

Element D Services

Heating, Ventilating, and Air
Conditioning

D300101 HVAC - Patient Treatment Load Calculation

PART 1 - GENERAL

1.1 OVERVIEW

- A. This section supplements Design Guideline Element D3001 with specific requirements for patient treatment occupancies that the A/E must incorporate when calculating HVAC cooling and heating loads.
- B. Load calculations must be performed in accordance with the latest ASHRAE Handbook of Fundamentals.
- C. Refer to Design Guideline Element D3001 for general design criteria related to outdoor design conditions, internal loads, occupant density, occupant heat rejection, building envelope, and system zoning.

PART 2 - DESIGN CRITERIA

2.1 INDOOR DESIGN CONDITIONS

- A. Humidification for control shall be provided for applications where indicated.
- B. Coordinate environmental requirements for special equipment in accordance with manufacturer's recommendations.
- C. Design conditions for spaces that house special equipment such as diagnostic imaging and X-ray equipment etc, shall be dictated by the respective equipment manufacturer.

2.2 BUILDING VENTILATION / PRESSURE RELATIONSHIPS

- A. The A/E shall ensure that make-up air required to maintain negative pressure and excess air to maintain positive pressure are available and taken into account in the air balance calculations.
- B. Supply air to occupied spaces will use a mixture of return air and pretreated outside air, unless noted otherwise herein.
- C. Where ASHRAE requires a particular static pressure differential be maintained between the room adjacent spaces, the A/E shall calculate the offset between supply air and exhaust as needed to maintain that pressure. A control strategy shall be designed to track that offset.
- D. Room ventilation and pressure relationships shall be based on ASHRAE /ASHE Standard 170 Ventilation of Health Care Facilities (applicable version per FGI, TJC, CMS).
- E. Pharmacy Compounding Room air change rates, pressurization, and space temperature and humidity requirements shall comply with USP 797 and USP 800.

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PART 3 - SPECIAL CONTRACT DOCUMENT REQUIREMENTS

3.1 GENERAL

- A. Unless stated otherwise in these Owner's Design Guidelines, the A/E need not submit calculations or economic analysis for review. Copies must be retained and presented however, to Owner for review upon request.

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	Original Issuance	
Rev. 1	20241202	Revised ASHRAE 170 applicability	TFS

END OF ELEMENT D300101