

80-TYPE CABINETS INSTALLATION

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1. GENERAL

1.01 This practice covers the installation of the 80-type cabinets (Fig. 1). The 80B cabinet is intended for use as an FDI (feeder distribution inter-

face). The 80C and 80D cabinets can be used to house a back-to-back FDI, an FDI with SLC* carrier systems, or various arrangements of SLC carrier systems only.

1.02 This practice is reissued to:

- Add Precautions
- Change ac power panel connections
- Change Fig. 30 and 31
- Delete Fig. 32, 33, 34, and 35.

Revision arrows are used to identify the significant changes.

1.03 Refer to the following practices for additional information on the 80-type cabinets.

* Registered trademark of AT&T.

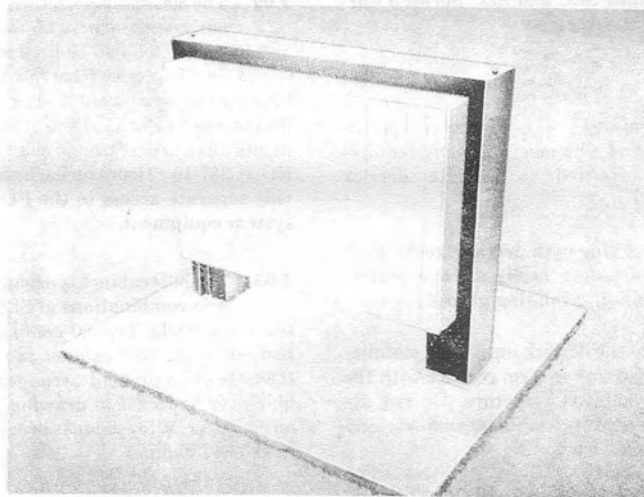


Fig. 1—80-Type Cabinet

PRACTICE	SUBJECT
462-250-110	108 Connectors and 76-Type Binding Posts—Wiring, 80-Type Cabinets
626-500-105	80-Type Cabinet—Coding Scheme, Ordering Information, and Lettering Guidelines
631-600-241	80-Type Cabinet Splicing
640-250-223	80-Type Cabinet Remote Terminal—Installation and Splicing (Metallic Systems)—SLC 96 Carrier System
640-250-325	80D Cabinet Remote Terminal—Description, Installation, and Splicing—SLC Series 5 Carrier System (Metallic)
640-252-220	80-Type Cabinet—Description, Installation, and Splicing—Fiber SLC 96 Carrier System
640-252-312	80-Type Cabinet—Description, Installation, and Splicing Combined SLC and SLC Series 5 Carrier Systems

2. PRECAUTIONS

- 2.01** Only those operators who have been specifically trained and who meet company requirements shall be permitted to operate derrick equipment.
- 2.02** All persons working with derrick trucks shall wear standard safety headgear, eye protection, and, when required, insulating gloves.
- 2.03** Do not operate the derrick until both stabilizers are extended and in firm contact with the ground or adequate support structure. Do not attempt to retract or extend the stabilizers while a load is suspended from the derrick.

2.04 When raising the derrick from the stowed position and while operating the derrick or digger, be alert for overhead obstructions or power lines that might interfere with movement of the derrick.

2.05 At all times, keep bystanders away from all work operations.

2.06 Operators shall not suspend loads over people; nor shall any person be permitted to work, stand, or pass under a suspended load.

2.07 Locate the cabinet to limit vulnerability to damage by vehicular traffic.♦

3. DESCRIPTION

3.01 The 80B cabinet (Fig. 2) is designed for use as an FDI. It is equipped with 76-type binding posts or 108-type quick-connect hardware. The maximum capacity is 1800 pairs with 76-type binding posts and 2700 pairs with 108-type quick-connect hardware. Doors on each side of the cabinet provide separate access to the FDI or the splice chamber. Both the 76-type binding post version and the 108-type quick-connect version are available with wiring harnesses raw-ended or terminated with 710-type connectors.

3.02 The 80C cabinet is designed to be used for various combinations of SLC 96 carrier systems and FDIs. It can also be used to house combinations of SLC 96 and Series 5 carrier systems. Typical combinations of equipment housed in an 80C cabinet are illustrated in Fig. 3. (Details of equipment arrangements that are available may be found in drawing ED-7C337-10.) Doors on each side of the cabinet provide separate access to the FDI and SLC 96 carrier system equipment.

3.03 The 80D cabinet is designed to be used for various combinations of SLC Series 5 carrier systems and FDIs. Typical combinations of equipment housed in the 80D cabinet are illustrated in Fig. 4. (Details of equipment arrangements that are available may be found in drawing ED-7C628-10.) Doors on each side of the cabinet provide separate access as in the 80C cabinet.

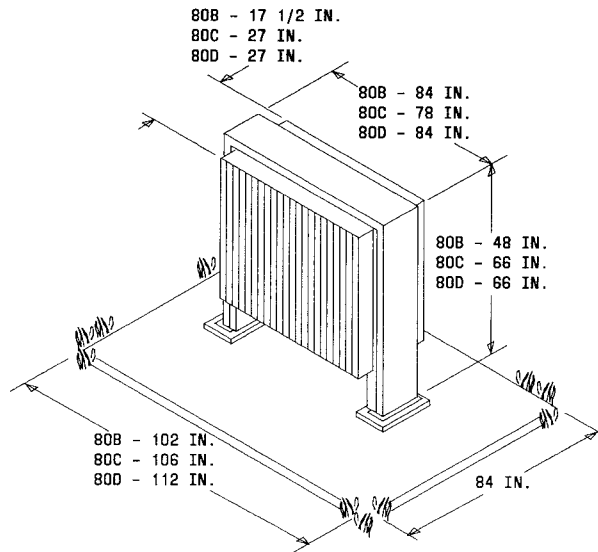
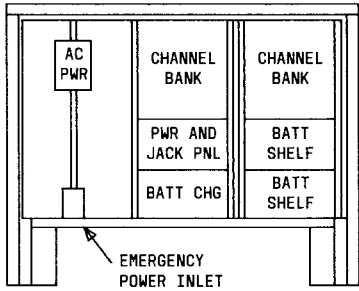
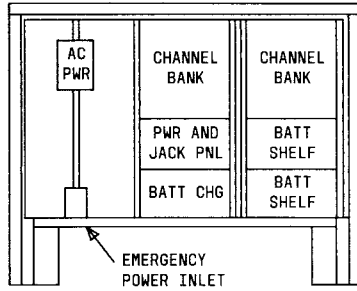


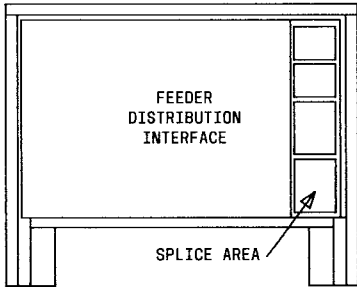
Fig. 2—80-Type Cabinet—Dimensions



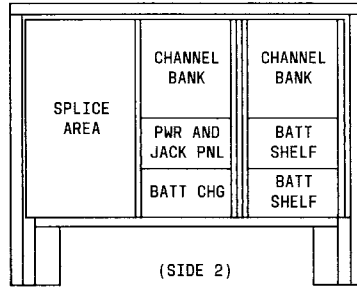
(TWO SLC-96 SYSTEM ARRANGEMENT)
(ELECTRONIC EQUIPMENT SIDE - SIDE 1)



(FOUR SLC 96 SYSTEM ARRANGEMENT)
(SIDE 1)

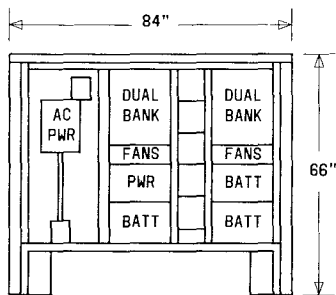


(FDI SIDE - SIDE 2)

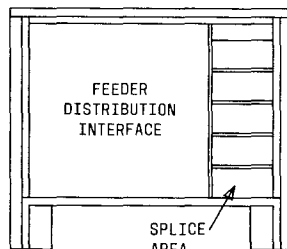


(SIDE 2)

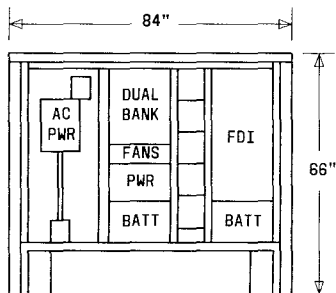
Fig. 3—80C Cabinet—Typical Equipment Layouts



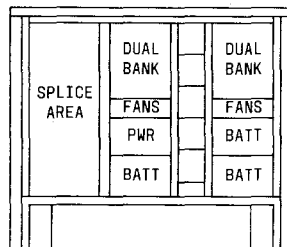
FOUR SLC SERIES 5 SYSTEM
ARRANGEMENT
(EQUIPMENT SIDE 1)



