# SECTION 26 05 33
# RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

## PART 1 GENERAL

### 1.01 SUMMARY

A. Section Includes
   1. The Section includes the requirements pertaining to conduits and fittings used to contain electrical conductors and cables.
   2. All conductors and cables shall be installed in conduit or approved raceways regardless of which Division the conductors or cables are specified.

### 1.02 REFERENCES

A. The following is a list of standards which may be referenced in this Section.
   1. American National Standards Institute (ANSI).
      a. C80.1, Rigid Steel Conduit-Zinc Coated.
   2. American Society for Testing Materials (ASTM).
      a. A123 E1, Standard Specification for Zinc-Coated (Galvanized) Coatings on Iron and Steel Products.
   3. National Electrical Contractors Association (NECA).
      a. National Electrical Installation Standards (NEIS).
   4. National Electrical Manufacturers Association (NEMA).
      a. TC 3, PVC Fittings for use with Rigid PVC Conduit and Tubing.
      b. TC 6, PVC and ABS plastic Utilities Duct for Underground Installation.
   5. Nation Fire Protection Association (NFPA).
      a. 70, National Electrical Code (NEC).
   6. Underwriters Laboratories, Inc. (UL).
      a. 6, Standard for Safety Rigid Metal Conduit.
      b. 514B, Standards for Safety Fittings for Conduit and Outlet Boxes.
      c. 651, Standard for Safety Schedule 40 and 80 PVC Conduit.
      d. 651A, Standard for Safety Type EB and Rigid PVC Conduit and HDPE Conduit.
      e. 1660, Standard for Safety Liquid-Tight Flexible Nonmetallic Conduit.
      f. 360, Standard for Safety Liquid-Tight Flexible Metallic Conduit.
      g. 797, Standard for Safety Electrical Metallic Conduit.

### 1.03 SUBMITTALS

A. Contractor shall submit all the product data in Division 26 at the same time. Piecemeal submittals will be rejected as incomplete.
   1. The product data shall be submitted in PDF format. Each PDF shall only contain products from a single specification section, products in a different specification section shall be in a separate PDF.
   2. A submittal is required for each product specified. Each individual product submittal shall have the corresponding Reference Keynote Number (example - 260533.C01) typewritten in the upper right-hand corner of the submittal. The submittals within each PDF shall be in the same sequential order as they are listed in the specification Section. Submittals not containing the Reference Keynote Number will be rejected as incomplete.
   3. No typical submittals will be accepted. Each submittal shall be project specific and clearly identify specifically which components or parts are being submitted for approval. Any product submittals, such as a catalog sheet, which do not clearly identify which components or parts are being submitted for approval, will be rejected as incomplete.

B. Product Data.
   1. Pursuant to Section 013300 Submittal Procedures.
   2. Manufacturer's data including materials of construction, equipment weight and related information for each item specified in PART 2 PRODUCTS.

## PART 2 PRODUCTS

### 2.01 MATERIALS

A. **Non-metallic (PVC) Boxes (260553.B60)**
   1. Shall be UL Listed, PVC, non-metallic.
   2. Carlon, or approved equal.

B. **Mini Meter Enclosure (260553.E01)**
   1. **Shall be NEMA 3R, wet location listed.**
   2. **Shall be 16" W x 24" H x 6" D.**
   3. **16-Gauge mild steel enclosure, gray powder coated finish.**
   4. **Shall have quarter-turn style latch.**
   5. **Solid single-door style.**
   6. **Hoffman nVent Concept Series, Catalog # CSD24166, or approved equal.**

C. **EMT Conduit (260533.C50).**
   1. **EMT conduit may be used in all indoor and outdoor locations. In outdoor locations the fittings shall be watertight compression fittings. Set screw fittings shall be acceptable in indoor locations.**
   2. **Conduit connectors shall have insulated throats, plastic bushings or ground bushing installed.**

### 2.02 ACCESSORIES

A. **Firestopping (260533.F90).**
   1. Shall be as specified in Division 07 Specifications.
   2. Shall be Listed for the conduit, raceway or box being installed.
   3. Install per the Manufacturer's instructions.

## PART 3 EXECUTION

### 3.01 INSTALLATION

A. Boxes
   1. Install boxes and enclosures in accordance with the schematic representation as indicated on the Drawings.
   2. Install vaults and in-ground box tops (lids) such that they are ½ inch above finished grade to prevent water ingress.
   3. Boxes and enclosures shall be mounted level and plumb.
   4. Boxes and enclosures shall not be altered, holes drilled, etc. in any way that may compromise the NEMA rating of the enclosure or box.
   5. Boxes and enclosures shall be bonded the equipment grounding conductor.
   6. Provide a divider whenever a box contains conductors of different potentials that the code requires separation.
   7. Surface mounted enclosures and boxes shall be spaced off the surface at least 1/4 inch in damp or wet locations.
   8. Enclosures shall be provided whenever a junction or pull box larger than 4 inches square is required.

9. Sheet metal boxes are permitted only in locations where EMT conduit is approved.
10. Enclosures shall be labeled with a nameplate as specified in Section 26 05 53 – Identification for Electrical Systems. The nameplate shall match the callout on the Drawings. If no callout exists, the CONTRACTOR is responsible to meet with the ENGINEER and develop a list of pull box, junction box and termination box nomenclature and their as-built Drawings shall reflect these callouts.

END OF SECTION