260533  RACEWAYS

PART 1:  GENERAL

1.01  WORK INCLUDED

A. Rigid Steel Conduit:
   1. Location of use:
      a. Wet, damp, unheated areas.
      b. Areas subjected to corrosive atmosphere.
      c. All exterior wiring.
      d. Interior wiring in slabs or exterior walls.
      e. All other areas except as noted below.
   2. Threadless connectors and couplings shall not be used.
   3. To protect the wire insulation from abrasion all cut ends must be reamed to remove rough edges.
   4. A bushing shall be provided to protect the wire from abrasion where a conduit enters a box, fitting, or other enclosure unless the box, fitting, or enclosure design provides equivalent protection.

B. Intermediate Metallic Conduit: (IMC)
   1. Location of use:
      a. Exterior, where encased in concrete.
      b. Interior wiring.
   2. Threadless connectors and couplings shall not be used.
   3. To protect the wire insulation from abrasion all cut ends must be reamed to remove rough edges.
C. Electrical Metallic Tubing:
   1. Location of use:
      a. Interior branch circuit wiring, power distribution, and motor feeders in clean dry areas.
      b. All interior low voltage control, signal, communication, emergency power, and alarm systems.
      c. Restricted from being installed where it will be subjected to severe physical damage.

D. Electrical Non-Metallic Tubing
   1. Location of Use
      a. Interior for lighting and receptacle circuits.
      b. Shall not be used for home runs.

E. Flexible Metal Conduit: (Greenfield)
   1. Location of use:
      a. Light fixture pigtails.
      b. Motor leads.
      c. Appliance connections.
      d. Where required for flexible connections.
   2. Connectors shall be UL listed for use with flexible metal conduit.
   3. A grounding conductor shall be installed in all flexible metal conduits.
   4. Flexible conduit shall not be used for connection to Fire Pumps.

F. Liquid Tight Flexible Steel Conduit: (Seal-Tight)
   1. Location of use:
      a. Same application as flexible metal conduit except where high ambient temperatures could harm jacket.
      b. Damp and wet areas.
2. A grounding conductor shall be installed in the conduit.

G. Non-Metallic Conduit: (PVC)

1. Location of use:
   a. Where encased in concrete, use Schedule 40.
   b. For pole risers more than 10' above grade, use Schedule 40.
   c. Where direct buried, use Schedule 80.
   d. Not allowed for exterior rooftop applications.
   e. Not allowed for exposed exterior applications.

H. Metal Surface Raceways:

1. Use for branch circuits only.

2. A grounding conductor shall be installed in all metal surface raceways.


I. Rigid Aluminum Conduit.

1. Location of use:
   a. Interior or exterior wiring.
   b. Dry or damp locations.
   c. Not allowed where buried or in contact with soil.
   d. Not allowed for encasement in concrete.
   
   e. Typical applications: Greenhouses and certain other applications where weight of the raceway and conductors is a factor.

2. Threadless connectors and couplings shall not be used.

3. To protect the wire insulation from abrasion, all cut ends must be reamed to remove rough edges.
4. A bushing shall be provided to protect the wire from abrasion where a conduit enters a box, fitting, or other enclosure unless the box, fitting, or enclosure design provides equivalent protection.

J. Acceptable raceways in addition to specially noted raceways in other sections:

1. Flat conductor cable
2. Wireways
3. Busways
4. Bus Duct
5. Cablebus
6. Cellular floor raceways
7. Cable trays

a. Cable trays are not considered raceways by the NEC but may be installed as such provided certain cable types (must be cable tray rated) are installed and the application meets certain requirements. The design engineer shall assess the particular circumstances of the installation and application to determine whether cable tray is allowed by code and what cable types are allowed for tray installation.