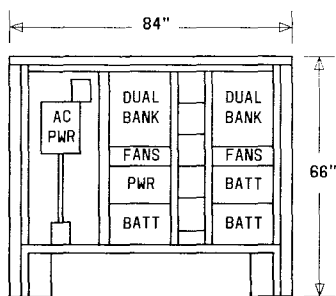
FDI
(EQUIPMENT SIDE 2)



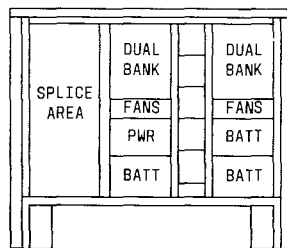
SIX SLC SERIES 5 SYSTEM
ARRANGEMENT
(EQUIPMENT SIDE 1)



(EQUIPMENT
SIDE 2)



EIGHT SLC SERIES 5 SYSTEM
ARRANGEMENT
(EQUIPMENT SIDE 1)



(EQUIPMENT
SIDE 2)

◆Fig. 4—80D Cabinet—Typical Equipment Layouts◆

3.04 The 80-type cabinet structure consists of an aluminum frame with a horizontal top beam, a bottom beam, and two legs. The legs have the same cross-sectional shape as the top. A collar is mounted on both sides of the frame to provide adequate interior depth for the FDI or SLC carrier system apparatus.

3.05 The 80-type cabinets are installed on concrete foundation pads.

4. CONCRETE FOUNDATION PAD

4.01 The concrete foundation specifications are available in ED-01 drawing format and IV03 distribution code. Drawing ED-1T222-01 provides design information for the foundation pad used with the 80B cabinet, ED-1T221-01 provides design information for the 80C cabinet foundation, and ED-1T279-01 provides design information for the 80D cabinet foundation. See Practice 620-050-005 for ED-01 drawing ordering information.

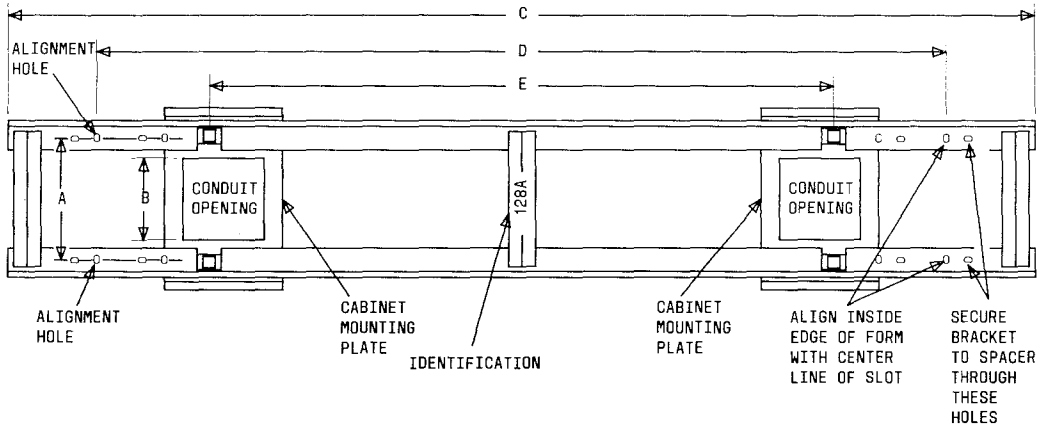
4.02 ***DANGER: Precast concrete foundation pads should be in place before cables are placed. Attempting to place a precast foundation pad over existing cables can result in an unsafe work condition if a person reaches under the pad as the pad is lowered to feed the cable through the opening in the pad.*** The concrete foundation pad can be precast or cast-in-place.

A 128-type bracket (Fig. 5 and 6) must be ordered in advance of construction. The bracket is necessary for locating the mounting plates that are cast in the concrete and are used for securing the cabinet to the pad.

4.03 The foundation pad should have a suitable footing of 3 to 6 inches of gravel or sand on firmly compacted soil for height and level control. The foundation pad should be level within 1 inch. The top surface of the foundation pad should be approximately 2 inches above final grade. Figure 7 shows the installation of the 128A and 128B brackets. Figure 8 shows the installation of the 128C bracket. The 128A and 128B brackets mount externally to the concrete pad and are discarded after use. The 128C bracket is mounted internally to the concrete pad, and becomes a permanent part of the pad. Each 128-type bracket is intended only for use on the cabinet specified in Fig. 5 and 6.

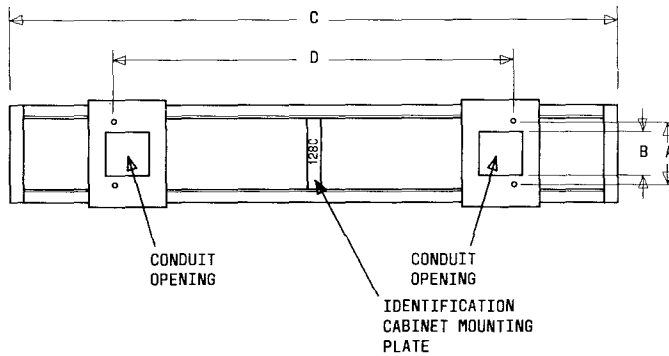
4.04 The conduit, ground rod, and ground wire should be placed before the pad is installed or constructed (Fig. 9). The cables (feeder and distribution) should not be placed before the pad is installed.

Note: When a 4-system SLC 96 carrier system is installed in an 80C cabinet (ED-97977-30, Group 10), or an 8-system SLC Series 5 carrier system is installed in an 80D cabinet (ED-7C621-30, Group 14), the two inboard ducts cannot be used.



BRACKET	USE WITH CABINET	DIMENSIONS (INCHES)				
		A	B	C	D	E
128A	80C	12-1/2	9	120	106	69-3/8
128B	80B	12-1/2	9	120	102	75-3/8

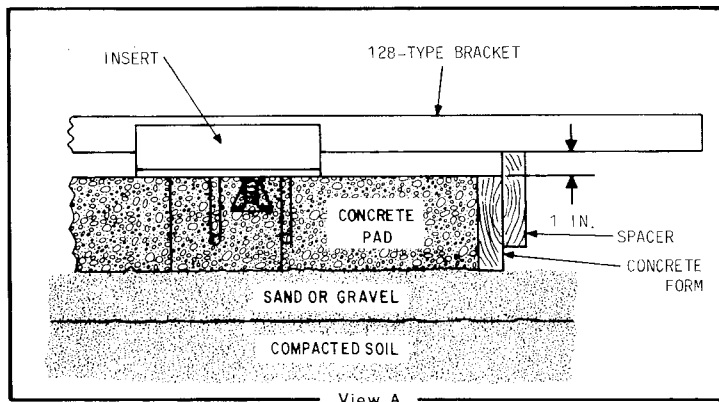
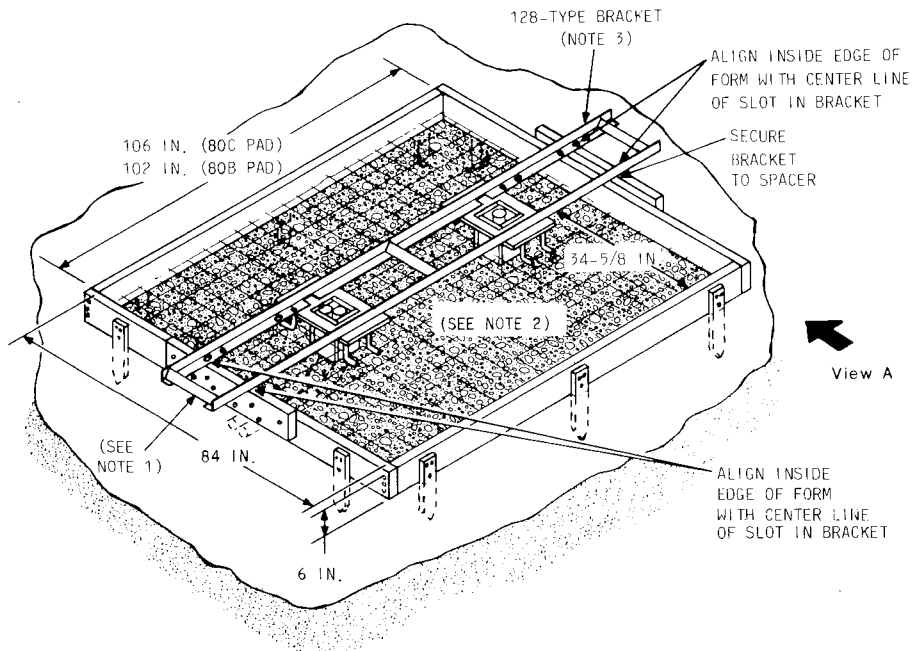
Fig. 5—128A and 128B Brackets



BRACKET	USE WITH CABINET	DIMENSIONS (INCHES)			
		A	B	C	D
128C	80D	12-1/2	9	112	75-3/8

NOTE: THE 128C BRACKET MOUNTS INSIDE THE CONCRETE PAD.

