EQUIPMENT HANDLING AND ASSEMBLY
BROADBAND CARRIER TRANSMISSION EQUIPMENT

INSTALLING STANCHIONS, LINEUP VIA AND CROSS-AISLE CABLE RACKS, (BROADBAND CABLEWAY), LIGHTING END GUARDS, AND CABLING

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1. GENERAL

1.1 Scope of Section - This section covers the specific requirements and procedures for installing J90606 Broadband Cableway (Not ESS type), Stanchions, Unistrut, Lighting and end guards for Broadband Carrier Transmission Equipment. See Fig. 1.

1.2 General Information

1.21 Refer to Handbook 261, Section 10, for information pertaining to arrangement of tools and precautions.

1.22 The following drawings apply to this section:

ED-97798-10 Method of Installing Cables
ED-97798-50 Specification for Line-up, Cross-Aisle and Via Racks
ED-97843-10 Method of Grounding Bays and Cableway
ED-97799-50 Specification for Lighting Assembly
ED-97799-51 Specification for Frame and Aisle Lighting and AC Wiremold Distribution
ED-97800-10 Method of Installation of Cableway

2. REQUIRED FACILITIES

2.1 General - In addition to the normal tools and materials available on the job, a quantity of R-4780 temporary stanchions will be required. See Paragraph 2.21 for direction on when to apply the temporary stanchion.

2.2 Description of R-4780 Temporary Stanchion and ED-97798-50, G-51 Floor Stanchion

2.21 The R-4780 Temporary Stanchion and the ED-97798-50 G-51 Floor Stanchion are identical. The ED-97798-50, G-51, Floor Stanchions are ordered in the job specification to support cableway in future bay areas. The R-4780 Temporary Stanchion is used to temporarily support the cableway at locations where frames are temporarily missing or to support the cableway that is installed prior to the installation of any equipment frames, maximum distance between supports is 4'-4".

2.22 The stanchions consist of a 2" wrought steel pipe, gray enamel finish, 6'-11 1/4" long, threaded on both ends. A floor flange is screwed on to each end; one flange is bolted to the floor, the other end is fastened to a support bracket which in turn is fastened to either a single or double support assembly. (See ED-97800-10, Sheet 8, Fig. 35). Notice the 7'-0 3/8" dimension from the floor line to the top of the support bracket, this is arrived at by rotating the steel pipe and the top flange prior to securing the top flange to the support bracket. If pipe is at a high point on the floor, it may have to be cut and rethreaded.

3. INSTALLING PROCEDURE

3.1 Cableway First (Installing Before Equipment Frames)

3.101 All floor preparation operations are to be completed first. This includes layout of the floor and installation of all floor anchors for both the equipment frames and permanent and temporary floor stanchions.

3.102 Install any permanent "ED" coded floor stanchions in accordance with Paragraphs 2, and 4 of this section. This includes the operation up to and including securing them to the floor.

3.103 Install one R-4780 Stanchion in accordance with Paragraphs 2 and 4 of this section.

3.104 Install cableway support structure, either single or double support assembly. Refer to ED-97800-10, Fig. 35.

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NOTICE: NOT FOR USE OR DISCLOSURE OUTSIDE THE BELL SYSTEM EXCEPT UNDER WRITTEN AGREEMENT

3.105 Install Unistrut channel on top of the cableway support structure. There are two types of Unistrut channel, the P-3301 channel for support of cross-aisle and via racking over equipment frames, and the P-3001 channel for support of cross-aisle and via racking over distributing frames (GDF, SGDF & MGDF). Both channels come in 10'-0" and 20'-0" lengths. See ED-97800-10, Fig. 11 for support of P-3001 channel, and Fig. 12 for support of P-3301 channel.

3.106 The Unistrut must be installed and its height adjusted so that it is level at all points of support. Adjustments can be made by rotating the pipe as required, prior to securing upper pipe flange.

3.107 Install the via rack support assembly on top of Unistrut, then install via cable rack on top of via rack support assembly. Refer to ED-97800-10, sheet 2, for method assembly and Fig. 4, this section.

3.108 Install cross-aisle cable rack on top of the Unistrut. Refer to ED-97800-10, Sheet 3, Fig. 13 for method of installing cross-aisle cable racks. Install the two cable flow guides at this time.

3.109 Install frame and aisle lighting support hardware. Refer to Job Information and ED-97799-50 for method of installing hardware.

3.110 Install wiremold distribution hardware. Refer to Job Information and ED-97799-51 for method of installing hardware.

