

PREPARATORY OPERATIONS
PREPARING SCAFFOLDING, LIGHTING, CABLE HOLES, SLEEVES AND CONDUIT

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1. GENERAL

1.1 Scope of Section

1.11 This section covers information and methods relative to scaffolding, lighting and the temporary opening of cable holes and sleeves.

1.12 The permanent closing of cable holes and sleeves is contained in Handbook 30.

1.2 General Information Pertaining to Arrangements of Tools, Precautions, Verification, Specifications and Drawings and Figures

1.21 Refer to Section 1 of this handbook for information pertaining to these items.

2. INSTALLING EQUIPMENT

NOTE: The tools and supplies normally required for the operations covered in this section are as follows:

2.1 Tools

- *R-2819 Wrench, Socket, Set
 - R-1516 Snips - Tinners
 - R-2529 Saw, Cross Cut
 - R-9430 Hammer, Claw
 - R-2826 Vacuum Cleaner
 - *R-1542 Wrench, Adjustable 6"
 - *R-4199 Wrench, Adjustable, 10"
- *Indicates Tools generally available in kit used on job.

2.2 Supplies

- R-4522 Cloth, Wire, 30" Wide
- RM-669152 Gloves, Cotton
- R-4248 Glove, Leather, Fingerless
- R-3428 Tape, Gray Plastic Adhesive, 3/4"
- P-284169 Washer, Plain Steel, 1/2" (Any suitable 1/2" I.D. washer may be substituted.)

3. SCAFFOLDING AND LIGHTING

3.1 Arrangement and Check

3.11 Arrange for sufficient ladders or scaffolding in accordance with the information in Handbook 3.

3.12 Check scaffolding and ladders to insure that they are properly located and supported and in proper condition for use. All precautions outlined in Handbook 3 should be strictly adhered to.

3.13 Arrange for lighting to be located at sufficiently close intervals to insure adequate lighting on cable racks where the cable operations are to be performed. See Handbook 3 for temporary lighting information.

4. CABLE HOLES

4.1 Opening

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SYSTEM EXCEPT UNDER WRITTEN AGREEMENT

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4.11 After removing the screws from the top cover, lift the cover carefully from the cable hole so as not to damage the cables.

4.12 When removing mineral wool bags, wear cotton gloves (RM-669152). Handle the bags carefully to prevent dust, lint and particles of mineral wool from being released in the air. Remove lint and dust from the bags with the vacuum cleaner. Place the bags in a box or other container.

CAUTION: HANDLE MINERAL WOOL BAGS WITH CARE. PARTICLES OF MINERAL WOOL MAY SIFT THROUGH THE BAGS AND CAUSE IRRITATION. AVOID KNEELING OR SITTING ON THE BAGS OR TOUCHING THE FACE WITH THE HANDS WHILE HANDLING THE BAGS. WASH HANDS THOROUGHLY AFTER HANDLING MINERAL WOOL BAGS.

4.13 Only those bags of mineral wool in good condition should be stored for reuse. Mineral Wool Bags, KS-5048, are ordered as equipment on all new jobs. Where they have not been provided to close new holes, or a sufficient amount is not available to replace defective bags, requisition the number of bags required as covered in Handbook 30.

4.14 After removing the nylon straps, floor covers, and mineral wool bags, vacuum the bottom cover before removing or opening the ceiling plate.

4.15 Restrict the working of cable runs to provide a gap of 3" between the cabling surfaces and the front and side walls of the cable hole.

NOTE: When the 3" limitations are reached, the hole shall be considered filled, and utilizing normal routines, a Final Marked Drawing shall be forwarded to the S.E.E. Organization as covered in CI 47.242.

4.2 Protection For Temporarily Opened Cable Holes

4.21 Cable Holes Not Equipped With Adjustable Type Ceiling Plates

4.210 Provide and install a temporary wire cloth basket to prevent material, tools, or personnel from falling through the cable hole, and to provide support for fire resistive mineral wool bags. See FIGS. 1 and 2 for illustrations and instructions regarding the fabrication of the temporary wire basket.