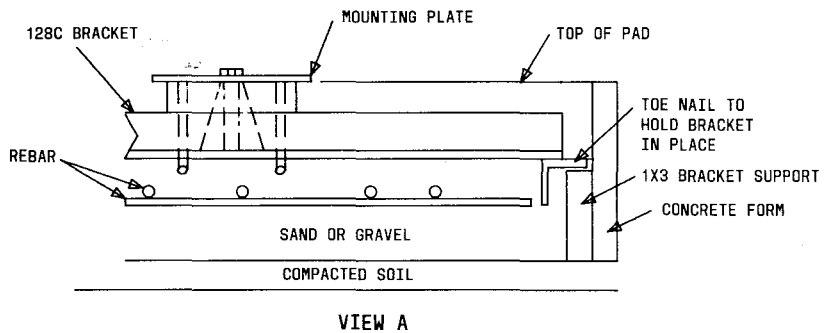
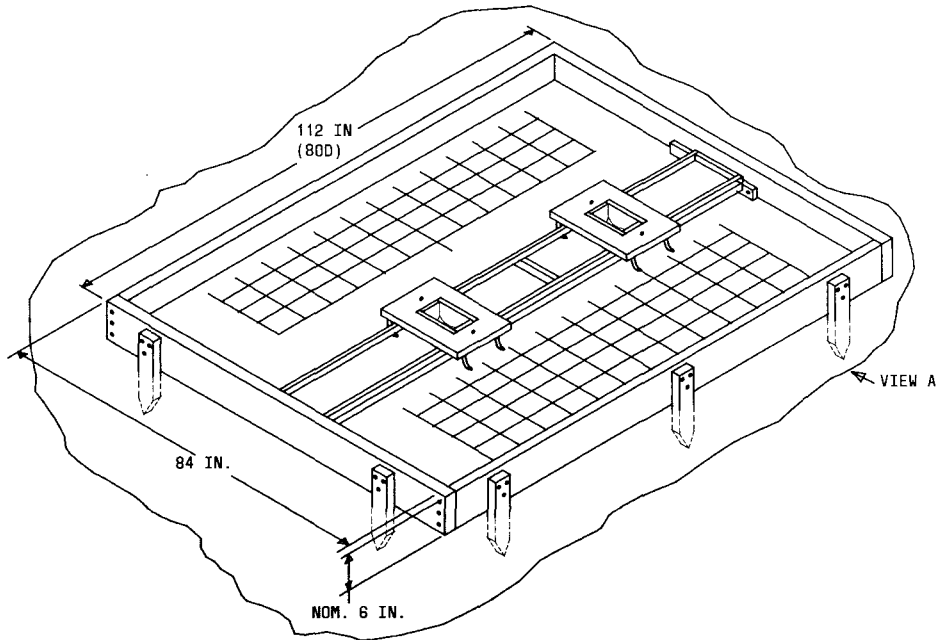
Fig. 6—128C Bracket



NOTES:

1. BENDING OR TWISTING THIS BRACKET CAN RESULT IN MISALIGNED CABINET DOORS.
2. FOR DETAILED INSTALLATION INSTRUCTIONS COVERING FOUNDATION PAD SEE ED-1T221-01 FOR 80C CABINET AND ED-1T222-01 FOR 80B CABINET.
3. AFTER CONCRETE HAS CURED FOR 7 DAYS, REMOVE THE FOUR CAP SCREWS AND WASHERS. REMOVE AND DISCARD WELDED ANGLE ASSEMBLY OF 128-TYPE BRACKET. REPLACE BOLTS AND WASHERS.

Fig. 7—Installing 128A and 128B Brackets



NOTES:

1. BENDING OR TWISTING BRACKET CAN RESULT IN MISALIGNED DOORS.
2. SEE ED-1T279-01 FOR DETAILED INSTALLATION INSTRUCTIONS (80D CABINET).

Fig. 8—Installing 128C Bracket

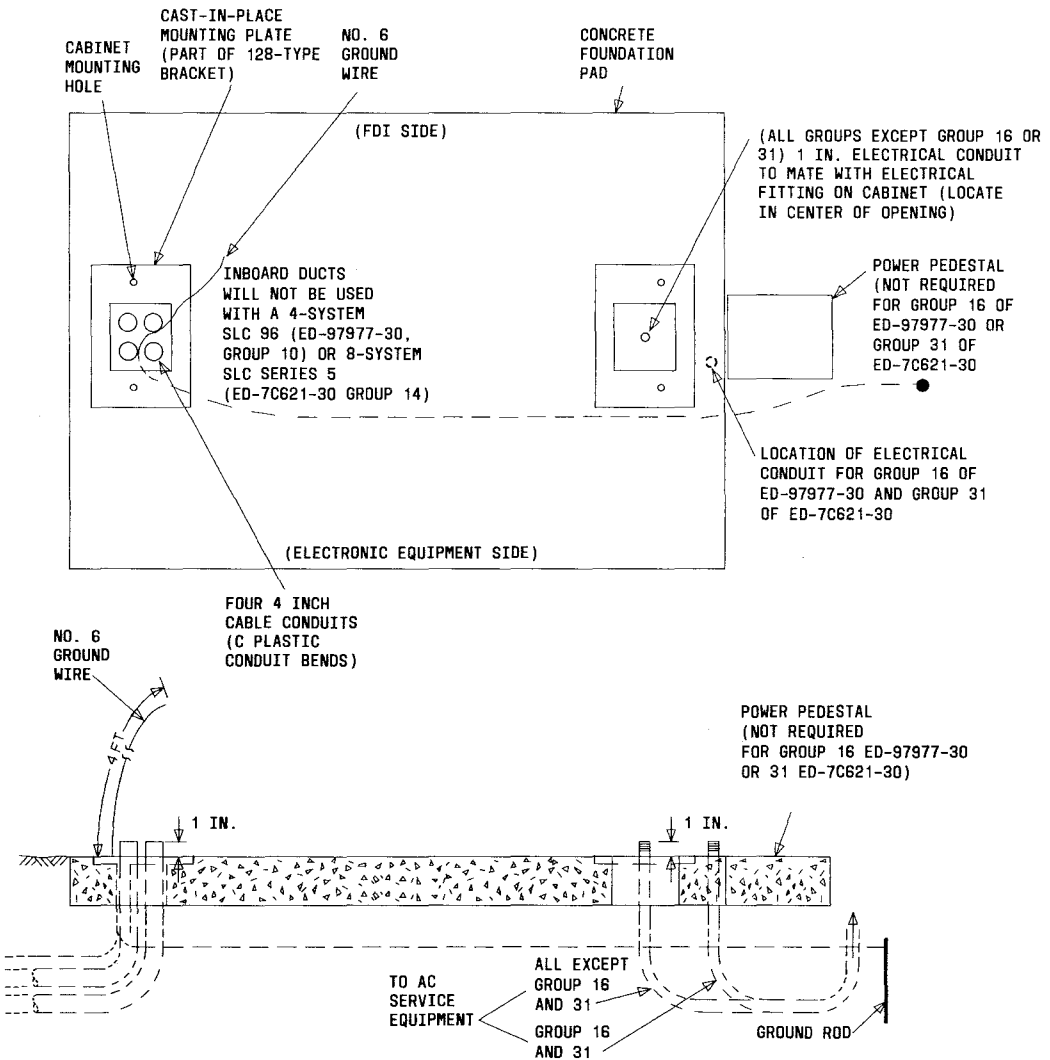


Fig. 9—Conduit/Cable Entrance for Typical Foundation Pad

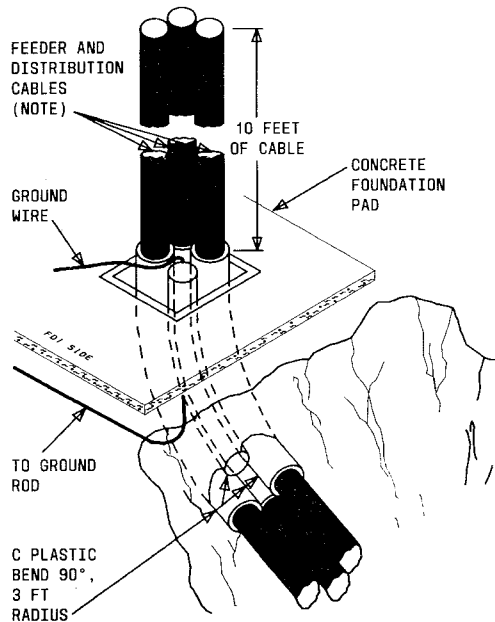
4.05 When an FDI is used on one side (Side 2) of the cabinet, the feeder and distribution cables pass through the cable entrance openings on the right side of the foundation pad, as viewed from the FDI side. The cable ends should be 10 feet long. A typical example of the cable arrangement in the cable entrance opening is shown in Fig. 10. The power cable conduit for this arrangement enters the cabinet at the end opposite the ac power panel board.

