SECTION 22 05 00

GENERAL PLUMBING REQUIREMENTS

PART 1 - PART 1: GENERAL

1.1 PURPOSE

A. This guideline is intended to provide useful information to the Professional Service Provider (PSP) to establish a basis of design. PSP is to apply the principles of this section such that the University of Texas at Arlington (UTA) may achieve a level of quality and consistency in the design and construction of their facilities. Deviations from these guidelines must be approved by UTA and may require justification through Life Cycle Cost (LCC) analysis and submitted to UTA for approval.

1.2 LESSONS LEARNED AND DESIGN CONSIDERATIONS

A. Indicate required service clearances on drawings with dashed lines. Design shall provide for service and maintenance access to all equipment. Service area shall comply with codes and manufacturer's recommendations and shall be reasonably planned for human access. Project shall provide elevator access to all levels including basement and attic mechanical spaces. Elevators shall be sized and designed for equipment removal.

B. Design shall include plan for removal of all equipment. Plan shall indicate sizes of major pieces of equipment and clearly marked paths of removal and egress for this equipment from point of installed equipment-to- equipment loading area exterior to building. Entire egress path shall be coordinated for removal of equipment. Preference is to remove all equipment through elevators to ground level. Egress paths of equipment through removable louvers or roof cupolas are acceptable provided louver or cupolas locations are crane accessible. Coordinate with structural to add lifting beams as required to move or replace heavy equipment.

C. Building utilities are required to be metered including but not limited to domestic water. See section 12 11 13 for meter types. Locate hydronic metering equipment inside a machine room. Provide isolation valves and bypass valves to accommodate meter service.

D. Include a 0-100 psi pressure gauge on the domestic water header. Also include an electronic pressure sensor on the header, suitable for connection to Owner's EMS system.

E. Avoid 3½" and 5" diameter pipe.

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

G. Verify location, available capacity and connection of new building services to existing campus utilities (domestic water, sanitary sewer, natural gas, etc.) with UTA.

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

I. Provide dielectric unions or dielectric nipples with a non-dielectric union to join dissimilar piping materials.

J. Slope plumbing systems to permit drainage.

K. Conceal piping within building walls, above ceilings or in furred chases. Use exposed piping only in mechanical rooms unless directed otherwise.

L. Provide one-piece stainless steel escutcheons for piping entering floors, walls, and ceilings in exposed spaces.

M. Provide N+1 redundancy for equipment providing building utility service such as domestic water backflow preventers (piped in parallel) and domestic hot water converters. Redundancy shall also be provided for equipment serving critical applications such as deionized water circulating pumps.

N. Floor drain traps installed in inaccessible areas shall be brought to the attention of the Owner for consideration of priming at that time.

O. There shall be one 2" x 12" floor sink per air handler for fin water (condensate from cooling coils), and one 12"x12" floor sink per pump battery to facilitate multiple condensate lines, and to eliminate trip hazard of condensate lines routed over floors.

P. Domestic water softening shall be coordinated with the Owner.

Q. Salvage of Materials: The Owner shall have the first right of refusal to retain custody of all plumbing materials removed or demolished during construction.

R. All plumbing systems, components and controls shall be provided with a minimum 12 month warranty that shall initiate upon substantial completion of building. Specific plumbing components may have longer warranty periods. Warranty shall be unconditional and include material, labor and response within 24 hours of notification.

END OF SECTION 22 05 00