OPTICAL CABLE CORPORATION

WALL MOUNT CABINETS
(for 72 fibers and 144 fibers)

Be sure to read and completely understand this procedure before applying product. Be sure to select the proper Optical Cable Corporation product before application.

Catalog#	Product Description (Where X is color: A = Almond, B = Black)
WTC72X	Wall Mount Cabinet with Fiber Mgt System, accepts up to 12 Adapter Plates
WTC144X	Wall Mount Cabenet with Fiber Mgt System, accepts up to 24 Adapter Plates
W72S	Splice Tray Kit for WTC72X Cabinet
W144S	Splice Tray Kit for WTC144X Cabinet

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1.00 NOMENCLATURE

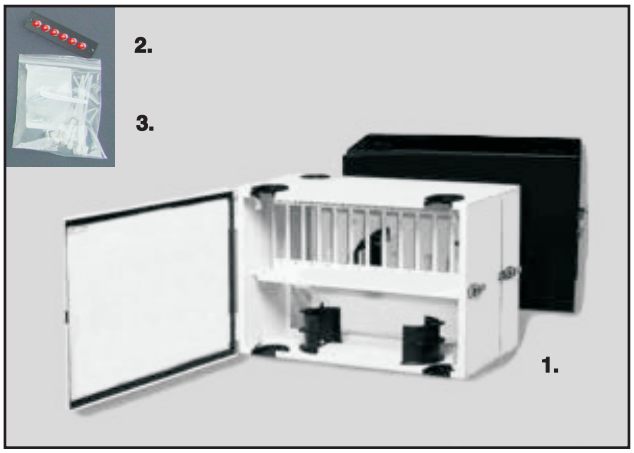

FIGURE 1A - CABINET ASSY (WTC72X SHOWN)

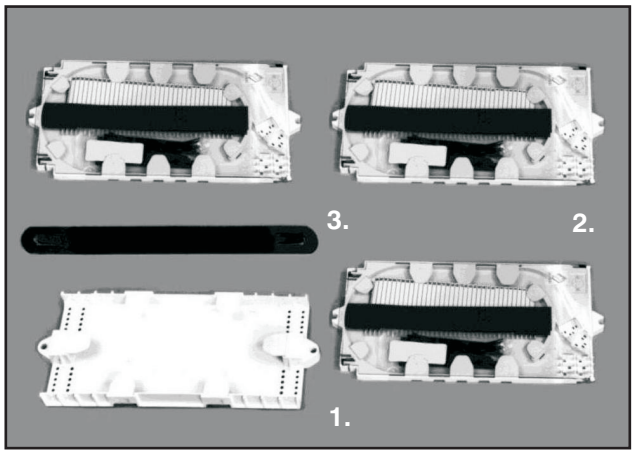

FIGURE 1B - SPLICE TRAY KIT (W72S SHOWN)

1.01

1. Wall Mount Cabinet Assembly
2. Adapter Plate (sold separately)
3. Small Parts Bag (mounting screws, tie wraps, ground lug)

1. Transition Assembly
2. Splice Tray(s)
3. Splice Tray Hold Down Strap
4. 1/4” Studs and Nuts (not shown)

2.00 DESCRIPTION

2.01 The Wall Mount Cabinets are designed to protect and organize optical fiber splices and connectors in central offices, equipment rooms, and CEVs.

2.02 The cabinets are available to accommodate fiber splices and connectors ranging from 12 to 144 in number. This procedure deals with cabinets for up to 72 fibers and up to 144 fibers (WTC72X and WTC144X).

2.03 The splicing kits (W72S or W144S), purchased separately, provide the Splice Trays and associated components required to splice pigtails (sold separately) to the fibers of the feeder cable. Each Splice Tray accommodates 24 splices.

2.04 Adapter Plates, order separately, are available with all standard fiber optic connectors (6 per connections plate).

2.05 The WTC72 and WTC144 Cabinets have a hinged, two-section design, which provides easy access to fiber connectors and splices.

3.00 MOUNTING ON WALL

3.01 Remove the front cover by lifting it off the lower hinge section.

3.02 Remove the center section by lifting it off the lower hinge section.

3.03 Position the rear section of the cabinet against the plywood backboard or wall where it is to be located, level, and mark the center of the four mounting hole locations (six for WTC144).

3.04 If a plywood backboard is used, drill a small pilot hole at the marks, otherwise install the appropriate anchors at marked locations.

3.05 Fasten cabinet securely to the wall.

3.06 Secure the ground lug (provided to the threaded hole in the left side of the cabinet with the 1/4-20 pan head screw provided.