3.111 Install lineup cable rack front or rear or both. See Job Information and ED-97800-10 for method of placement of cable rack so that the cable compartments are properly oriented. Junction the racks and reinforce across main aisles per ED-97800-10, Sheet 8, Fig. 34.

3.112 Install #6 bare ground on lineup cable rack. Refer to ED-97843-10 for method of installation. Remove paint under cable clamp area and coat with NO-OX-1D "A" before installing #6 bare ground and cable clamp.

3.113 Crimp the #6 bare ground feeder to the #2 bare main aisle feeder using the Thomas and Betts #54730 Compression "C" Tap (provided in the Job Specification). Crimp the connection with the R-4354 compression tool and the detail 2 Die.

3.2 Frame First (Installing Cableway After Equipment Frames)

3.21 With the frames installed, and levelled, the single or double support assembly can be installed. Refer to ED-97800-10, Fig. 14 for support assembly installation and to this section, paragraphs 3.105 to and including paragraph 3.113, for sequence of installation. See Fig. 2.

3.22 Install R-4780 temporary stanchion in equipment lineups where there are frames temporarily missing, use one stanchion to provide a support every 4'-4", locating the stanchion at center line of future bay. See Fig. 3.

3.23 Ground each equipment frame with ground connection provided, refer to ED-97843-10. Remove paint under ground terminal area on top channel of framework, and coat with NO-OX-1D "A" compound before installing terminal.

3.24 Crimp the bay framework ground to the #6 bare ground feeder on the lineup cable rack, using the Thomas and Betts #54720 compression "C" tap (provided in the Job Specification). Crimp the connection with the R-4354 compression tool and the Detail 1 Die.

4. CABLE RACK SUPPORT AT UNEQUIPPED FRAME POSITIONS

4.1 General - Under certain conditions (See Paragraph 2.21, this section), the ED-97798-50 G-51 floor stanchions are installed to provide support for the cableway where unequipped frame positions occur in a lineup. This does not apply in the GRP, SG, or MG distributing frame lineups. In this situation "Framework Only" bays are used for support. Job Information will instruct the installer on the number and location of both conditions.

4.2 Methods and Requirements

4.21 Floor Preparation for Floor Stanchions

4.211 Floor Bolt Hole Location information is shown on ED-97800-10. Drill two holes for each pipe flange, and secure flange with the two 1/4"-20X3/4" FHM screws furnished with ED-97798-50 G-51.

4.212 The size and depth of the two holes for the 1/4X3/8 THD self drill anchors is similar to H-555-120 G-12.

4.213 The two (2) holes for the floor flange must be located so that future frame bases will cover the holes.

4.22 Installing Floor Stanchions - The stanchions are installed in accordance with ED-97800 and paragraph 2.22 of this section.

5. UNISTRUT, LINEUP, VIA AND CROSS-AISLE CABLE RACKS

5.1 General

5.11 Drawing ED-97798-50 shows specific ordering information.

5.12 The cable rack plan Job Drawing will instruct the installer as to the size, location and arrangement of Unistrut, lineup, via and cross-aisle racks.

5.2 Methods and Requirements

5.21 Drawing ED-97800-10 shows method of installation and requirements for Unistrut, lineup, via and cross-aisle cable racks.

5.22 Refer to Job Specification and Job Drawings for the type and location of cable shield compartments.

6. FRAME AND AISLE LIGHTING

6.1 Drawing ED-97799-50 shows installation of lighting assembly. Drawing ED-97799-51 shows installation of AC wiremold distribution. Drawing ED-97800-10 shows method of support and installation of high voltage square "D" duct.

6.11 Specific attention should be given to the various installation notes on these drawings.

6.12 For specific application of these drawings, refer to Job Specifications and Job Drawings.

7. FREE STANDING END GUARDS

Drawing ED-97798-50 shows specific ordering information. Drawing ED-97800-10 shows method of support.

8. METHOD OF INSTALLING CABLES

Drawing ED-97798-10 shows method of installing cable on line-up, cross-aisle and via racks. Before any cabling is attempted, it is strongly advised that all notes, on all sheets, be thoroughly read and understood.

ATTACHMENT:
Figures 1 through 4 on pages 4 thru 7.

