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## BATTERY ROOM EQUIPMENT SPECIFICATIONS

### Battery Racks & Related Accessories Specification

#### 1.0 Battery Racks & Related Accessories

**1.1 Strength Requirement:** Battery rack and associated anchorage shall be designed according to the 1997 Uniform Building Code, Volume 2, Section 1632 and be certified to withstand lateral forces, specific to the installation site.

**1.2 Anchorage:** Rack manufacturer shall furnish appropriate anchor bolts with the rack and shall have capability to be re-torqued to original foot-pound in the event of a seismic occurrence. The anchors shall be certified in the seismic analysis specified with a minimum safety factor of four against combined shear and pullout assuming the floor to be 3000 psi concrete of sufficient thickness to accommodate minimum embedment depth.

**1.3 Certification:** Rack manufacturer shall furnish a certificate stating the lateral acceleration of the rack, including anchorage. Such certificate shall be equal to or greater than the strength requirement stated above. Certificate shall also include certification of supplied anchor bolts in respects to the lateral acceleration of the rack. Certificate must be signed and sealed by two independent professional engineers, including an independent California professional structural engineer. Certificates should be backed up by finite element analysis reports of which shall be made available upon request.

**1.4 Immobility:** Racks shall include spacers and adjustable side restraints that are designed to fully immobilized the batteries. Steel restraints shall be coated or covered with material that electrically insulates the batteries. Foam products used as spacers must be electrostatic dissipative per EIA-541. All non-steel parts of the rack must pass UL flame spread criteria and have a LOI (lower Oxygen Index) of 28 or greater.

**1.5 Acid Resistance:** Structural frames (uprights) must be coated in a manner that resist sulfuric acid in concentration of 70% in continuous emersion duty. All other steel components must be corrosion resistant plated or painted to match the frames. Provide one two-part epoxy coating touch up kit per rack including pan & brush in matching rack color ANSI/ASA #61 gray.

**1.6 Electrical:** Steel components shall be electrically interconnected and provisions for grounding shall be designed and provided as a part of the rack. Grounding bar provided shall include mounting hardware to accommodate two #6 two-hole lugs. One grounding bar shall be supplied for each rack with a length of up to 14' (two grounding bars shall be provided for rack lengths exceeding 14').

**1.7 Terminal Post Covers:** Provide continuous linear, translucent insulated covers made of rigid PVC over all cell posts and inter-jar connectors. Covers shall be provided in 4' lengths and meet requirements of UL94 VO with LOI (Lower Oxygen Index) of 28 or greater.

**1.8 Spill Control:** Racks shall be provided with a spill control barrier system and related accessories manufactured by Acran and as described below.

**1.9 Vendor:** Approved vendor, without substitution, **Acran**.