3.07 Ground the cabinet to an approved ground with a #6 solid copper wire (or equivalent) attached to the ground lug.

3.08 Reinstall the center section and front cover.

4.00 FIELD TERMINATION APPLICATIONS

4.01 Remove the plug from the cable entry in the rear section to be used (top or bottom) and install the appropriate non-metallic conduit fitting (if required).

4.02 Install the L-Bracket Assembly adjacent to the entry being used with the 1/4” bolt, nut, and lock washer provided.

4.03 Feed the cable through the conduit (if required) into and through the cabinet.

4.04 With the end of the cable jacket extending about 1 ½” into the cabinet, remove a minimum of 94” of jacket from the cable .

4.05 If required, install a bond connector at the end of the cable jacket and secure it to the L-Bracket Assembly.

4.06 Capture the central strength member or any other strength member into the clip on the L-Bracket Assembly.

4.07 Install the Adapter Plates (purchased separately) in the cabinet bulkhead(s). Push the locking fasteners at the ends of the Adapter Plates to secure them in place.

4.08 Route the individual jacketed fiber elements around the rear section and across the hinge to the center section. In the WTC144 Cabinet, route 72 fiber elements to the lower Fiber Radius Hoops, and the remainder to the upper Fiber Radius Hoops. Route the fiber elements at least once around the Fiber Radius Hoops and then up through the Management Hoops behind the bulkhead(s).

TIP: Be sure to maintain a 1 3/4” to 2” bending radius on the individual fiber elements as they go around the top or bottom Radius Hoop and through the Management Hoops.

4.09 Mark the jacketed fiber elements at a point about 1” beyond where they contact the bulkhead (this provides additional fiber length for application of the connectors).

4.10 Field install the connectors to the jacketed fiber elements according to your accepted company practices and recommendations from the connector supplier.

4.11 Install the connectorized fiber elements to the bushings on the Adapter Plates.

5.00 PIGTAIL/SPLICING APPLICATIONS

5.01 Sections 6.00 through 8.00 detail the steps required where pigtails are used and spliced into the feeder cables in the cabinet.

5.02 Loosen the nuts and remove Fiber Radius Hoops from the center section of cabinet.

5.03 Screw the 1/4" studs provided with Splicing Kit into the PEM nuts in the center section of the cabinet (upper and lower for WTC144).

5.04 Install the large Transition Assy(s) provided with the Splicing Kit over the 1/4" studs and secure in place with the 1/4" nuts provided.

5.05 Install the small Transition Assy(s) within the rear section. In the WTC72 Cabinet, install the Transition Assembly on the upper set of 1/4" PEM nuts for a cable entering from the bottom of cabinet and on the lower set of nuts for a cable entering the top. (Figure 2)

6.00 PREPARATION AND ROUTING OF FEEDER CABLE

6.01 Remove a minimum of 90" of sheath from the cable and clean cable according to accepted company practices.

6.02 Remove the rear cover from the cabinet by turning the 1/4-turn fasteners counterclockwise.

6.03 Slit the grommet in the cable entry at rear of the cabinet on the side being used for cable entry and position the cable into the entry.

6.04 Lay the fibers or the unitube into the Transition Assembly. For the unitube application, skip to Step 6.10.

TIP: The retaining tabs on top of Transition Assy are removable to facilitate placement of fibers.

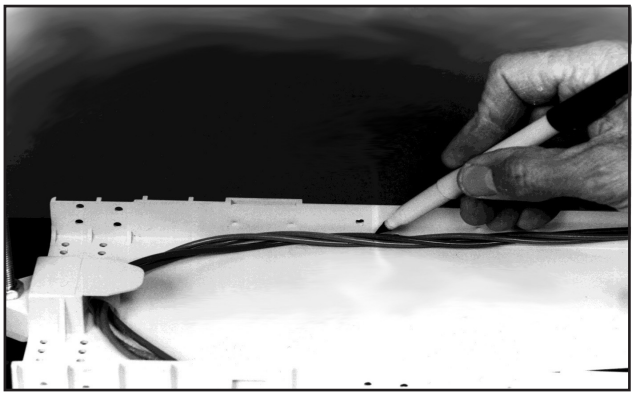

FIGURE 2- MARK THE FIBERS FOR BOTTOM CABLE ENTRY

6.05 Mark fibers at the back wall centerline of the Transition Assembly as shown in Figure 2.

(Note that for cable entry into the right side of the cabinet, the fibers are routed against the front of the Transition Assy and then around to the back wall).