4.06 When a cabinet does not have an FDI filling one side of the cabinet, the power cable conduit enters at the same end of the cabinet where the ac power panel board is located. In a back-to-back FDI arrangement, the feeder distribution cables enter through both ends of the foundation pad. The cables for each FDI enter the cabinet on the right-hand side as viewed from that FDI side.

5. CABINET INSTALLATION

5.01 The installation of the 80-type cabinet requires the use of a rotating derrick equipped with a boom tip winch (see Practice 649-300-021 for operating procedures and precautions) or other derrick capable of handling a 1200-pound load. Two 7/16-inch, 5-foot long (minimum) wire rope slings (Practice 649-310-115) and three B connecting links (Practice 081-410-105) or adequate clevises are also required.

5.02 The 80-type cabinet is shipped with protective packaging around the cabinet. Lifting eyes are in place in the top of the cabinet. The lifting eyes are used when lifting and placing the cabinet at the job site. Do not remove any of the protective packaging until the cabinet is at the job site.



NOTE:
CABLES MAY BE PLACED EITHER BEFORE OR
AFTER CABINET IS INSTALLED. DO NOT
PLACE CABLES UNTIL AFTER FOUNDATION PAD
IS INSTALLED.

Fig. 10—Cable Arrangement in Pad Cable Entrance

5.03 After the cabinet is delivered to the site, remove the banding (Fig. 11) and the pallet from the top of the cabinet (Fig. 12). Mounting hardware and an instruction sheet are supplied with the cabinet. Do not discard these items. Do not remove the bolts securing the cabinet to the bottom pallet. At-

tach the slings to the boom line with a clevis or B connecting link (Fig. 13). Attach the other ends of the slings to the lifting eyes on the cabinet with a B connecting link or clevis at each lifting eye (Fig. 14). Tie a length of 5/8-inch rope to one end of the bottom pallet to use as a tag line.

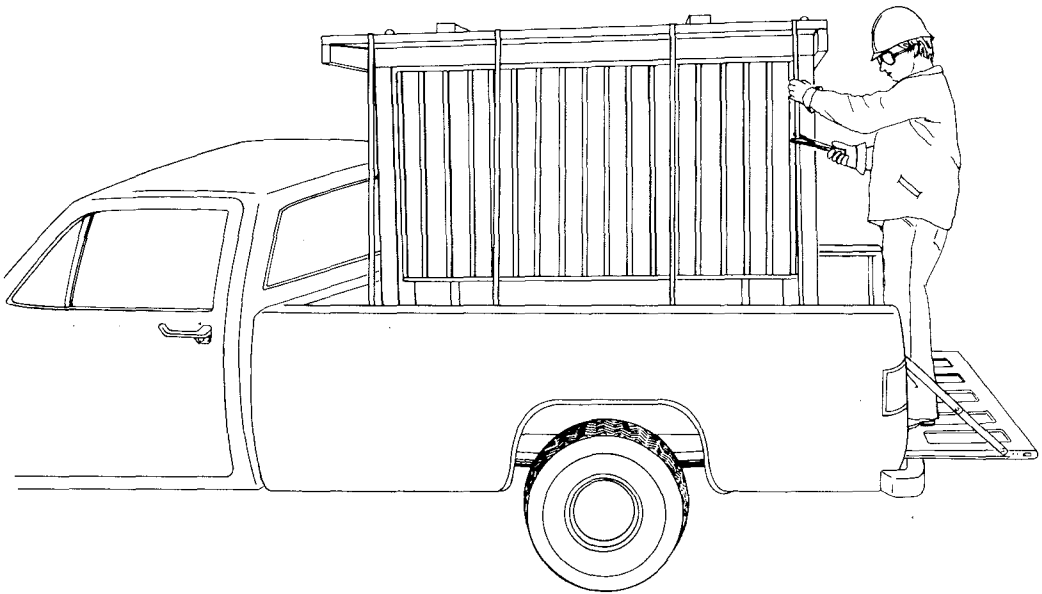


Fig. 11—Removing Banding

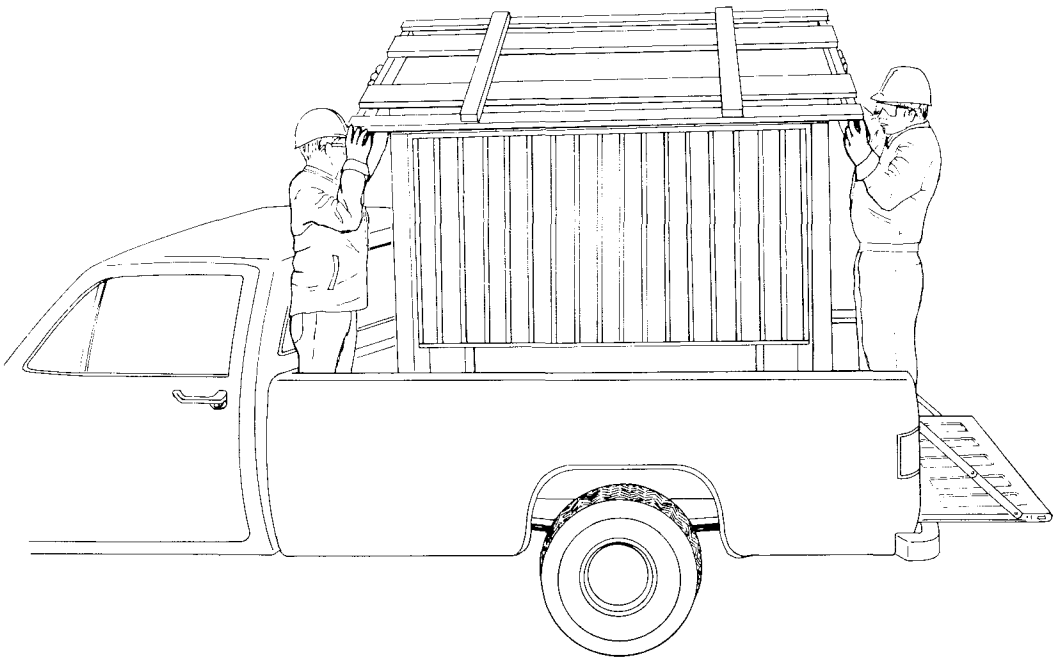


Fig. 12—Removing Top Pallet

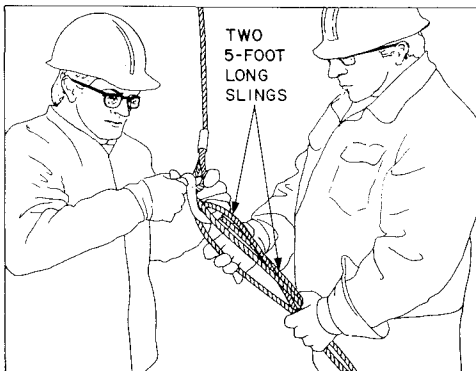


Fig. 13—Attaching Slings to Boom Line

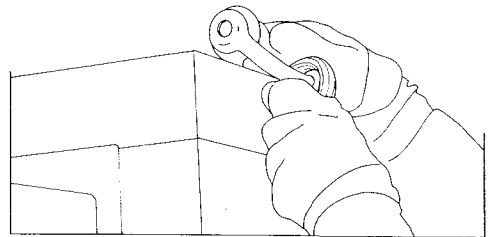


Fig. 14—Attaching Sling to Lifting Eye

5.04 Lift the cabinet (Fig. 15) and place it on a clear, level area adjacent to the foundation pad (Fig. 16). Keep the boom line taut to prevent the cabinet from tipping over while it is being prepared for installation.

5.05 Remove the temporary screws from the anchors in the foundation pad (Fig. 17) and discard them. Be sure the anchor threads are clean.