4.211 Apply R-3428, 3/4" Gray Plastic Tape, to all cut ends of the wire cloth.

4.212 As the cable pileup in the cable hole increases, both the top closure and the wire basket shall be modified to accommodate the added cable. Cut the wire basket as required and roll the wire cloth under as shown in FIG. 1.

4.213 While running cable through the cable hole, the opening between the wire basket and the cable shall not exceed two inches.

4.214 When cable is not being run, the wire cloth should be rolled back so that the opening between the wire basket and the cable shall not exceed one inch.

CAUTION: THE PURPOSE OF THE WIRE BASKET IS TO PREVENT TOOLS MATERIAL, OR PERSONNEL FROM INADVERTENTLY FALLING THROUGH THE CABLE HOLE. PERSONNEL SHALL NOT STAND ON THE WIRE BASKET.

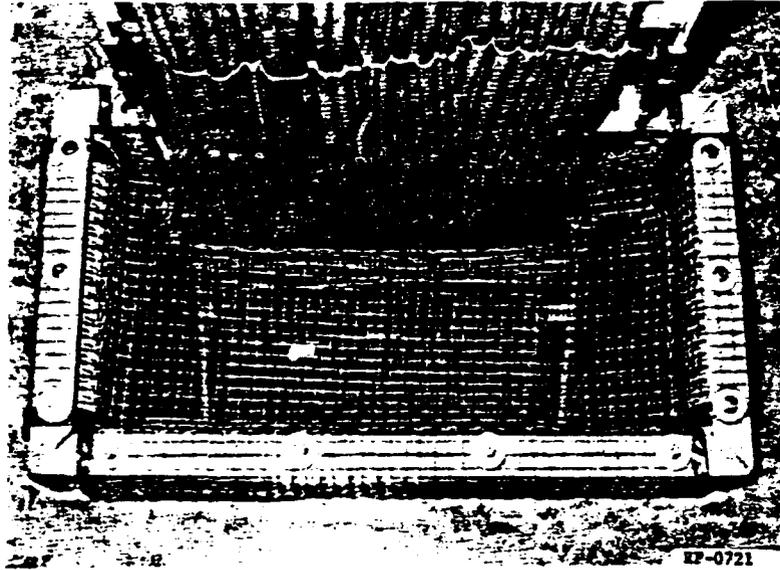
4.215 The cable hole shall be temporarily closed at the end of each working day or whenever it is anticipated that no additional cable will be run that same day.

4.216 Close the hole by tightly packing the mineral wool bags in the wire basket to a depth of six inches. Take care to distribute the bags in such a manner as to prevent drafts through the cable hole.

4.217 After the mineral wool bags have been packed into the wire basket, place the top closure over the hole.

4.218 If for any reason it is not possible to secure the wire basket to the cable hole sheathing, protection for personnel will be provided by constructing temporary guard-rails as shown in FIG. 3. The unsecured wire basket is still required for supporting the mineral wool bags and to prevent material and tools from falling through the hole.

4.219 Cable holes shall be temporarily closed, as indicated above, during the job interval. However, the holes shall be permanently closed no later than Friday or the week final job completion is reported.



**FIG. 1 TEMPORARY WIRE BASKET CLOSURE FOR CABLE HOLES
(PAR. 4.210)**

Fabrication of Temporary Wire Basket

1. Use R-4522 Wire Cloth of sufficient length and width to allow for proper forming into the cable hole and for folding over top and sides of sheathing. - See Fig. 2 for dimension guides.
2. Use the R-1516 Tin Snips for cutting the wire cloth to size. R-4248 Fingerless Gloves should be worn when handling and cutting wire cloth to avoid hand injuries.
3. Cut all ends of wire close to the last crosswire and tape all exposed ends using R-3428 3/4" Gray Plastic Tape.
4. Form the basket by folding the wire cloth along the fold lines shown in Fig. 2.
5. Cut the wire basket to fit the contour of the cable rack and cable. Fold cut portion under.
6. Insert the basket six (6) inches into the hole and fold the remaining edges of the wire cloth over the sides of the cable hole sheathing.
7. Bolt the wire basket to the cable hole sheathing. Use P-284169 Washers (or equivalent) in addition to the screws and washers furnished for the top cover.

