SECTION 271116 - COMMUNICATIONS CABINETS, RACKS, FRAMES, AND ENCLOSURES

This section is based on the products of Chatsworth Products (CPI) located at:

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Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat, SectionFormat,* and *PageFormat,* as described in *The Project Resource Manual—CSI Manual of Practice, Fifth Edition.*

This section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all "Specifier Notes" after editing this section.

Section numbers are from *MasterFormat 2016 Edition*.

1. GENERAL
   * + 1. RELATED DOCUMENTS

Retain or delete this article in all Sections of Project Manual.

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

* + - 1. SUMMARY

Section Includes: RFM2 Equipment Cabinet

* + - 1. DEFINITIONS

Retain terms that remain after this Section has been edited for a project.

BICSI: Building Industry Consulting Service International

* + - * 1. EIA: Electronic Industries Alliance
        2. TIA: Telecommunications Industry Association
        3. ANSI: American National Standard Institute
        4. LAN: Local area network
        5. RCDD: Registered Communications Distribution Designer
        6. ASTM: American Society for Testing and Materials
        7. ISTA: International Safe Transit Association
      1. REFERENCES

A. ANSI/TIA-569 Telecommunications Pathways and Spaces.

* + - * 1. ANSI/TIA-568.0 Generic Telecommunications Cabling for Customer Premises.
        2. ANSI/TIA – 568.1 Commercial Building Telecommunications Cabling Standard.
        3. ANSI/NECA/BICSI 568-2006 – Standard for Installing Commercial Building Telecommunications Cabling.
        4. ANSI/TIA-942 Telecommunications Infrastructure Standard for Data Centers.
        5. ANSI/TIA – 606 Administration Standard for Telecommunications Infrastructure.
        6. ANSI/TIA – 607 Generic Telecommunications Bonding and Grounding (Earthing) For Customer Premises (Standard)
        7. ANSI/NFPA 70 – National Electric Code.
        8. Standard Practice for Performance Testing of Shipping Containers and Systems
        9. ASTM D4169 – Truck Assurance Levels: low, medium and high
        10. ASTM D4169 Air Assurance Levels: I, II and III

1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for equipment racks and cabinets.

Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

B. Shop Drawings: For communications equipment room fittings. Include plans, elevations, sections, details, and attachments to other work.

Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.

Equipment Racks and Cabinets: Include workspace requirements and access for cable connections.

Bonding and Grounding: Indicate location of primary or secondary bonding busbars and its mounting detail showing standoff insulators and wall mounting brackets.

1. PRODUCTS

2.1 RFM2 CABINET SYSTEM

[Basis-of-Design Product](http://www.specagent.com/LookUp/?ulid=12512&mf=04&src=wd): Subject to compliance with requirements, provide RF Mote; [RFM2 Cabinet System](http://www.chatsworth.com/Products/Wall-Mount-Systems/ThinLine-II-Wall-Mount-Cabinet/).

The ZetaFrame™ Cabinet System is designed for rack-and-stack or "roll in/roll out" use in any data center and computer room applications, primarily as a storage solution for computer server, network and data storage equipment. ZetaFrame can be sent to a systems integrator, fitted with equipment, then sent to the site for quick deployment. ZetaFrame can support a high equipment loads and can be shipped on a shock pallet.

Product webpage:

https://www.chatsworth.com/en-us/products/cabinets-enclosures-containment/server-and-network/enterprise-and-colocation/zetaframe-cabinet-system

Product Data Sheet:

https://www.chatsworth.com/en-us/documents/data-sheets/zetaframe\_datasheet

[Basis-of-Design Product](http://www.specagent.com/LookUp/?ulid=12512&mf=04&src=wd): Subject to compliance with requirements, provide Chatsworth Products (CPI); [ZetaFrame Cabinet System](http://www.chatsworth.com/products/cabinet-and-enclosure-systems/globalframe-cabinets/).

Eight-Slide Cabinet Frame: Non-seismic applications; Maximum equipment weight of **3000 lb (1360 kg)** when secured to the structural floor with standard anchors. Non-seismic secured load is tested per UL 2416 and cabinet is UL Listed NWIN.E227626.