5.06 The cables (feeder and distribution) may or may not be placed before the cabinet is installed. If cable has been placed, open the cabinet door on the FDI side for access to the splicing compartment. The cabinet leg through which the cable will enter is identified with a label. When facing the

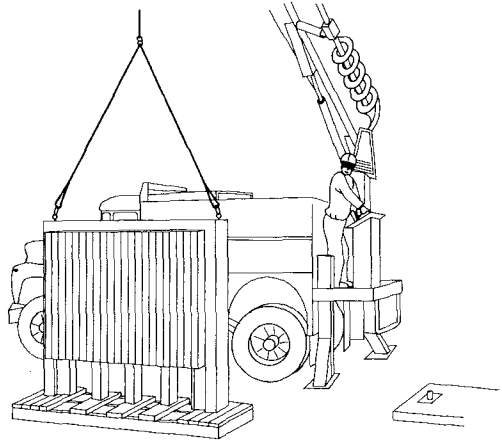


Fig. 16—Cabinet Positioned Next to Pad

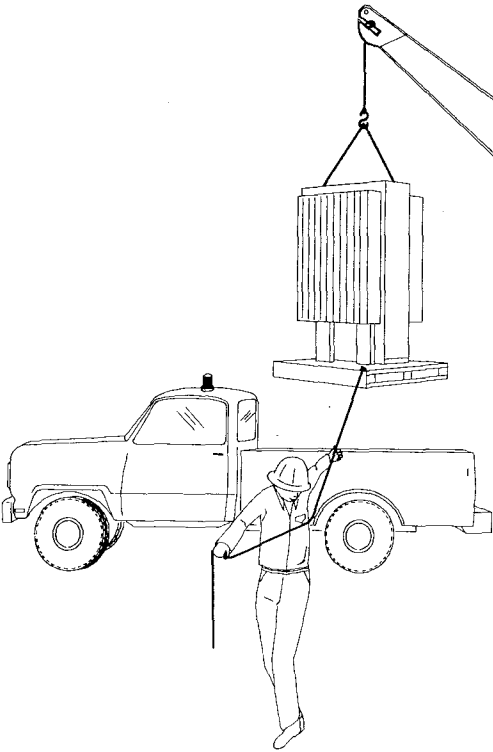


Fig. 15—Moving Cabinet to Foundation Pad

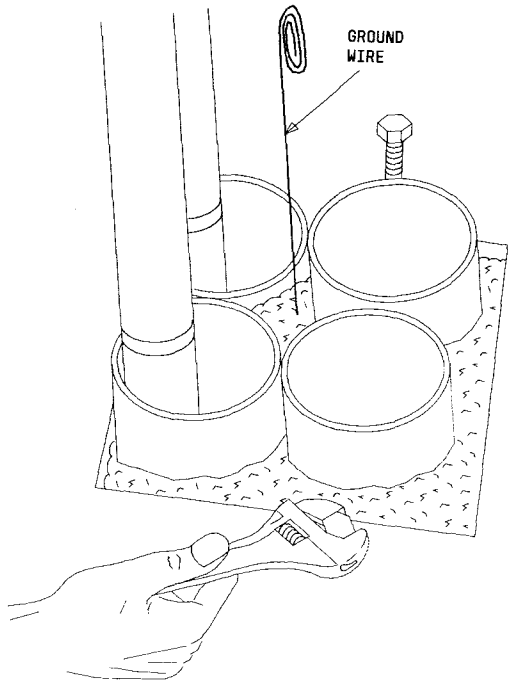
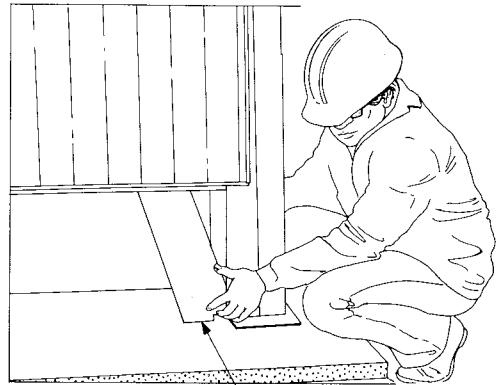


Fig. 17—Removing Temporary Screws From Anchors

cabinet with the cable entrance leg to the right of the viewer, the splicing compartment is behind the cabinet door on the right. Open the door far enough so it locks in the open position. Remove the two bolts in the bottom of the compartment that hold the leg cover in place (Fig. 18). Remove the 3-piece cover plate from the bottom of the compartment.

5.07 Tilt the top of the leg cover away from the leg while lifting the cover to disengage the retainer pins (Fig. 19). Remove the cover and set it aside.

5.08 Check to be sure the boom line is taut and remove the four bolts that hold the cabinet to the pallet (Fig. 20).



TILT TOP OF LEG
COVER AND LIFT
UP TO DISENGAGE
RETAINER PIN

Fig. 19—Removing Leg Cover

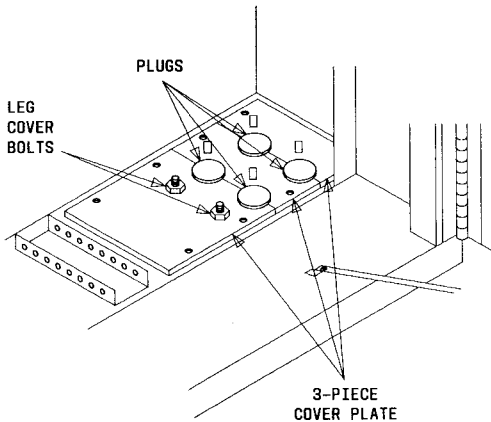


Fig. 18—Removing Leg Cover Bolts

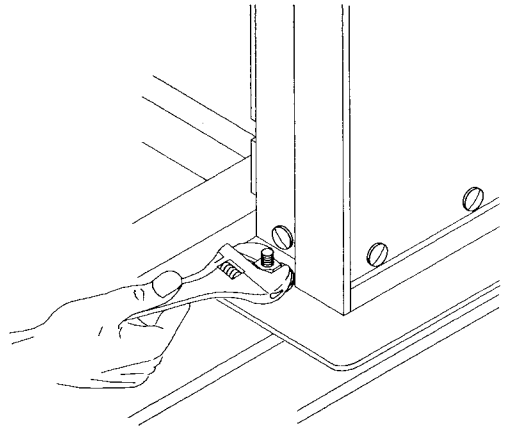


Fig. 20—Removing Bolts From Pallet

5.09 Secure a tag line around one cabinet leg. Raise the cabinet and position it over the pad with the cabinet leg through which the cable will enter over the cable/conduit in the pad. Guide the cables and the No. 6 ground wire through the cable entrance as the cabinet is slowly lowered onto the pad (Fig. 21). Center the mounting holes in the cabinet legs over the anchors in the pad. Secure the cabinet with the 1/2-13 cap screws furnished with the cabinet (Fig. 22). Check the top of the cabinet doors to ensure proper alignment. If the cabinet doors are out of alignment, shim as illustrated in Fig. 23.

