

1. Do not use deadband thermostats.
2. Equip all chillers with factory installed DDC controls.
3. Pneumatic mechanical system controls are very problem prone and have difficulty maintaining calibration. DDC and non-pneumatic controls are heavily favored. Pneumatics should only be used for valve/damper actuators.
4. Variable frequency drives are favored over the more traditional means of fan modulation (i.e. discharge or inlet valve dampers).
5. Do not install wall mounted space thermostats in BEQ's. Return air temperature sensors instead of return air thermostats should be utilized.
6. Minimize HVAC system complexity!
7. Provide access by catwalks, ladders, etc. to HVAC equipment installed over 10 feet above finished floors. Platforms should be amply sized for ease of equipment maintenance.
8. Provide access panels/doors to HVAC equipment installed above ceilings. Consider use of access panels/doors in areas with lay-in ceilings.
9. Generally, Public Works prefers that HVAC equipment not be installed above ceilings, but if unavoidable, use double condensate drain pans.
10. Air handling unit filter access doors should be specified to be hinged and lockable with half-twist thumb screws; do not specify/approve access panels that are unhinged and/or retained by a multitude of sheet metal screws.
11. Never install HVAC equipment above splined ceilings that do not have access doors that allow for maintenance or equipment removal.
12. Little Creek prefers that mechanical rooms have exterior doors only. Interior access promotes the likelihood the occupant will use mechanical spaces for storage, further hindering equipment access.
13. Evidence has been seen that the 10 AC/HR ventilation rates for mechanical rooms prescribed by MIL-HDBK 1190 is inadequate. Due to excessive internal heat gains, care must be exercised to account for mechanical system heat sources (i.e. steam PRV stations). PRV stations should be insulated with removable, snap-on jackets.
14. Designs should place the PRV stations inside buildings, out of the weather.

15. EMCS at NAB Little Creek continues to be operable and expanded. Though limited to monitoring and load-shedding functions, it remains integral to PW Little Creek's long range plans. Local DDC controls should be provided with provisions to interface with the base EMCS.
16. Steam pressures vary throughout the base. Obtain steam pressures for design purposes from PWD Engineering, Little Creek.
17. Convert steam to hot water for all buildings with heat loads greater than 300,000 BTUH. Unconverted steam heat may be used for loads less than 300,000 BTUH.
18. Use reciprocating chillers up to 175 tons. Chiller types for loads greater than 175 tons, may be designer's option based in life cycle considerations. Steam absorption chillers shall not be utilized.
19. Rooftop equipment should be avoided where possible.
20. Mechanical equipment rooms shall be located at the first floor level and on the perimeter of the building where possible. Below grade mechanical rooms are prohibited.
21. Utility roadways and walks shall be provided to all mechanical rooms.
22. Hot water relief valves shall be piped to drain directly to the nearest drain. Drain lines must be designed to handle the maximum temperature of relief valve effluent.
23. All mechanical equipment located exterior to the building (i.e. grade, roof) shall be screened from view.
24. Install blow down valves on all strainers in exterior steam trap drip stations. Use thermodynamic steam traps.
25. For exposed steam pipe on piers, use glass type insulation protected with stainless steel jackets.
26. Do not run new steam condensate cooling well discharge lines to sanitary sewers unless replacing an existing one. New installations shall be tied into the storm drain or a field drain system.
27. Use chained assemblies to prevent loss of removable flanged caps at steam/ship pier connections.
28. All exterior steam pipe supports shall be of the concrete type. Use roller supports for piping. All miscellaneous steel shall be hot dip galvanized.
29. All steam meters shall be installed for ease of maintenance and for counters readable from ground level. Provide meters unless directed otherwise.