Dimensions: As coordinated with useable space requirements selected.

Cabinets on shock pallets are NOT available in 52U.

Equipment Mounting Rails: Square punched; spaced horizontally to support **19 inches (482.6 mm)** wide EIA/ECA-310-E compliant rack-mount equipment and shall provide [**42U**][**45U**][**48U**] of rack-mount.

Cabinet Width: Overall Cabinet Width to be [**24”/610mm**][**30”/762mm**]

Cabinet Depth: Overall Cabinet Depth to be [**42”/1071mm**][**48”/1223mm**]

Top Panel: Solid top panel with four 3.9”W x 8.8”D (99 mm x 224 mm) cable openings with Brush-seals, one in each corner.

Solid Side Panels: [**One**][**Two**][**None**].

Thermal Management**: [None][Air Dam][Air Dam, Brush-Sealed Rail]**

Perforated Front Door: **78%** percent perforation.

Perforated Rear Door: **78%** percent perforation.

Select one of the options below.

Latch: Single-Point Door Latch with keyed lock on front and rear single doors.

Color: Powder coat paint, [**White**][**Black**].

Included Hardware: Baying Kit, four leveling feet, 24 x ¼-20 Cage Nuts and Screws

Optional Accessories: **[Air Dam Kit] [Equipment Mounting Rail Brush Kit] [Snap-In Filler Panel] [Vertical Cable Manager – Finger Style] [Front-to-Rear Cable Manager] [Full Height PDU / Cable Lashing Bracket] [Cage Nut Hardware Kit]**

Article below describes the RIM-750 Remote Infrastructure Management System.

* + - 1. SHELVES FOR EQUIPMENT CABINETS

Equipment Shelves: Sized to fit the rack-mount width and depth of the cabinet and have adjustable depth mounting brackets that allow attachment to the front and rear pair of equipment mounting rails within the cabinet. Sized wider and deeper than the equipment placed on the shelf and have a load bearing capacity that exceeds the fully populated weight of equipment.

Fixed, Vented – 400 lb. Load Capacity – Adjustable Depth:

19 inch EIA wide by 1U by 23.75 inches (603 mm) to 45.5 inches (1156mm) deep; black.

Fixed, Vented – 200 lb. Load Capacity – Adjustable Depth:

19 inch EIA wide by 1U by 26 inches (660 mm) to 33.5 inches (851mm) deep; black.

Sliding, Vented – 100 lb. Load Capacity – Adjustable Depth:

19 inch EIA wide by 1U by 26 inches (660 mm) to 33.5 inches (851mm) deep; black.

EXECUTION

* + - 1. INSTALLATION OF FLOOR MOUNTED EQUIPMENT CABINETS

This article applies to ZetaFrame cabinets.

General: Comply with NECA 1.

* + - * 1. Install and adjust to position all cabinet/frame accessories including thermal management accessories, vertical cable managers, vertical power managers and equipment-mounting rails, using the manufacturer's installation instructions prior to baying and/or placing the cabinet for attachment to the building and before installing any rack-mount equipment into the cabinet.
        2. Shelves, horizontal cable managers and filler panels (rack-mount accessories), if used, may be installed after the cabinet is placed.
        3. When attached to the structural floor, the installer shall provide installation hardware.

Retain paragraph below for seismic cabinets.

* + - * 1. When used in a multi-cabinet bay, cabinets shall be attached side-by-side using included baying kits according to the manufacturer's instructions.
      1. BONDING

Install bonding according to BICSI TDMM, "Grounding, Bonding, and Electrical Protection" Chapter.

* + - * 1. Attach a bonding conductor sized as defined in ANSI/TIA-607 and as defined by local code or the authority having jurisdiction (AHJ) between the Bonding Busbar and the cabinet.
        2. Attach the bonding conductor to the cabinet using a ground terminal block according to the manufacturer's installation instructions. The installer shall provide the bonding conductor and other necessary hardware required to make the connections between the cabinet and the Bonding Busbar.

END OF SECTION 271100