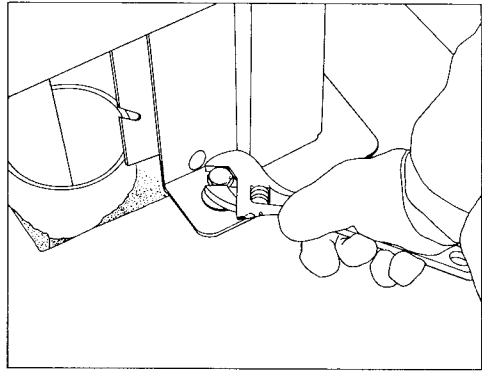


Fig. 22—Bolting Cabinet to Pad

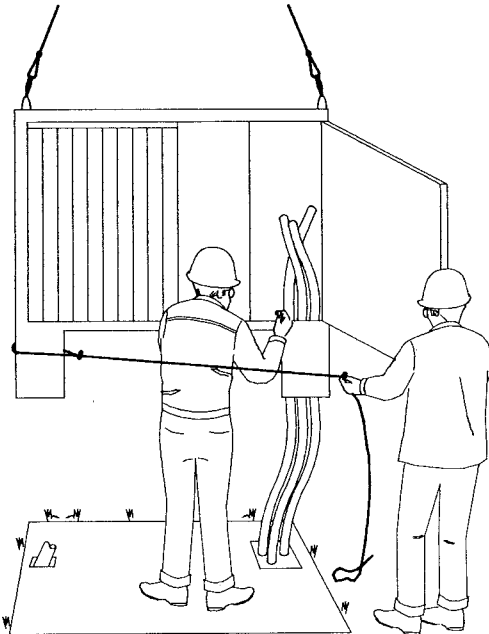


Fig. 21—Lowering Cabinet Onto Pad

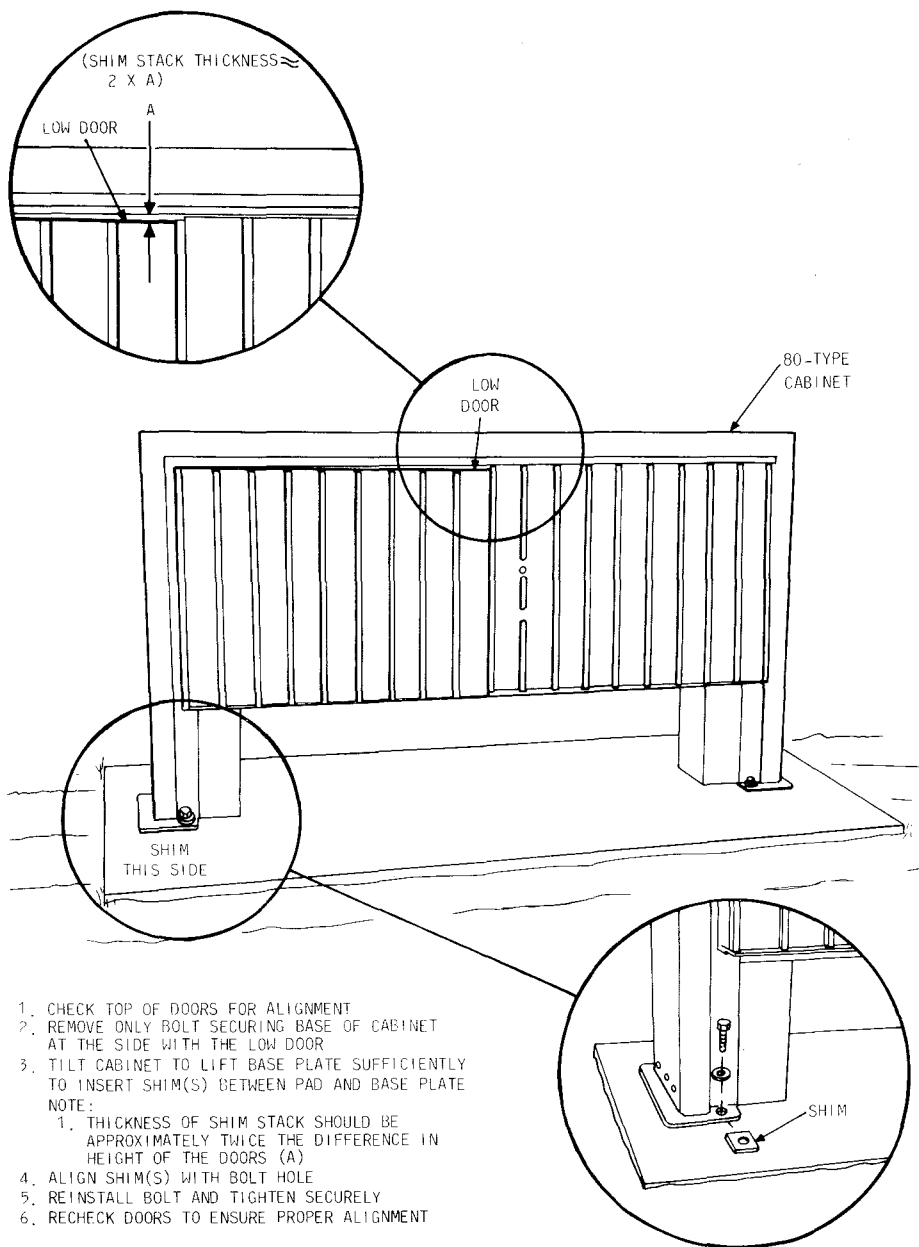


Fig. 23—Door Alignment Procedures—Installing Shims

5.10 Connect the No. 6 ground wire to the ground lug located in the bottom of the splicing compartment (Fig. 24).

5.11 Replace the 3-piece cover plate, install plugs (furnished with the cabinet) in the unused openings in the plate, secure cable ends inside the cabinet, and close the cabinet doors. Seal the space between the cables and conduit with B caulking compound (Fig. 25) and seal vacant conduit with conduit plugs. Seal the space around cables where they enter the cabinet with B caulking compound.

5.12 Remove the lifting eyes and replace them with the brown cap screws furnished with the cabinet (Fig. 26). When removing the lifting eyes, hold the nut with a wrench to keep the nut from turning and disturbing the adhesive. The adhesive is a water seal.

5.13 Where cables will be placed after the cabinet has been installed, they can be fed from the cabinet into the conduit.

6. AC POWER SERVICE

6.01 The SLC 96 and SLC Series 5 carrier systems remote terminals both require a separately protected 120/240 volt ac 30 amp circuit. The electri-

cal installation should comply with the National Electrical Code* and state and local codes, as applicable. The power service installation may include a watt-hour meter (if required by the power company), a fused service switch or circuit breakers, and a surge arrester (lightning protector) independent of the cabinet. If the ED-97977-30, Group 16, or ED-7C621-30, Group 31, is ordered with the cabinet, this equipment will be provided as an integral part of the cabinet. Utility boxes and any exposed switches should normally be equipped with locks.

* Registered trademark of the National Fire Protection Association.

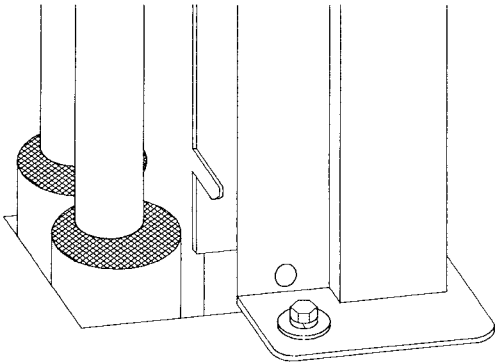


Fig. 25—Sealing Ducts With B Caulking Compound

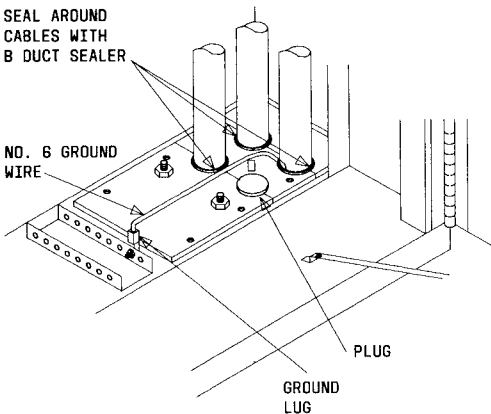


Fig. 24—Terminating Ground Wire

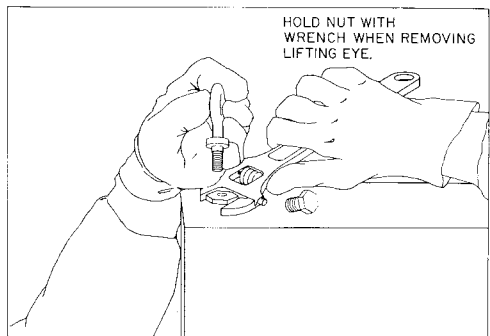


Fig. 26—Replacing Lifting Eye With Cap Screw

6.02 To place power conductors from the ac service to the ac panel board in a cabinet having an FDI on one side, proceed as follows (Fig. 27 and 28):

- (1) Open electronic equipment side (Side 1) of cabinet.
- (2) Reach under lower right-hand battery shelf, use 7/16-inch wrench to remove leg cover retaining bolts, and remove leg cover.

- (3) Connect a length of flexible conduit to electrical conduit in pad.
- (4) Remove unilet cover.
- (5) Pull four conductors from power service to ac panel board.
- (6) Remove panel board cover.

NOTES:

1. AC EQUIPMENT FROM SERVICE DROP TO FEMALE UNION MUST BE PROVIDED LOCALLY.
2. PROCEDURE FOR PLACING POWER CONDUCTORS FROM POWER SERVICE TO AC PANEL BOARD IN CABINET:
 - (1) OPEN ELECTRONIC EQUIPMENT SIDE OF CABINET.
 - (2) REACHING UNDER BATTERY SHELF, USE 7/16-IN. WRENCH, REMOVE LEG COVER RETAINING BOLTS, AND REMOVE LEG COVER.
 - (3) CONNECT A LENGTH OF FLEXIBLE CONDUIT TO ELECTRICAL CONDUIT IN PAD.
 - (4) REMOVE UNILET COVER.
 - (5) PULL FOUR CONDUCTORS FROM POWER SERVICE TO AC PANEL BOARD.