Manager, Engineering Transmission Products

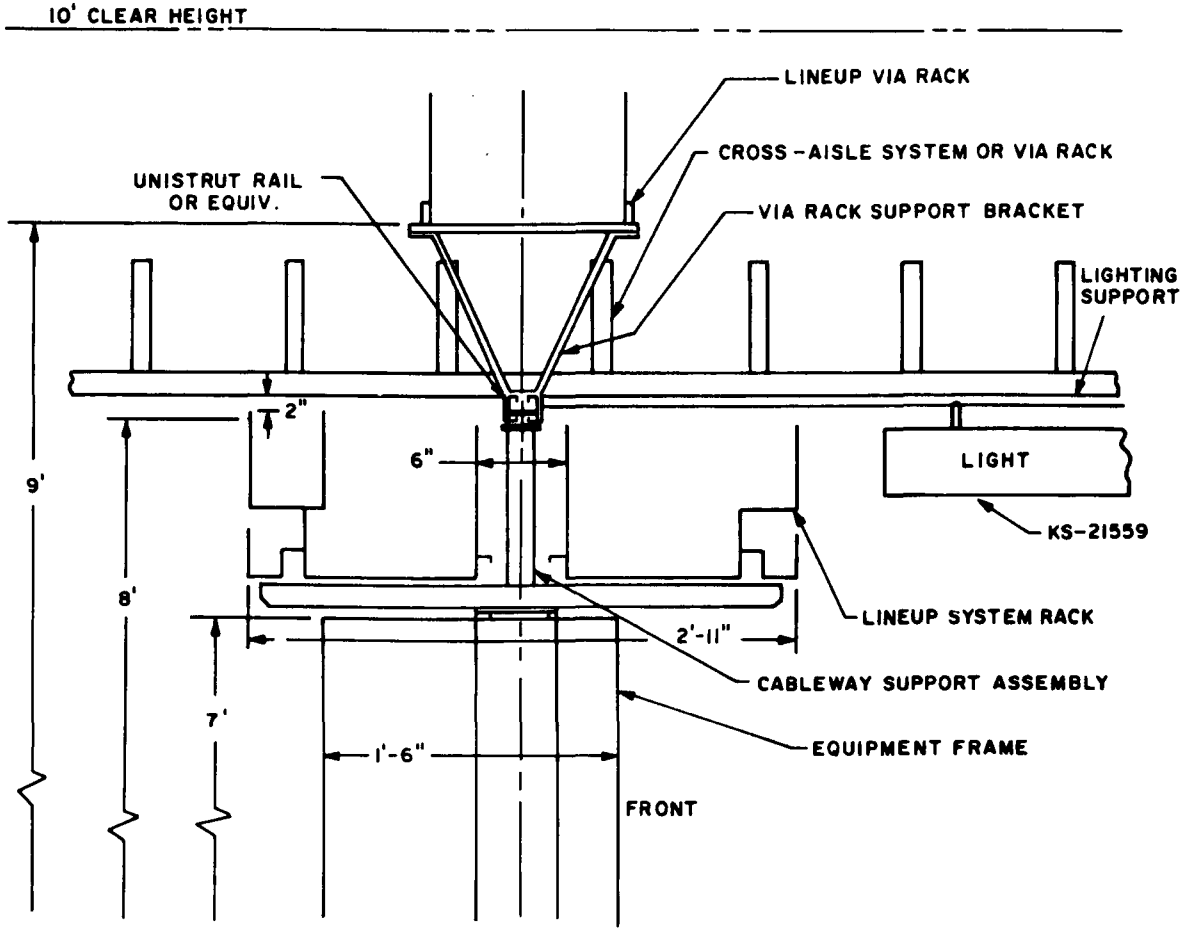

Fig. 1 —Typical Cableway Arrangement Over Equipment Frames
(PAR. 1.1)

