systems with clean water following successful testing.

B. Disinfection of water systems: Disinfect hot and cold water systems as follows: Fill systems with water solution containing 50ppm chlorine (calculated based on total system volume); allow to stand for 8 hours, opening and closing all valves several times during this period; thoroughly flush; refill and place system in service; ensure residual chlorine content of 0.2ppm.

22 13 00: SANITARY SEWAGE

1.0 TESTING

A. NO PIPING,FITTINGS SHALL BE COVERED BEFORE INSPECTION AND TESTING

B. TESTING REQUIRES 10 FT OF HEAD FOR 4 HOURS

1.01 Requirements:

A. Provide floor drains in all toilet rooms, janitor closets, and mechanical rooms.

B. Extend cleanouts to finished floor or wall surface, with access covers installed flush to the finished surface. Ensure clearance at cleanout for rodding of drainage system.

1. Residence Life Maintenance (RLM) buildings shall locate alh v:.2 (M)3.61.5 (l)-9 (t)7.2 l (ha)-3 (d)]T

1.01Requirements:

A. Floor mounted Urinals are not allowed
B. Residence Life NO Garbage Disposers

PART 2: PRODUCTS

2.01 Fixtures:

1. Manufacturers: Where applicable, provide products by the following:

PARResiden2

1/2" O.D. tubing, or 1-1/2" solder-joint outlet connection on waste tee.

i. RLM requires heavy duty lift and turn stopper assembly.

G. Shower Head: RLM requires Kosdo inc. Airjet model #KSAJ-150 max 2.0gpm chrome or approved equal

H. Escutcheons: Chrome-plated cast brass with set screw.

END OF STANDARD