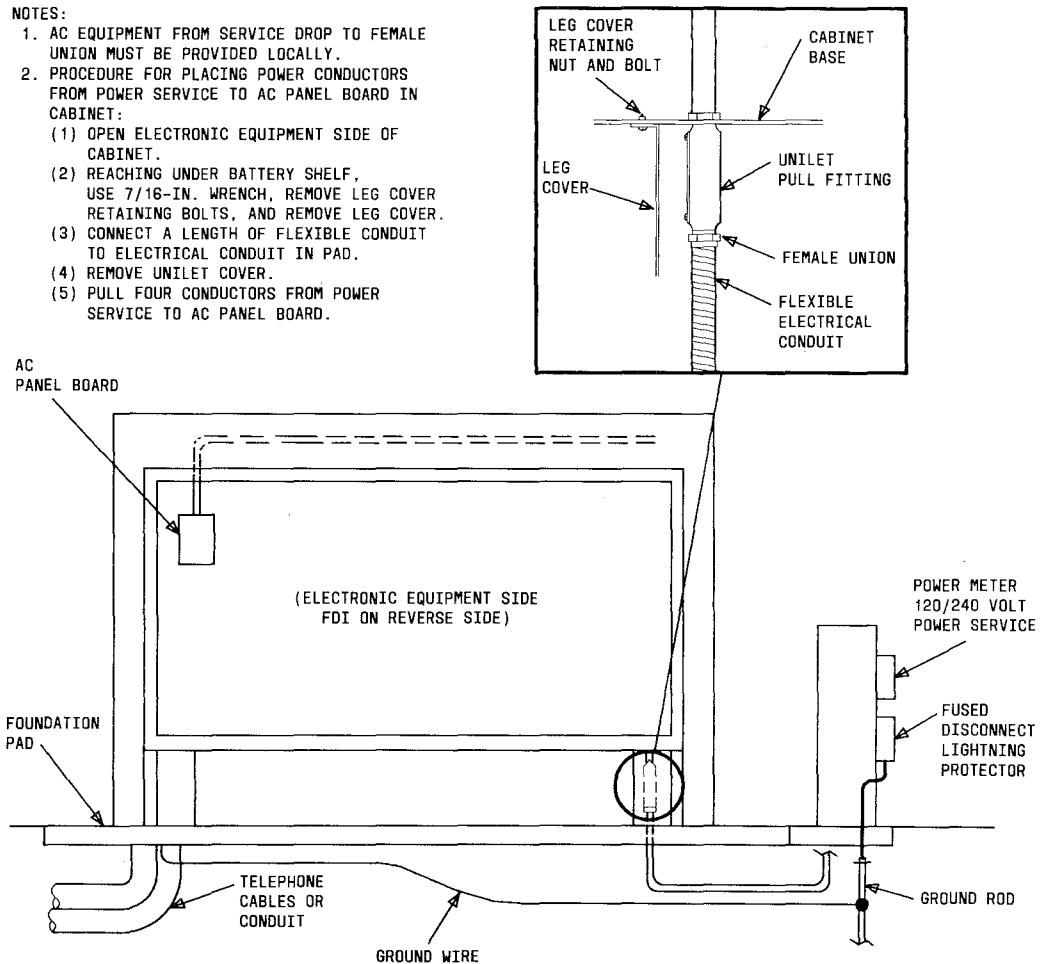
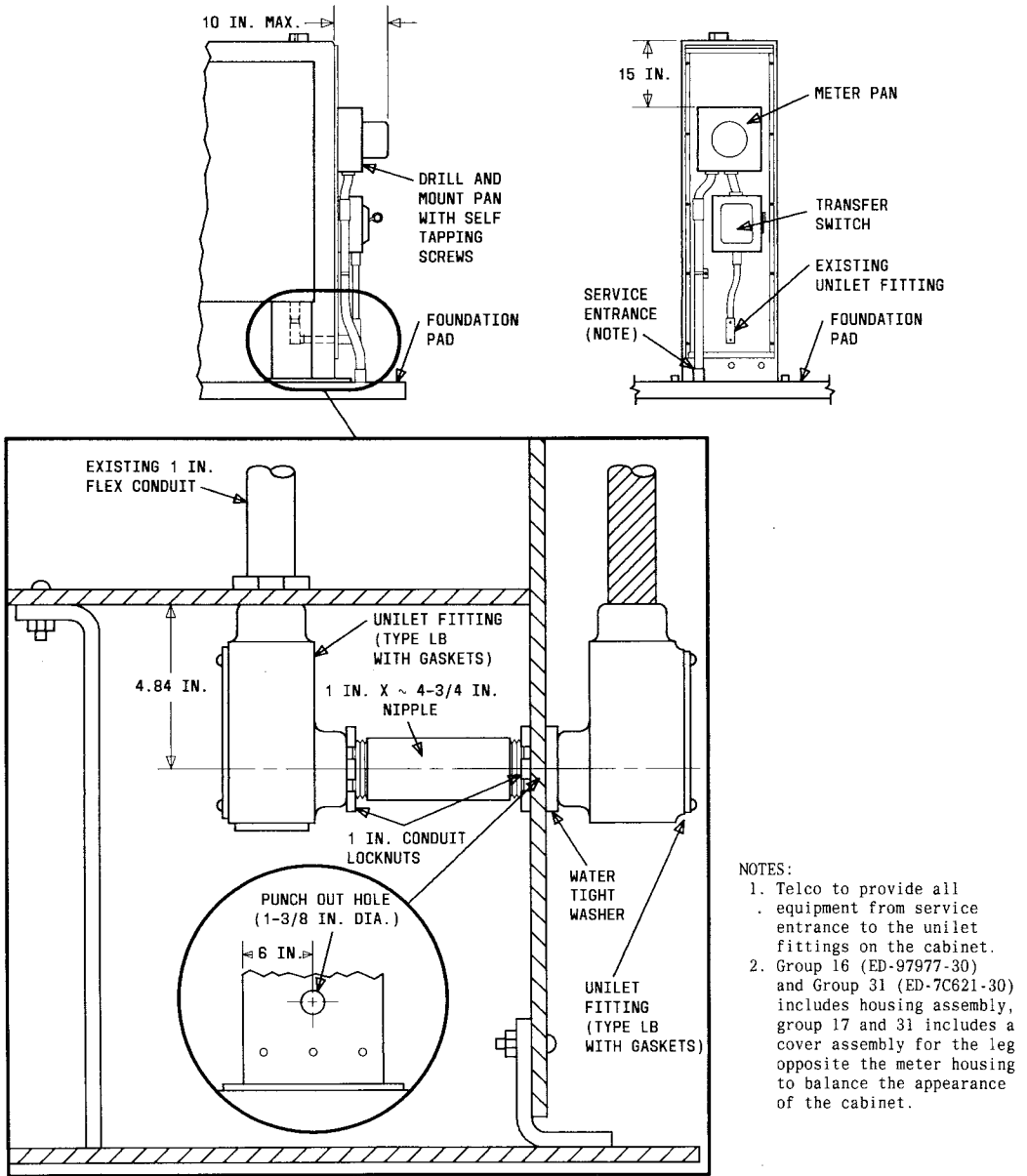


Fig. 27—AC Power Service Arrangement With FDI on Side 2—Pedestal Mounted Power Meter



- NOTES:
1. Telco to provide all equipment from service entrance to the unilet fittings on the cabinet.
 2. Group 16 (ED-97977-30) and Group 31 (ED-7C621-30) includes housing assembly, group 17 and 31 includes a cover assembly for the leg opposite the meter housing to balance the appearance of the cabinet.

Fig. 28—AC Power Service Arrangement—Cabinet Mounted Power Meter (ED-97977-30, Groups 16 and 17, or ED-7C621-30, Groups 31 and 32)

(7) Connect the power conductors to the utility supply (CB1), the ground, and neutral busses.

(8) Replace panel board cover.

6.03 To place power conductors in a cabinet containing SLC carrier equipment on cabinet frame Side 2, proceed as follows (Fig. 29):

(1) Open electronic equipment Side 2 of cabinet.

(2) Reach under lower right-hand battery shelf, use 7/16-inch wrench to remove leg cover retaining bolts, and remove leg cover.

(3) Connect a length of flexible conduit to electrical conduit in pad.

(4) Remove unilet cover.

(5) Pull four conductors from power service to ac panel board.

(6) Open electronic equipment Side 1 to access ac panel board.

(7) Remove panel board cover.

(8) Connect the power conductors to the utility supply (CB1), the ground, and neutral busses.

(9) Replace panel board cover.

6.04 Typical connections in the ac power panel in the 80-type cabinets are shown in Fig. 30 and 31. The actual power panel supplied may not be exactly as shown in these figures. A decal on the cabinet door provides the correct power panel wiring instructions for that particular cabinet.■

7. ISSUING ORGANIZATION

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NOTES:

1. AC EQUIPMENT FROM SERVICE DROP TO FEMALE UNION MUST BE PROVIDED LOCALLY.
2. PROCEDURE FOR PLACING POWER CONDUCTORS FROM POWER SERVICE TO AC PANEL BOARD IN CABINET:
 - (1) OPEN ELECTRONIC EQUIPMENT SIDE 2 OF CABINET (SIDE WITHOUT AC PANEL BOARD)
 - (2) REACH UNDER LOWER RIGHT HAND BATTERY SHELF AND REMOVE LEG COVER RETAINING BOLTS (2) WITH 7/16 INCH WRENCH.
 - (3) REMOVE LEG COVER
 - (4) CONNECT LENGTH OF FLEXIBLE CONDUIT TO ELECTRICAL CONDUIT IN PAD.
 - (5) REMOVE UNILET COVER.
 - (6) PULL FOUR CONDUCTORS FROM POWER SERVICE TO AC PANEL BOARD.

