



Building, Office and Equipment Secure Areas Standards Check List Form

This form is to manage major aspects of environmental architectures and standards for buildings that contain SOA information and equipment. This form must be customized for each particular Department and Division's needs for physical security.

Department: _____

Division: _____

Building/Site Protection Requirements :

- Access Secure perimeter, and entrance, through establishment of a buffer zone.
- Building & Site Protection Security fencing, video cameras surveillance system, motion and intrusion detectors, wind and door alarms, lightning protectors, good working environment (standards.)
- Entry All entrances should be properly secured and alarmed where appropriate.
- External Environment Minimize external risks.
- Services Where possible & justifiable, alternate routes and suppliers for all essential services, including network services.

Division Special Notes:

Major Equipment Room:

- Access Secure controlled entry, combination locks, swipe card, video cameras (if business critical & unattended) Doors should be a minimum of 42 inches wide and 96 inches in height.
- Location First floor accessible when possible. Eliminate gas, chemical, and fire hazards within the vicinity directly above, below, or adjacent to equipment.
- Visibility Reduce facility identification from visible indicators by removing signage, labels, and covering windows when applicable.
- Shell External shell: water proof, airtight, soundproofed, fire-resistant (.05 hour to 4 hours depending on criticality)
- Equipment delivery Adequate provision should be made for the delivery and positioning of large delicate equipment.
- Internal floor Sealed
- Separate plant room? Emergency back up power not tied into building life safety systems. Uninterruptible Power Supply (UPS). Electrical supply and switching, air-handling units, dual units and rooms if business critical.
- External Redundant power supply Generator for major data centers and business-critical systems.

Division Special Notes:

Major Data Centers:

- Access Secure controlled entry, combination locks, swipe card, video cameras (if business critical & unattended)) Doors should be a minimum of 42 inches wide and 96 inches in height.

- Cooling and Temperature An under air floor distribution system is preferred, although ducted systems are acceptable. In either system, racks should be arranged in a hot/cold isle configuration. Strict Control, 22° (±3°). Provide for up to 550 W/m2. 6° variation throughout the room and a maximum of 6° per hour.

- Humidity Control Strict control: 50% (± 10%).

- Air Quality Positive pressure, filtered intake low gaseous pollution (e.g. sulphur dioxide ≤ 0.14 ppm), dust levels for particles > 1 micron, less than 5 x 106 particles/m3. Auto shut-down on smoke or fire detection.

- Power Power Distribution Unit (PDU), with three-phase supply to non-switched boxes, one per piece of equipment, with appropriate rated circuit-breakers for each supply. Alternatively, approved power distribution strips can be used. Balanced three-phase loading. UPS (online or line interactive with Simple Network Management Protocol (SNMP) Management) to ensure voltage supplied is within ± 5% of rating with minimal impulse, sags, surges, and over/under voltage conditions Electrical distribution system with shunt trip for emergency shutdown.

- False Floor Antistatic, liftable floor tiles 600 x 600mm on pedestals, with alternate pedestals screwed to the solid floor. Minimum of 600mm clearance to solid floor. Raised floor must be designed to accommodate the weight of fully loaded equipment racks, as well as any lifting and transportation devices used in the movement of racks, computer equipment, and ancillary support systems with a recommended minimum of 3m between false floor and ceiling

- Internal Walls From false floor to ceiling, fire-resistant, but with air flow above and below floor level

- Fire detection/prevention HSSD or VESDA multi-level alarm with auto FM200 (or alternative halon replacement) release on 'double-knock' detection ("pre-action" type system is recommended)

- Environmental Detector For smoke, temperature, power, humidity, water and intruder with automated alarm capability. Local alarm panels with repeater panels and also remote alarm capability.

- Lighting Adequate levels of ceiling lighting with emergency lighting on power failure.

- Power Safety Clean earth should be provided on the PDU and for all equipment. With clearly marked remote power-off buttons on each exit. Dirty power outlets, clearly marked should also be supplied.

- Fire Extinguishers Sufficient electrical fire extinguishers with adequate signage and procedures.

- Vibrations Equipment racks with seismic bracing and proper grounding. Vibrations should be minimal within the complete area

- Electromagnetic Interference Minimal interference should be present (1.5V/m ambient field strength)

- Installations All equipment should be provided and installed by qualified suppliers and installers to appropriate electrical and health and safety standards.

- Network Connections The equipment space should be flood-wired with adequate capacity for reasonable growth. All cables should be positioned and secured to appropriate cable trays.

- Disaster Recovery Fully tested recovery plans should be developed for all major data centers including the use of stand-by sites and equipment.

Division Special Notes:

Regional Data Centers and Major Equipment Centers:

- Access Secure controlled entry, combination locks, swipe card, video cameras (if business critical & unattended)) Doors should be a minimum of 42 inches wide and 96 inches in height.

- Cooling and Temperature An under air floor distribution system is preferred, although ducted systems are acceptable. In either system, racks should be arranged in a hot/cold isle configuration Temperature Control, 22° (±5°), preferable.
- Humidity Control Strict control: 50% (± 10%), preferable.

- Air Quality Positive pressure, filtered intake low gaseous pollution (e.g. sulphur dioxide ≤ 0.14 ppm), dust levels for particles > 1 micron, less than 5 x 10⁶ particles/m³. Auto shut-down on smoke or fire detection.

- Power Power Distribution Unit (PDU), with three-phase supply to non-switched boxes, one per piece of equipment, with appropriate rated circuit-breakers for each supply. Alternatively, approved power distribution strips can be used. Balanced three-phase loading. UPS (online or line interactive with Simple Network Management Protocol (SNMP) Mangement) to ensure voltage supplied is within ± 5% of rating with minimal impulse, sags, surges, and over/under voltage conditions. Electrical distribution system with shunt trip for emergency shutdown.

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