SECTION 16190
SUPPORTING DEVICES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Conduit and equipment supports.
   2. Fastening hardware.

B. Related Sections:
   1. Section 16110 - Raceways
   2. Section 16130 - Boxes
   3. Section 16160 - Cabinets and Enclosures
   4. Section 16320 - Medium Voltage Transformers
   5. Section 16345 - Medium Voltage Switchgear
   6. Section 16425 - Switchboards
   7. Section 16460 - Dry Type Transformers
   8. Section 16470 - Panelboards
   9. Section 16510 - Lighting Fixtures
  10. Section 16620 - Standby Power Generation Systems
  11. Section 03300 - Cast-In-Place Concrete

1.02 COORDINATION

A. Coordinate locations of concrete pads and their dimensional requirements with Architect and Structural Engineer during design.

PART 2 PRODUCTS

2.01 MATERIAL

A. Support Channels:
   1. Galvanized or painted steel.

B. Hardware:
   1. Corrosion resistant metal.
PART 3 EXECUTION

3.01 INSTALLATION

A. Fastening of hanger rods, conduit clamps, outlet and junction boxes to building structure.

1. In precast structures, use cast in inserts wherever possible. Use expansion anchors with caution and require prior approval.

2. In hollow masonry or drywall, specify toggle bolts.

3. In cast-in-place concrete, specify expansion anchors, preset inserts or self-drilling masonry anchors.

4. In sheet metal studs, specify sheet metal screws.

5. In wood studs, specify wood screws.

6. Do not allow attachment of electrical supports to piping, ductwork, mechanical equipment or conduit.

7. Drilling of structural steel members is prohibited.

8. Plastic or fiber anchors are prohibited.

9. Attachment to ceiling suspension wires is prohibited.

10. Wire shall not be used to support J. Boxes or Conduit.

B. Supports:

1. Require that supports be fabricated from structural steel, steel channel or unistrut, rigidly bolted or welded to present a neat appearance.

2. Install free-standing electrical equipment on concrete pads.

3. Require that surface mounted cabinets, enclosures and panelboards be supported with a minimum of four anchors. On exterior concrete walls below grade and all other areas subject to moisture, provide 1” steel channel stand-offs for cabinets and raceways.

4. Specify stud bridges at top and bottom of cabinets and enclosures which are flush mounted in hollow drywall walls.

5. Specify suitable vibration insulation pads for vibrating equipment such as transformers.

END OF SECTION 16190