Project Delivery Method

☐ Design-Build (D-B)
☐ Integrated Project Delivery (IPD)
☐ Construction Management @ Risk (CM) with Guaranteed Maximum Price (GMP)
☐ Design-Bid-Build (D-B-B)
☐ Performance Contract (PC)

Owner-IPD Team

☐ Health Care Facility Vice President of Support Services
☐ Owner's Representative (consultant)
☐ Project Manager of Capital Projects
☐ Facility Manager (in-house staff)
☐ Integrated Project Delivery (IPD) Project Manager
☐ Construction Management (CM) Project Manager
☐ Job Superintendent
☐ Architect and HVAC Consultant

HVAC Project Team

☐ HVAC Technician (in-house staff)
☐ ATC Technician Subcontractor
☐ BAS Technician (in-house staff)
☐ BAS Technician (outsource staff)
☐ Operations and maintenance (O&M) Technician (in-house staff)
☐ Third-Party Commissioning Consultant (CxC)
☐ Third-Party Testing, Adjusting, and Balancing (TAB) Technician
☐ TAB Technician
☐ Energy Engineering Consultant (EEC)
☐ Infection Control Consultant (IC)

Application

☐ Commercial and Public Buildings, Chapter 3
☐ Hotel, Motel, and Dormitories, Chapter 7
☐ Health Care Facilities, Chapter 9
☐ Clean Space/Rooms, Chapter 19

Project Type

☐ New Construction
☐ Renovation
☐ Shell and Core
☐ Infrastructure (central heating, cooling, and/or cogeneration)
☐ Energy Audit and Retrofit

References

☐ 2017 ASHRAE Handbook – Fundamentals
☐ 2018 ASHRAE Handbook – Refrigeration
☐ 2019 ASHRAE Handbook – HVAC Applications
☐ 2020 ASHRAE Handbook – HVAC Systems and Equipment
☐ Refer to the Codes and Standards in the Back of Each ASHRAE Handbook

Other References

☐ ASHRAE GreenGuide: Design, Construction, and Operation of Sustainable Buildings
☐ ASHRAE Design Guide for Cleanrooms: Fundamentals, Systems, and Performance
☐ ASHRAE Humidity Control Design Guide for Commercial and Institutional Buildings
☐ ASHRAE Guide for Buildings in Hot and Humid Climates
☐ ASHRAE Indoor-Air Quality Guide: Best Practice for Design, Construction, and Commissioning Systems
☐ ASHRAE Standard 62.1 (IAQ)
☐ ASHRAE Standard 170 (Ventilation of Health Care Facilities)
☐ ASHRAE Standard 202 (Commissioning Process for Buildings and Systems)

DESIGN INTENT DOCUMENT (DID)

☐ The HVAC System Selection and Design Intent Is Based on the Process Outlined in ASHRAE Handbook 2020, Chapter 1, "HVAC System Analysis and Selection," and Includes the Owner's Building Program Goals and Additional Goals, System Constraints and Constructability Constraints, and Specialized System Retrofits to the Existing Central Air-Handling System Serving Eight Renovated Isolation Rooms

☐ Automatic Controls Shall Include Temperature Controls, a BACnet Interface, an Internet Interface, and an Existing BAS Interface
☐ Program and Project Goals, Including Functional Goals: (refer to Chapter 1, 2020 Handbook); Budget Goals, First Cost, and Operating Cost; Timeline Goal(s), the Occupancy Due Date and Prepurchased Equipment Date; and Management Goals, Such as IPD Team Participation, Capital Projects Management, and Mechanical and Electrical Operation and Maintenance Management
☐ Other Goals, Including Occupant Comfort and Controlled Humidification Space Control
☐ Available Utilities Include Gas (propane), Electrical Power, Emergency Power, High-Pressure Steam (HPS), Condensate Return, and Process Cooling Water
☐ Existing Equipment Includes Central Air System Supply Air and/or Return Air cfm with Terminal Reheat Coils; Steam Humidification with an Air-Handling Unit; a Hot Water Heating System; Air-Cooled Chiller Air Conditioning System; an Air-Side Economizer Ventilation System; and a MERV-7 Prefilter and MERV-14 Final Filter within the Air-Handling Unit.
☐ Low-Velocity, Sealed, Aluminum Sheet Metal Volume Dampers and Fire Dampers

DESIGN CRITERIA DOCUMENT

☐ The HVAC Design Criteria Shall Be in Sync with the Project Delivery Method and Owner's Project Requirements.
☐ The Design Criteria Shall Be Based on ASHRAE 90.1 and State Energy Code Compliance for Outdoor Air Temperature Compliance.
☐ Utilities Shall Be the Existing Steam Humidification System, Hot Water Heating System, and Chilled Water Cooling System.
☐ New Automatic Controls Shall Replace the Existing BAS for the Entire Existing Air-Handling Unit.
☐ The New Evaporative Cooling Coil Shall Be Provided in Sync with Existing Mechanicals during the Year When Adiabatic Cooling Is Practical.
☐ The Existing Central Air System with Eight Terminal Reheat Coils Shall Provide Space Temperature and Humidity Control to Maintain 40%-60% Relative Humidity within Each Room while Maintaining 68°F in the Heating Season, 74° in the Cooling Season, and Space Pressure Maintained at 0.05-Inch Gage Positive Pressure.