## 15100 BUILDING SERVICES PIPING

- 1. All underground utility lines require a trace wire mounted under the line with no breaks from point to point. Data trace wires should be installed within the conduit.
- 2. Victaulic piping is permitted in exposed areas, but not in concealed spaces.
- 3. Steam and condensate piping shall be Schedule 80.
- 4. Underground steam and condensate piping shall have 3/8-inch PVC jacket with minimum 3" foam glass insulation, INSUL 800 by ROVANCO or approved equal.
- 5. Provide link seals where underground piping enters a building.
- 6. Balancing valves are preferred over gate valves at all sizes, for balancing.
- 7. Valves 2" and larger shall be flanged. Valves under 2" shall be screwed.
- 8. PVC piping is acceptable for drain lines and sewer lines.
- 9. PVC piping is not acceptable for heating pipe or tempered water pipe or any pressurized system.
- 10. Avoid ball joints on steam systems.
- 11. Flexible connections for pipe to equipment shall be stainless steel braids.
- 12. Backflow preventers shall be provided on all new water and fire mains to buildings.
- 13. Provide isolation valves on all pieces of equipment and on branch piping.
- 14. Provide Ashkroft gages and snubbers on gages.
- 15. Provide bypass piping on critical service piping.
- 16. Provide water treatment on all systems. Provide emergency eyewash and shower at all chemical treatment feed stations.
- 17. Power pressure pumps are preferred over electric condensate pumps.

- 18. Provide protection of piping at job site. Temporarily seal ends.
- 19. Provide large elbow sweeps for piping from roof drains. Provide for overflow.
- 20. Water, steam, and gas meters shall be installed in all new construction or renovation work. Meters shall be tied into the campus Energy Management System.