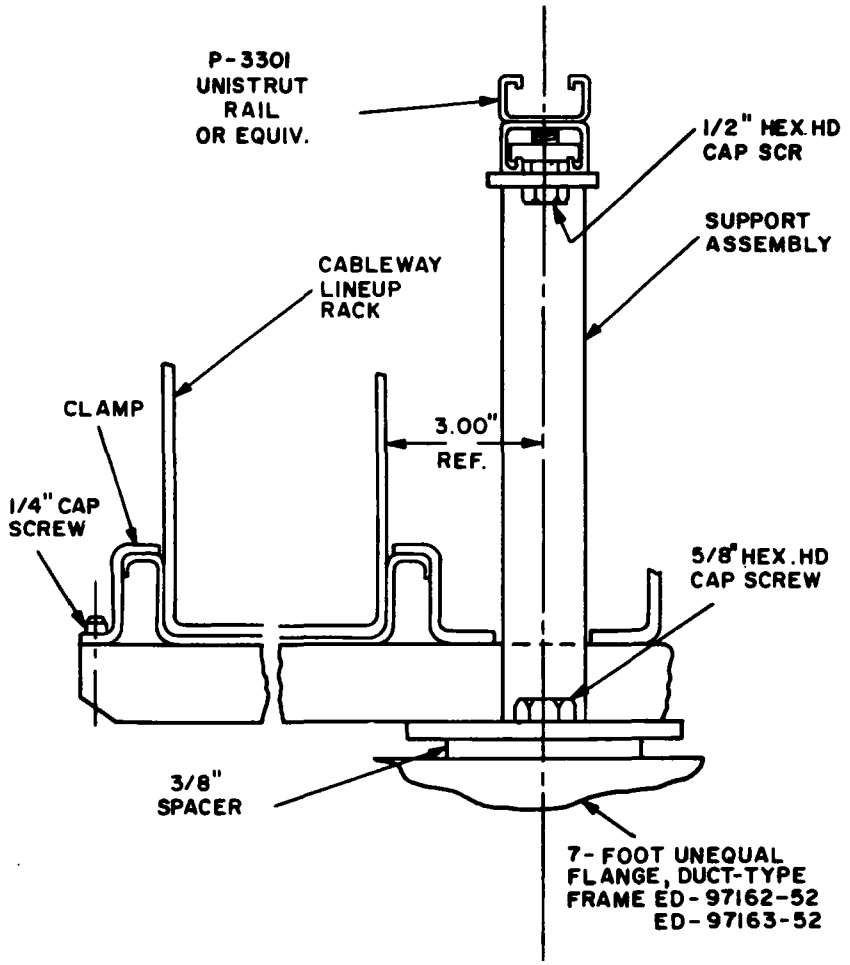

Fig. 2 —Installation of Broadband Cableway Lineup Racks and Support Assembly to Framework

(PAR. 3.21)