4.22 Cable Holes Equipped With Adjustable Ceiling Cover Plates

4.220 The following is the procedure for cable holes with adjustable ceiling cover plates (ED-92116-72) and ceiling plates modified per ED-92116-73. Typical modified cable hole illustrated in FIG. 4.

4.221 Loosen the two set screws in the ceiling cover and slide the movable portion of the cover in the direction away from the cable rack. This operation is performed from the floor above the ceiling plate.

4.222 Add cable to the vertical cable rack uniformly, so as to result in a squared off pileup configuration.

4.223 The cable hole shall be temporarily closed at the end of each working day, or whenever it is anticipated that no additional cable will be run the same day.

4.224 The cable holes will be temporarily closed in the following manner:

- A. Slide the movable portion of the ceiling cover against the cable pileup.
- B. Tighten the thumb screws to hold the plate in position.
- C. Fill the cable hole completely full with KS5048 Mineral Wool Bags. Take care to distribute the bags in such a manner as to prevent drafts through the cable hole.
- D. After the bags have been packed, place the top closure over the hole.

4.225 Cable holes shall be temporarily closed, as indicated above, during the job interval. However, the holes shall be permanently closed no later than Friday of the week final job completion is reported.

5. TREATMENT OF ENDS OF CONDUIT AND SLEEVES CONTAINING ONLY SWITCHBOARD CABLE

5.1 Refer to Handbook 30 for treatment of conduit and sleeves.

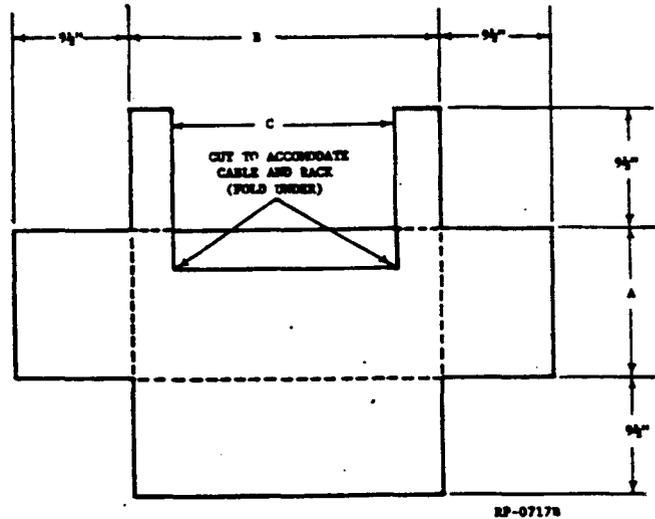


FIG. 2 WIRE BASKET DIMENSION GUIDE (PAR. 4.210)

A = Inside Width of Hole (Minus 1" to Allow Easier Fit)

B = Inside Length of Hole (Minus 1" to Allow Easier Fit)

C = As Required to Accommodate Cable Rack

----- Fold Lines

Ordering Recommendations = Largest Inside Hole Dimension + 18"

Example:
1' x 2' Cable Hole

24" + 18" = 42 Inch Length of 30 Inch Wide Wire Cloth Required for This Size Hole.

