PART 1 - GENERAL

1.1 OVERVIEW

A. The D3040 Series Design Guideline Elements address building HVAC distribution systems including air distribution, exhaust and ventilation, heating hot water distribution, and chilled water distribution systems.

PART 2 - DESIGN CRITERIA

2.1 GENERAL

A. Refer to the following HVAC distribution system sub-sections for specific design Element information as appropriate to the Project:

D3041	Air Handling Distribution
D304101	Patient Treatment Air Handling Distribution
D304102	Laboratory Air Handling Distribution
D304104	Pharmaceutical Air Handling Distribution
D304105	MRI Air Handling Distribution
D304106	Data Center Air Handling Distribution
D3042	Exhaust and Ventilation
D304201	Patient Treatment Exhaust and Ventilation
D304202	Laboratory Exhaust and Ventilation
D304204	Ethylene Oxide Sterilization Exhaust and Ventilation
D3044	Hot Water Distribution
D3045	Chilled Water Distribution

B. When designing systems, all service piping and ductwork shall be organized and arranged to preserve ceiling plenum flexibility.

C. Zoning of the building will be established at the onset of design. The A/E shall be responsible for preserving the arrangement of systems within the building.

D. Piping shall not be routed through rooms containing electrical, telecommunication, or imaging equipment.

E. Provide line shut-off valves at locations required for proper operation, servicing and troubleshooting of the HVAC hydronic distribution systems and connected components. Locations shall include but not be limited to the following; at each piece of equipment, at each branch take-off from mains, at the base of each riser, where recommended by equipment manufacturers and at strategic locations to allow sectional isolation while limiting disruption of services to large portions of the system.

2.2 TEST, ADUST AND BALANCE (TAB)

A. Ductwork and piping systems must have sufficient length of straight sections for installation of devices and sensors that interface with the building's automation system (BAS).

B. Each item of equipment, including individual terminal units, must have a unique equipment identification number that may be referenced for TAB and BAS Commissioning.

C. For systems that use the ceiling plenum for return air, ensure that return air openings in mechanical room partitions are sufficiently sized for the design return airflow (CFM). Ensure all HVAC materials located in the return air plenum meet the 25/50 requirements of ASTM E84.

D. Schedule maximum and minimum primary CFM for terminal units.

E. Schedule minimum water flows (gpm) at each air handling unit.

PART 3 - SPECIAL CONTRACT DOCUMENT REQUIREMENTS

3.1 GENERAL

A. The A/E shall include HVAC schematics of the distribution systems as noted in the individual Design Guideline Element sections.

B. The A/E shall provide a duct pressure schedule of each FCU, ERU, AHU, OAHU, and exhaust fan, etc. that will indicate the static pressures on the Drawings for main and branch duct sections for each supply air, return air, relief air, outside air and exhaust air duct distribution system.

C. The A/E team shall prepare sections or profiles of underground piping to indicate elevation with respect to grade, roads, and conflicting utilities, including provision for draining and venting.

PART 4 - PRODUCTS

4.1 GENERAL

A. Refer to Owner's Master Construction Specifications. These are available on the Owner's Design Guidelines website: http://www2.mdanderson.org/depts/cpm/standards/specs.html

PART 5 - DOCUMENT REVISION HISTORY

Issue	Date	Revision Description	Reviser
	20190301	Initial Adoption of Element	
Rev. 1			

END OF ELEMENT D3040