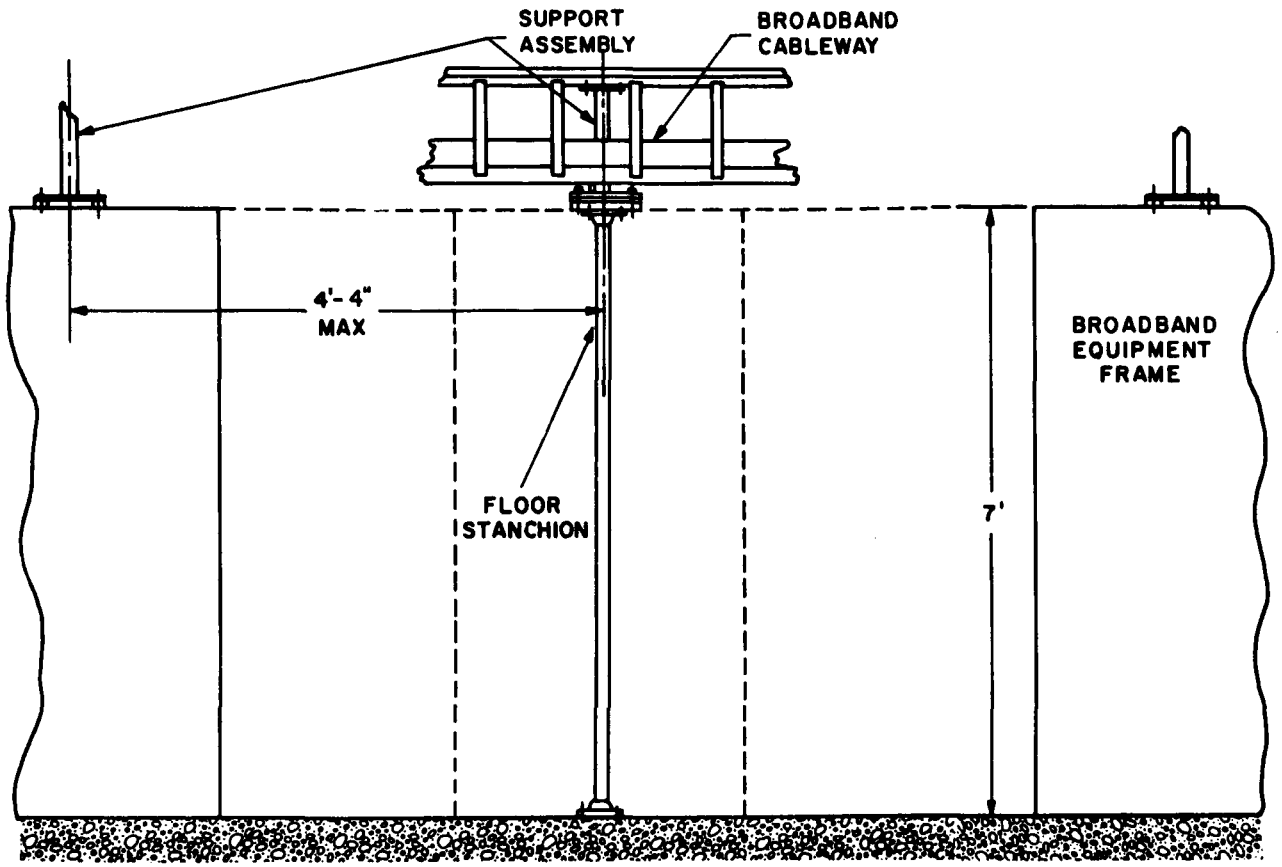

Fig. 3 —Use of Floor Stanchion in Equipment Lineup with Broadway Cableway Distribution System (PAR. 3.22)

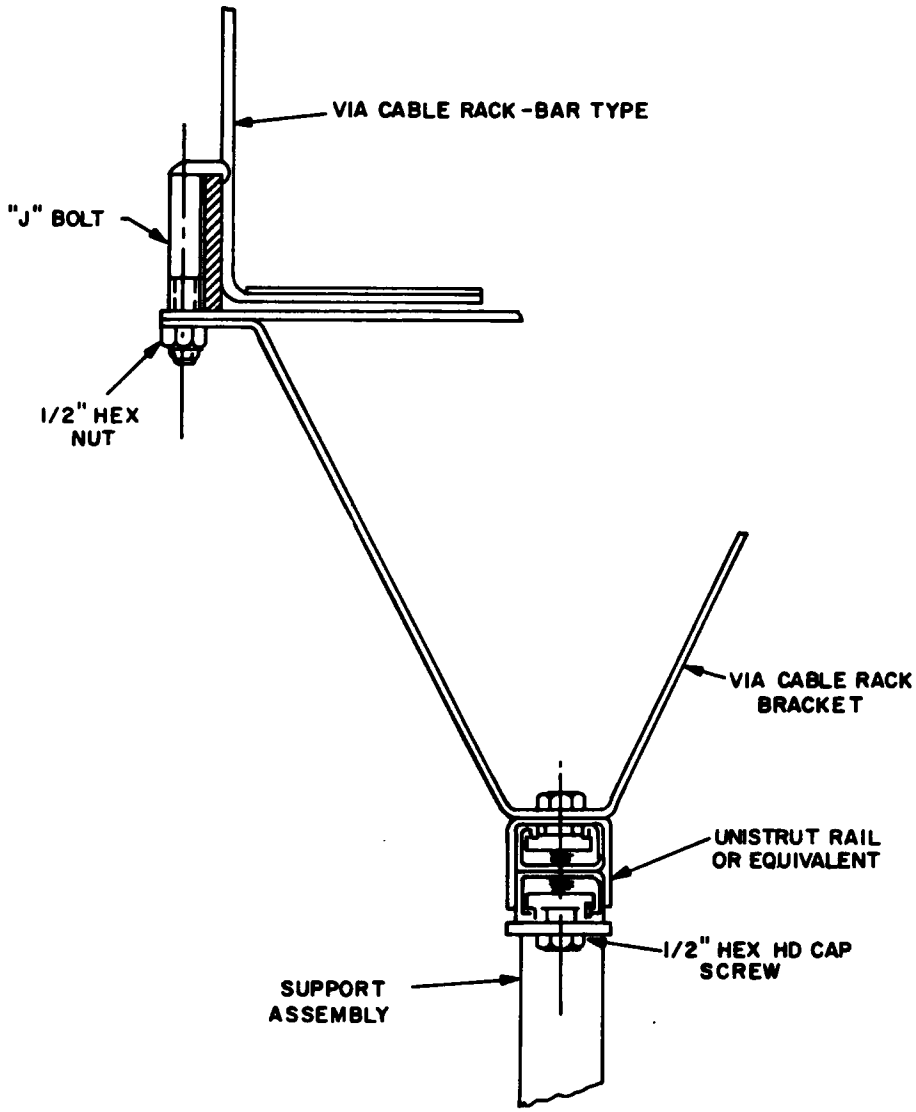

Fig. 4 —Installation of Via Cable Rack and Supporting Bracket in Broadband Cableway System

(PAR. 3.107)