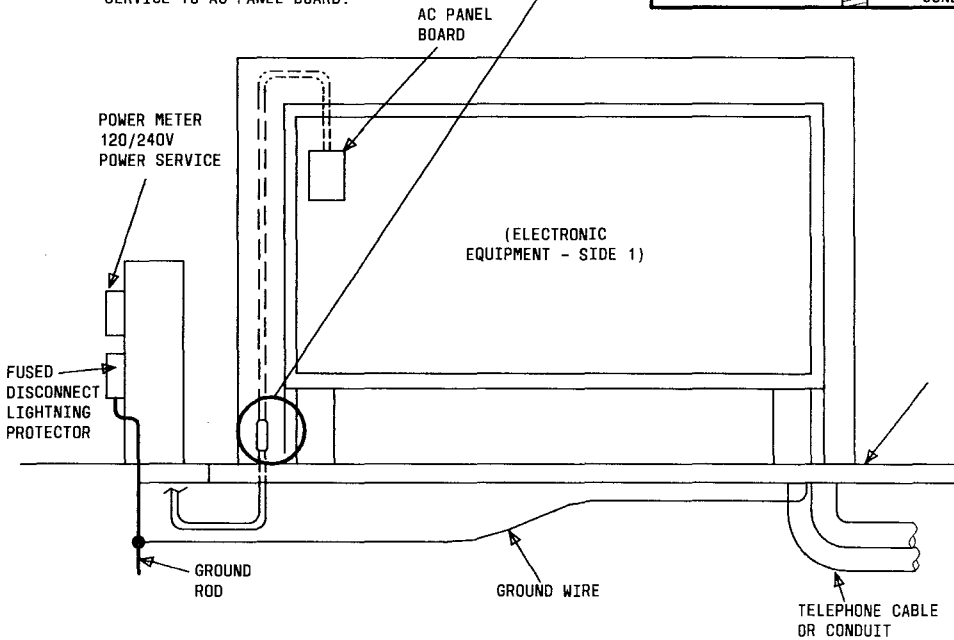
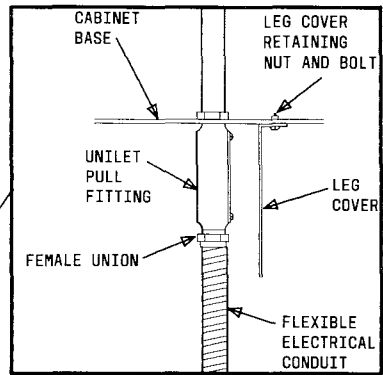
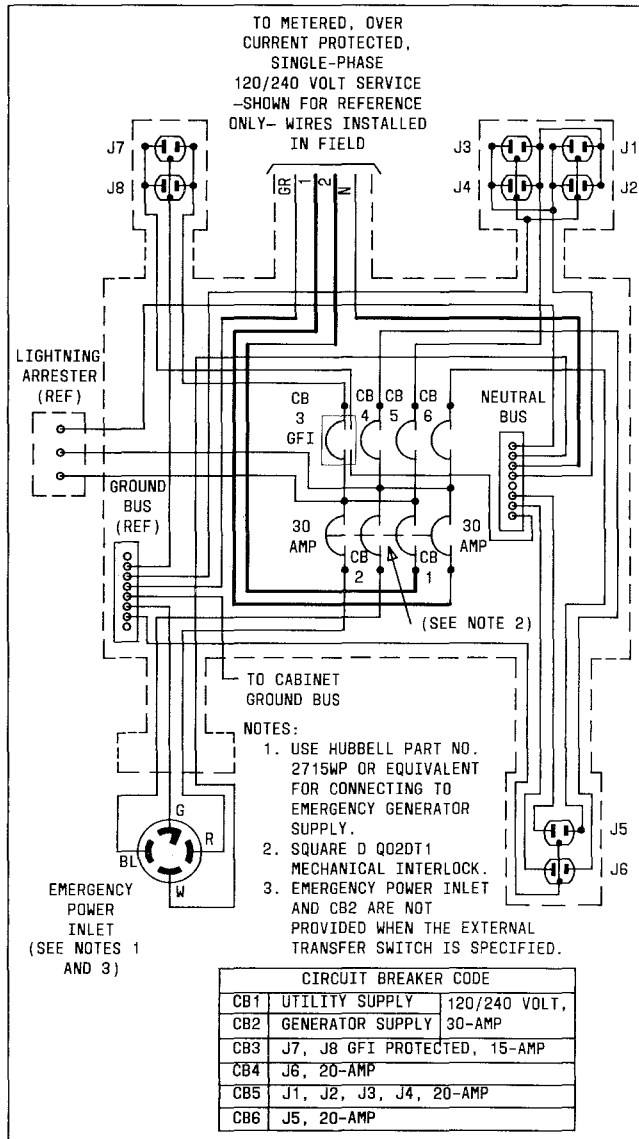
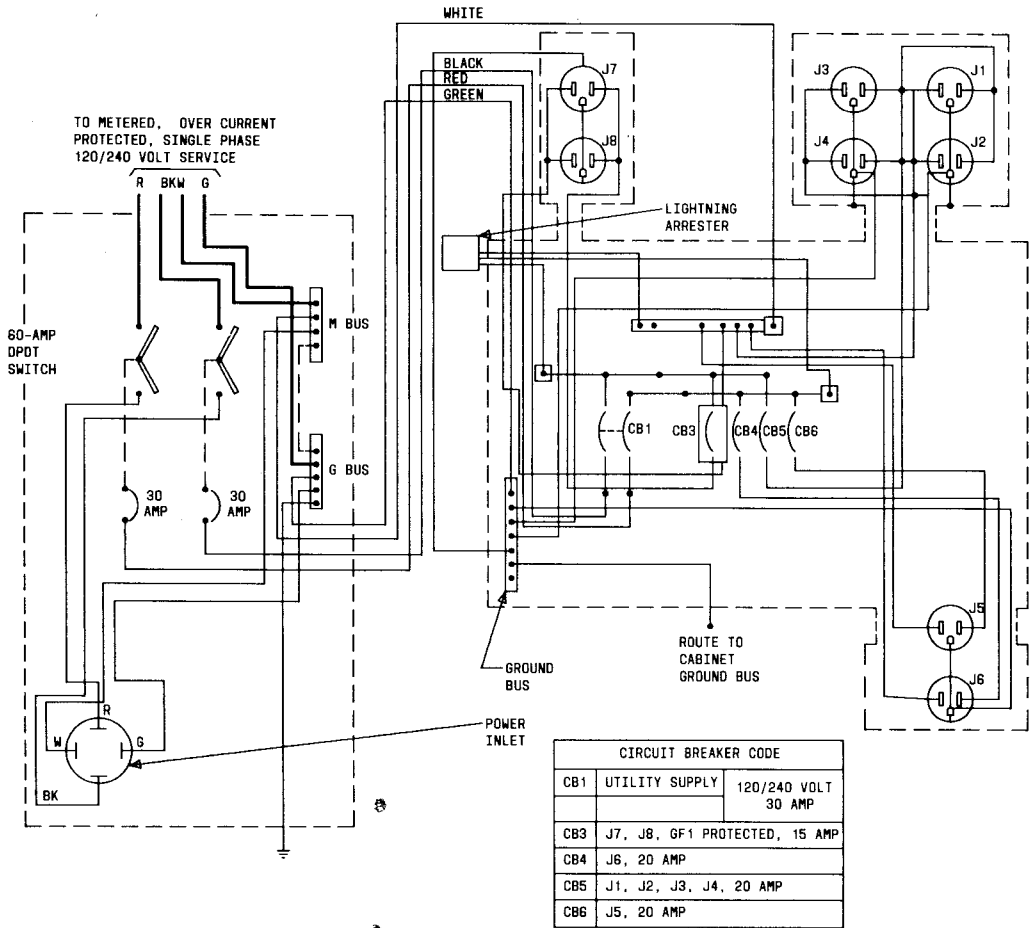


Fig. 29—AC Power Service Arrangement—Cabinet Without FDI on Side 2—Pedestal-Mounted Power Meter



◆Fig. 30—Typical Connection of Conductors From Service Equipment to AC Power Panel (Internal Transfer Switch)◆



◆Fig. 31—Typical Connection of Conductors From Service Equipment to AC Power Panel (External Transfer Switch)◆