

## Section 1- Acceptable Manufacturers

- 1.01 Manufacturer: Subject to compliance with these specifications, cable tray systems shall be as manufactured by Cooper B-Line, Inc.

## Section 2- Cable Tray Sections and Components

- 2.01 General: Except as otherwise indicated, provide metal cable trays, of types, classes and sizes indicated; with splice plates, bolts, nuts and washers for connecting units. Construct units with rounded edges and smooth surfaces; in compliance with applicable standards; and with the following additional construction features. Cable tray shall be installed according to the latest revision of NEMA VE 2.
- 2.02 Pre-Galvanized Steel: Straight sections, fitting side rails, rungs, and covers shall be made from structural quality steel meeting the minimum mechanical properties and mill galvanized in accordance with ASTM A653 SS, Grade 33, coating designation G90. Hardware finish shall be electrogalvanized zinc per ASTM B633.
- 2.03 Hot Dip Galvanized Steel: All side rails, covers, splice plates, and rungs shall be made from structural quality steel meeting the minimum mechanical properties of ASTM A1011 SS, Grade 33 for 14 gauge and heavier, ASTM A1008, Grade 33 Type 2 for 16 gauge and lighter, and shall be hot dip galvanized after fabrication in accordance with ASTM A123. Mill galvanized covers are not acceptable for hot dip galvanized cable tray. Hardware finish shall be chromium zinc per ASTM F-1136-88.
- 2.04 Ladder Cable Trays shall consist of two longitudinal members (side rails) with transverse members (rungs) welded to the side rails. Rungs shall be spaced [6] [9] [12] inches on center. Rung spacing in radiused fittings shall be industry standard 9" and measured at the center of the tray's width. No portion of the rungs shall protrude below the bottom plane of the side rails. Each rung must be capable of supporting a 200 lb. concentrated load at the center of the cable tray over and above the cable load with a safety factor of 1.5.
- 2.05 Ventilated Trough Cable Trays shall consist of two longitudinal members (side rails) with a corrugated bottom welded to the side rails or rungs spaced 4" on center. The peaks of the corrugated bottom shall have a minimum flat cable bearing surface of 2<sup>3</sup>/<sub>4</sub>" and shall be spaced on 6" centers. To provide ventilation in the tray, the valleys of the corrugated bottom shall have 2<sup>1</sup>/<sub>4</sub>" x 4" rectangular holes punched along the width of the bottom.
- 2.06 Non-Ventilated Bottom Trough Cable Trays shall consist of two longitudinal members (side rails) with a corrugated bottom welded to the side rails or a solid sheet over rungs. The peaks of the corrugated bottom shall have a minimum flat cable bearing surface of 2<sup>3</sup>/<sub>4</sub>" and shall be spaced on 6" centers.
- 2.07 Cable tray loading depth shall be [3] [4] [5] [6] inches per NEMA VE 1.
- 2.08 Straight sections shall have side rails fabricated as I-beams. Straight sections shall be supplied in standard [12 foot] [24 foot] [10 foot (3 m)] [20 foot (6 m)] lengths.
- 2.09 Cable tray widths shall be [6] [9] [12] [18] [24] [30] [36] inches or as shown on drawings.
- 2.10 Splice plates shall be manufactured of high strength steel, meeting the minimum mechanical properties of ASTM A1011 HSLAS, Grade 50, Class 1 and be secured with 8 nuts and bolts per plate. The resistance of fixed splice connections between an adjacent section of tray shall not exceed 0.00033 ohm.
- 2.11 All fittings must have a minimum radius of [12] [24] [36] [48] inches.

## Section 3- Loading Capacities and Testing

- 3.01 Cable tray shall be capable of carrying a uniformly distributed load of \_\_\_\_\_ lbs./ft. on a \_\_\_\_\_ ft. support span with a safety factor of 1.5 when supported as a simple span and tested per NEMA VE 1 5.2. In addition to the uniformly distributed load the cable tray shall support 200 lbs. concentrated load at mid-point of span. Load and safety factors specified are applicable to both the side rails and rung capacities. Cable tray shall be made to manufacturing tolerances as specified by NEMA.
- 3.02 Upon request, manufacturer shall provide test reports in accordance with the latest revision of NEMA VE 1 or CSA C22.2 No. 126.