BREVARD PUBLIC SCHOOLS BAS CONTROLS SYSTEMS DESIGN SPECIFICATIONS

NETWORK SPECIFICATIONS

1) Networks shall consist of a Supervisory system utilizing only one IP drop per facility
    a) Additional IP drops shall only be approved by BPS BAS Controls administrator
    b) All BAS systems shall be hardwired from Supervisory Controller throughout facility
    c) All Building/Floor level network systems shall utilize MS/TP or ARCNET protocol
    d) BacNet IP Field Servers shall NOT be allowed
    e) Wireless T-stats, field controllers, or routers shall NOT be allowed

SOFTWARE SPECIFICATIONS

2) All new BAS System software shall allow unlimited simultaneous BPS administrative users at no additional cost
    a) All Firmware shall be updated when updating the system software to the latest revision (at no cost to BPS)
    b) All BAS systems software shall be compliant to BPS IT department (windows latest version)
    c) All new BAS system updates shall include BPS Tech software/tools
    d) All latest Tech software/tools shall be provided with new systems
    e) All BAS Systems shall provide unlimited system access (at no cost to BPS) for BPS users
    f) All new BAS software shall be compatible with earlier version of hardware controllers

CONTROLLERS AND HARDWARE

3) All Controllers shall be accessible by BPS BAS field Technician
    a) Controllers shall be accessible by wall sensor on cabinet
    b) Pre-application (canned program) controllers shall not be allowed
    c) Thermostat wall type controllers shall not be allowed without prior approval from BPS BAS controls administrator
    d) Controllers shall be fully programmable by BAS Field Technician Laptop
    e) All programs shall be listed, if not backed up by system, and provided to BPS BAS technicians
    f) Wireless T-stats shall not be allowed

NAMING OF EQUIPMENT AND POINTS

4) All Systems shall be named according to facility drawing(s) floor plans
    a) All points shall represent the name of the function point is providing, indicated on graphics and controller
    b) All systems represented on graphics must link back to its source of air flow:
        i) VAV must link back to the AHU, RTU, etc., providing airflow
        ii) AHUs must link to OAU providing outside airflow (if applicable)
    c) Naming of equipment must follow FISH (Florida Inventory of School Houses)

PROGRAMMING

5) All programming shall incorporate the following:
   a) All points shall represent the name of function its providing, or indicating on graphics and controller
   b) All programming shall be editable by all BPS BAS technicians
   c) All programs shall be updatable from any browser or smart device
   d) All programming shall be graphical and object-based
   e) All old programs must be removed and new programming put in place. No partial programming with old programming.
   f) All programming/changes shall be backed-up and provided to BPS BAS Controls department on CD or USB drive

SCHEDULING

6) There shall be multiple schedules per facility provided by Controls Contractor
   a) One schedule for entire facility for holidays with overrides for individual buildings and rooms
   b) One master schedule for entire facility
   c) Schedules shall provide a description of event
   d) Schedule shall indicate building and room scheduled
   e) All BPS authorized users shall have the ability to create schedule groups
   f) Provide the ability to schedule special events, holidays, and overrides in advance indefinitely

GRAPHICS

7) All BAS projects shall have the latest graphics offered
   a) All floor plan graphics shall have color thermographic representation of the space temperature deviation from set point
   b) All graphics shall be updatable from any browser or smart device
   c) All areas, equipment, and program names shall be editable from any browser or smart device
   d) All controlled equipment shall have a graphic interface
   e) All graphics shall link back to the AHU, RTU, FCU, etc. providing airflow to that equipment

VARIABLE SPEED DRIVES (ABB BRAND)

8) All Variable Frequency Drive must be ABB Brand (no exceptions) unless approved by BPS BAS controls supervisor
   a) All drives shall be installed below ceiling and BPS Technician accessible
   b) All drives displays shall be accessible to BPS Technician:
      i) Drive Display(s) must be readable within reach of a six foot (6') ladder or lower
      ii) The VFD Drive choice selection shall be considered when picking the style for installation location:
         (1) VCR is an open horizon style and is narrow but tall in height
         (2) BDR is an enclosed box style and is wider and more compact in height