

BASIS OF DESIGN – BATTERY STORAGE ROOM WITHIN A NEW MISSION CRITICAL PROJECT

Date: April 2015 Project Name: Mission Critical Battery Room Pine Bluff, AR Project #: 2015-04 Prepared By: Reader Revision date: _____

BUILDING

New Construction Renovation Addition Sq. Ft.: _____ No. of floors below grade: _____ No. of floors at and above grade: _____ Battery room: _____ Sq. Ft.

UTILITIES

Electrical: New Upgrade Existing **Natural Gas:** New Upgrade Existing **Steam:** New Upgrade Existing **Chilled Water:** New Upgrade Existing

Hot Water: New Upgrade Existing **Services from Utility for:** Electric Gas District energy steam Existing

Campus Power Plant: Electric Gas Steam CHWS CWS Hot Water None

UTILITY DESIGN PARAMETERS

Electrical: 120/1/60 208/3/60 277/3/60 480/3/60 Explosion-proof

Emergency Power: New Diesel oil Gas Existing None **Gas:** Design parameters by plumbing engineer

Steam Pressure: Low @ ___psig Medium @ ___psig High @ ___psig High @ ___psig

Chilled Water Temperature: CHWS @ 42°F CHWR @ 56°F Outdoor temperature compensated

Condenser Water Temperature: CWS @ ___°F & CWR @ ___°F None

Hot Water Temperature: HWS @ 160°F & HWR @ 120°F when 24°F OAT and HWS @ 90°F & HWS 70°F when OAT is 60°F Fixed HWS @ ___°F & HWR @ ___°F None

ASHRAE APPLICATION HANDBOOK

ASHRAE 2011 Handbook: Chapter [] **ASHRAE 2012 Handbook:** Chapter [] [] [] []

OWNER MECHANICAL DESIGN PARAMETERS

Equipment Location: On floor being served In central equipment room(s) _____ In penthouse Away from building _____

Maintenance Outside Occupied Space: Yes serving primary HVAC equipment No

Redundancy: N+1 N+N None

Equipment/System Expansion: Increase equipment size by 15% None

Indoor Air Quality at: MERV rating of [] for pre-filters MERV rating of [] for final filters

Acoustic & Vibration Criteria: Design parameters by acoustic consultant None

Specialty Room(s): _____ None

Occupancy Schedule: 24-7-365 Occupied/Unoccupied (*List Hours of Occupancy*) None

DESIGN CRITERIA

Outdoor Dry Bulb & Wet Bulb: ___°F Heating season ___°F/___°F Cooling season

Battery Room: Occupied-unoccupied 24-7 period Unoccupied period Warm-up and cool down

_____ **Set Point:** ___°F heating season & ___°F cooling season 45% RH Space pressure [+] [] [=]

Mechanical & Electrical Space and Back of the House Area: Occupied period Unoccupied period Warm-up and cool down

_____ **Set Point:** ___°F heating season & ___°F cooling season ___% RHn Space pressure [+] [-] [=]

ENERGY & ENVIRONMENT CRITERIA

LEED Certification: Yes No Other certification (*List the program*)

Annual Operating Budget: Energy budget Organization structure Outsource

Refer To "The Facility Files" For Additional Operation & Maintenance Design Criteria

SPECIAL CONDITIONS & REQUIREMENTS

1. _____

2. _____

3. _____

To view the solution online, please visit www.esmagazine.com.