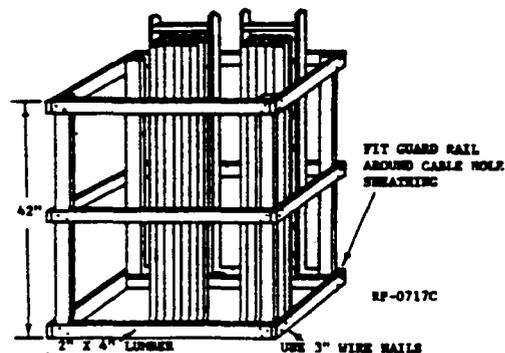
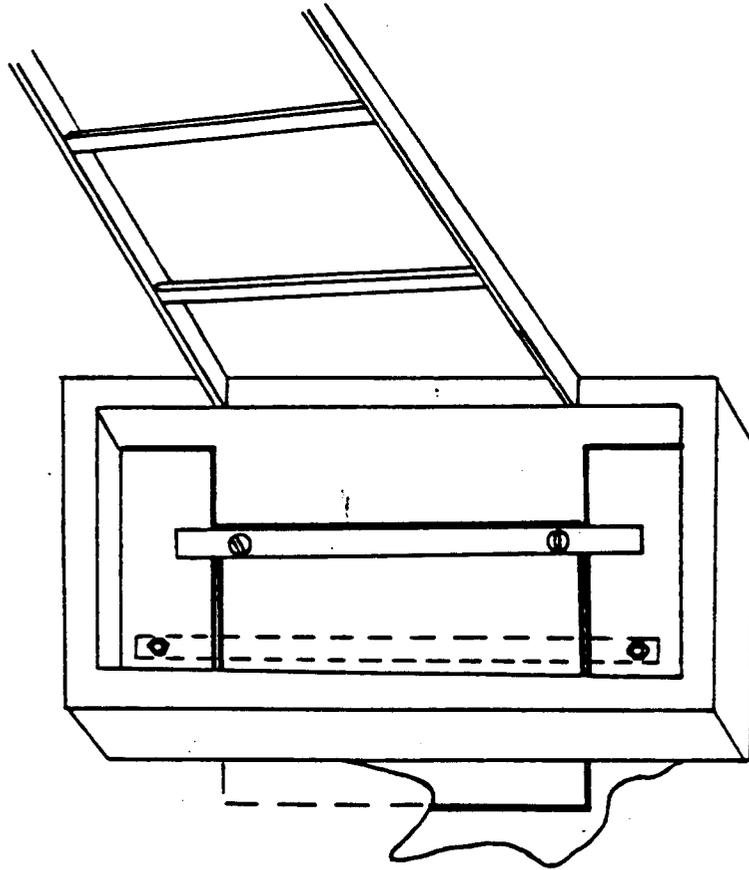


FIG. 3 TEMPORARY GUARD RAIL FOR CABLE HOLES (PAR. 4.218)



RP-0974F

FIG. 4 CABLE HOLE MODIFIED PER ED 92116-73 (TYPICAL)
(PAR. 4.22)

6. VERIFICATION

VERIFICATION ITEMS AND BRIEF STATEMENT OF REQUIREMENTS		REFERENCE	
		Par. No.	Fig. No.
6.01	Temporarily opened cable holes protected with a properly secured wire basket or an unsecured wire basket and temporary guard rails when required or by an adjustable ceiling cover plate.	4.210	1, 3
		4.218	
		4.220	
6.02	All cut ends of wire cloth protected with tape.	4.211	
6.03	Openings between cable pileup and wire basket, not to exceed one inch.	4.214	
6.04	Cable holes temporarily closed at the end of each working day or when cable running is not anticipated.	4.215	
		4.223	
6.05	Mineral wool bags tightly packed to a depth of 6 inches in temporarily closed cable holes.	4.216	
6.06	Top closure placed on temporarily closed cable hole	4.217	
		4.224	
6.07	Cable holes permanently closed on completion of job.	4.219	
		4.225	

→ Indicates new or changed information.

[Vertical lines at side of paragraph indicates requirements.

Engineering Planning Manager
(Installation)

Reason for Reissue:

To revise the time at which the cable holes are to be permanently closed.