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 UFGS-27 05 28.36 40 (January 2007)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated January 2008

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DIVISION 27 - COMMUNICATIONS

SECTION 27 05 28.36 40

CABLE TRAYS FOR COMMUNICATIONS SYSTEMS

07/07

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Reference Article to automatically place the
reference in the Reference Article. Also use the
Reference Wizard's Check Reference feature to update
the issue dates.

References not used in the text will automatically
be deleted from this section of the project
specification when you choose to reconcile
references in the publish print process.

The publications listed below form a part of this specification to the
extent referenced. The publications are referred to within the text by the
basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM A 1008/A 1008M (2007a) Standard Specification for Steel,
Sheet, Cold-Rolled, Carbon, Structural,
High-Strength Low-Alloy and High-Strength
Low-Alloy with Improved Formability,
Solution Hardened, and Bake Hardened

ASTM A 123/A 123M (2002) Standard Specification for Zinc
(Hot-Dip Galvanized) Coatings on Iron and
Steel Products

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70 (2007) National Electrical Code

1.2 GENERAL REQUIREMENTS

NOTE: If Section 26 00 00.00 20 BASIC ELECTRICAL
MATERIALS AND METHODS is not included in the project
specification, applicable requirements therefore
should be inserted and the following paragraph
deleted.

Section 26 00 00.00 20 BASIC ELECTRICAL MATERIALS AND METHODS applies to
work specified in this section.

1.3 SUBMITTALS

NOTE: Review Submittal Description (SD) definitions
in Section 01 33 00 SUBMITTAL PROCEDURES and edit
the following list to reflect only the submittals
required for the project. Submittals should be kept
to the minimum required for adequate quality control.

A "G" following a submittal item indicates that the
submittal requires Government approval. Some
submittals are already marked with a "G". Only
delete an existing "G" if the submittal item is not
complex and can be reviewed through the Contractor's
Quality Control system. Only add a "G" if the

submittal is sufficiently important or complex in context of the project.

For submittals requiring Government approval on Army projects, a code of up to three characters within the submittal tags may be used following the "G" designation to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are [for Contractor Quality Control approval.] [for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Fabrication Drawings
Installation Drawings

SD-03 Product Data

Manufacturer's product data shall be submitted for the following items:

Cable Trays
Supports

SD-08 Manufacturer's Instructions

Manufacturer's instructions shall be submitted for cable trays in accordance with paragraph entitled, "Manufacturer's Instructions," of this section.

PART 2 PRODUCTS

2.1 CABLE TRAYS

[Ladder cable trays shall consist of two longitudinal side members connected by individual transverse members.]

[Trough cable trays shall consist of continuous one-piece ventilated-bottom sections contained within longitudinal side members.]

[Channel cable trays shall consist of one-piece ventilated channel sections.]

[Solid bottom trays shall consist of two longitudinal side members connected by one-piece bottom section.]

2.2 MATERIAL AND FABRICATION

Cable trays shall be [high-strength corrosion-resistant aluminum Alloy No. 5052-H32] [steel sheet in accordance with ASTM A 1008/A 1008M with a zinc coating applied after fabrication].

Steel trays shall be hot-dipped galvanized finish in accordance with ASTM A 123/A 123M.

Fabrication drawings shall be submitted for cable trays consisting of fabrication and assembly details to be performed in the factory.

Prior to assembly, contact surfaces of trays shall be coated with an antioxidant compound. Edges, fittings, and hardware shall be finished free from burrs and sharp edges. Cable trays shall include splice and end plates, dropouts, and miscellaneous hardware.

2.3 SUPPORTS

Supports and hangers shall permit both vertical and horizontal adjustment, where possible. Horizontal and vertical tray supports shall provide an adequate bearing surface for the tray and shall have provisions for holddown clamps or fasteners. Vertical tray supports shall provide a secure means other than friction for fastening cable trays to supports.

Cable trays shall be supported at not more than [1800] [] millimeter [6] [] -foot intervals. Supports for horizontal-elbow tray fittings shall be placed within [600] [] millimeter [2] [] feet of each fitting extremity and as recommended by the cable-tray manufacturer.

When supported at [1800] [] millimeter [6] [] -foot intervals, the cable trays shall be capable of carrying not less than [225] [] kilogram per meter [150] [] pounds per linear foot. Tray fittings shall have not less than the load-carrying ability of straight tray sections and shall have the manufacturer's minimum standard radius.

PART 3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

Manufacturer's instructions shall be submitted for Cable Trays including special provisions required to install equipment components and system packages. Special notices shall detail impedances, hazards and safety precautions.

3.2 INSTALLATION DRAWINGS

[Thirty] [] calendar days prior to shipment, installation drawings shall be submitted to the Contracting officer for approval. Drawings shall be coordinated with all other work in the immediate area that could come in conflict with the installation. Drawings shall include layout of cable tray work, including details of both horizontal and vertical supports. Both horizontal and vertical supports shall be as specified in paragraph entitled, "Supports," of this section.

3.3 GROUNDING

Cable trays shall be properly grounded by means of a low-resistance conductor of sufficient capacity, but in no case smaller than No. 1/0 AWG copper . Grounding conductor shall be bonded to cable-tray sections and fittings by compatible bolted connections. Effective grounding shall be permanent and continuous with an impedance sufficiently low to limit the potential above ground and to facilitate operation of overcurrent devices in the circuit. Grounding and bonding cable trays shall be in accordance with NFPA 70.

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