1 General

1.1 All pipe penetrations through interior walls will be sleeved and sealed to prevent air transfer.

**Note:** Large gaps around pipe and duct penetrations make HVAC balancing difficult.

1.2 Teflon Tape should be specified for threaded pipe on potable water systems, do not allow pipe dope.

**Note:** Pipe dope can put an oily film in the water and you either have to remove all the fittings until you find the one causing the problem or wait until the oily stuff leaches out. This happened when we built Hansen; it took weeks to figure out the source of the oily film and months before the oily film subsided.

2 Buried Piping

2.1 Supply piping should not be buried under floor slabs.

**Note:** Buried supply pipe will cause a big problem if it springs a leak, especially if it isn't discovered for a while. In Lilly we had buried RO water. There was a leak we didn’t find for years (we knew there was a lot of water going somewhere but could not find a leak) until the floor caved in revealing a large cavity that had been washed away under the slab.

2.2 Do not bury any waste piping that is less than 3" pipe size.

**Note:** When there is a clog in the pipe then buried waste pipe less than 3" is hard to mechanically root out.

3 Above Grade Piping

3.1 Pitch piping to allow for complete drainage and install drain valves at low points.

3.2 Provide unions, flanges, isolating valves, and access space for service and removal of all equipment.

4 Above Grade Valves

4.1 Install a valve and a union within 12" downstream of the valve on all pressurized system branches or laterals.

4.2 All valves 2" and smaller must be removable.

4.3 Do not use sweat-fitting valves.

**Note:** Valves with sweat or soldered fittings are not removable for service; they have to be cut out.

4.4 Butterfly valves must be lug type with SS stem.

4.5 Ball valves should be "full port" (except for service stops and balancing valves).