



State University  
Construction Fund

**Directive: 26-3 Raceway Systems**

**Responsible Office: Design & Construction**

**Last Revised Date: October 2022**

## **SUMMARY**

This Directive provides the consultants with the requirements of the State University Construction Fund (SUCF) for SUNY projects. The requirements detailed within are to be implemented into the project's specifications and/or drawings. The intent is not for the specifications or drawings to reference back to this document for compliance nor is it intended to override or amend the applicable laws or codes where either is more stringent.



## TABLE OF CONTENTS

### Contents

Section 1 – RACEWAY SYSTEMS.....	3
A. GENERAL.....	3
B. RACEWAY REQUIREMENTS.....	3
C. METAL-CLAD CABLE (MC).....	4

## Section 1 – RACEWAY SYSTEMS

### A. GENERAL

1. This Directive applies to all power and fire alarm systems wiring. If data and communications cabling is to be installed in raceway, this Directive's requirements should be followed.
2. All circuits shall be run in raceway.
  - a. Exception, Metal-clad cable (MC) may be allowed in limited applications as detailed in this Directive.
3. A full-sized insulated copper equipment grounding conductor is required in all raceways.
4. A pull cord shall be provided in all spare and empty raceways.
5. Raceway homeruns shall be 3/4" minimum.
6. Feeder and branch circuit junction boxes shall be labeled by voltage, size, panel of origin, and load served.

### B. RACEWAY REQUIREMENTS

1. Rigid Metal Conduit (RMC) – Galvanized Steel
  - a. Applications
    - 1) Mechanical rooms, fire pump rooms and loading docks when located less than 10 foot above finished floors.
    - 2) Areas that are wet, damp, or hazardous as defined in the National Electrical Code (NEC).
    - 3) Areas where it is subject to physical damage, such as equipment storage rooms.
2. Electrical Metallic Tubing (EMT)
  - a. Applications
    - 1) Branch circuits and feeders when
      - a) Concealed above suspended ceilings.
      - b) Concealed in hollow areas in dry locations.
      - c) Exposed in locations 10 feet or more above finished floor.
3. Flexible Metal Conduit (FMC)
  - a. Applications
    - 1) Use for final connections to equipment subject to vibration (dry locations), or equipment requiring flexible connection for adjustment or alignment (dry locations).
    - 2) May be used for concealed branch circuits or feeders where conduit must be fished through inaccessible spaces.
4. Liquidtight Flexible Metal Conduit (LFMC)
  - a. Applications same as FMC with the addition of damp and wet locations.
5. Surface Metal Raceway
  - a. Applications
    - 1) May be used as an exposed raceway system in finished spaces.
6. Metallic Wireways
  - a. Applications
    - 1) May be used in locations for exposed raceway between grouped, wall-mounted equipment.
7. Aluminum Conduit



- a. Application
  - 1) May be used where nonferrous material is desired.
8. Rigid Polyvinyl Chloride Conduit (PVC)
  - a. Applications
    - 1) Direct buried, shall be schedule 80.
    - 2) Encased in reinforced concrete, shall be schedule 40.
9. Plastic Coated Galvanized Rigid Steel
  - a. Applications
    - 1) To be used for corrosive environments applications.
10. Flexible Nonmetallic Conduit (FNC), Flexible Nonmetallic Tubing (FNT), Flexible Metal Tubing (FMT) and Armored Cable (AC or BX)
  - a. Applications
    - 1) Generally not permitted.
11. Chrome Plated or Stainless Steel Conduit may be used in operating, autopsy, and x-ray rooms, where conduit it to be installed exposed.
12. Below or within concrete slabs, utilize PVC or plastic coated RMC. Sweeps and penetrations through the concrete slab shall be with RMC conduit.
13. Fittings for Conduit, Tubing
  - a. RMC, FMC and LFMC shall have threaded steel insulated bushings and throats.
14. Electrical metallic tubing shall have steel, set-screw fittings with insulated bushings and throats.

#### C. METAL-CLAD CABLE (MC)

- a. The use of metal-clad cable **requires Campus approval.**
- b. May be used for branch circuits, when concealed above ceilings, in walls and partitions, except for homerun circuits to an electrical panelboard.
- c. Raceway from the electrical panelboard shall be provided to a junction box located above the ceiling in the area that the branch circuit serves. MC cable may be used from this junction box for lighting fixtures, lighting control devices, general use receptacles and for other similar 20A branch circuits.
- d. A full sized insulated copper equipment grounding conductor is required.
- e. Cable fittings shall be clamp-type with malleable iron locknuts and have an insulated throat bushing.
- f. Shall have threaded steel insulated bushings and throats.