6.06 Starting with one of the fibers, mark and clean the fibers per your accepted company practices.

6.09 Using two of the tie wraps supplied with the Splice Tray(s), secure the fibers to the back wall of the Transition Assembly. (Figure 3).

6.10 Mark the unitube at a point 2" from where it enters the Transition Assembly (for either right or left side cable entry).

6.11 Remove the unitube and clean the fibers per your accepted company practices. Make sure to maintain the identity of each bundle of twelve fibers.

6.12 Secure the unitube to the Transition Assy with the tie wraps provided. Use two sets of the tie down holes in the side of the Transition Assembly.

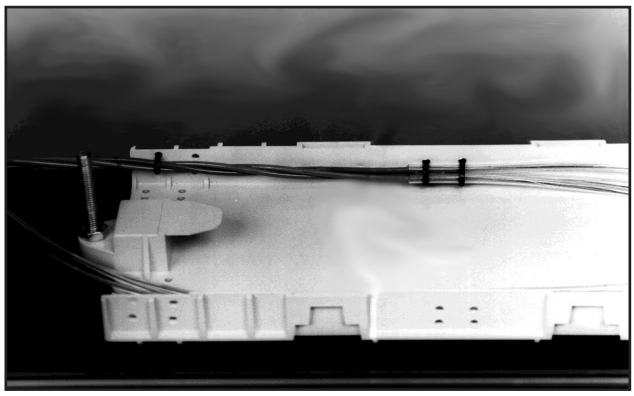

FIGURE 3- SECURE FIBERS TO TRANSITION ASSEMBLY

7.00 PIGTAIL PREPARATION & ROUTING

7.01 The pigtail lengths required for each Wall Mount Cabinet is 3 meters.

7.02 Select one of the Adapter Plates (purchased separately) and install it in one of the locations in the cabinet bulkhead. Push the locking fasteners at the ends of the adapter plate to secure it in place.

7.03 Select six of the pigtails, clean the fiber connector and connect them to the rear side of the adapter plate.

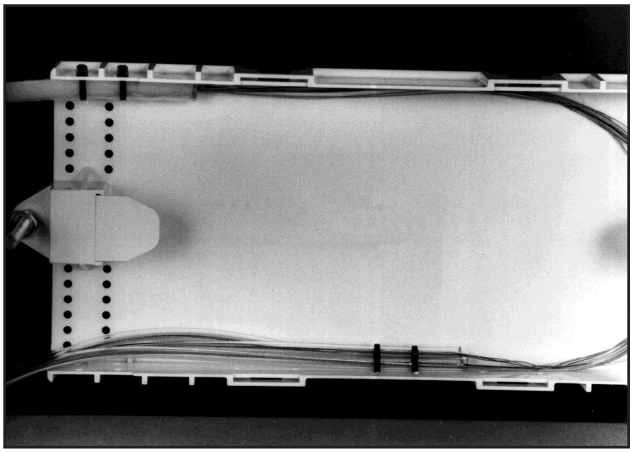

FIGURE 4A - FIBER ROUTING & LOCATION FOR RIGHT SIDE CABLE ENTRY

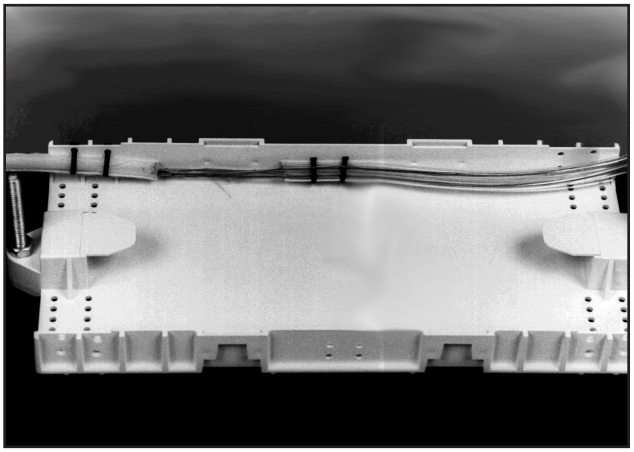

FIGURE 4B - FIBER ROUTING & LOCATION FOR LEFT SIDE CABLE ENTRY

7.04 Route the pigtails along the Transition Assy toward the right side of the cabinet, while maintaining a smooth bending radius behind the Adapter Plates. (Figure 5)

7.05 Mark jacket of each of the pigtails at a point 2” beyond the bending radius. (Figure 6)

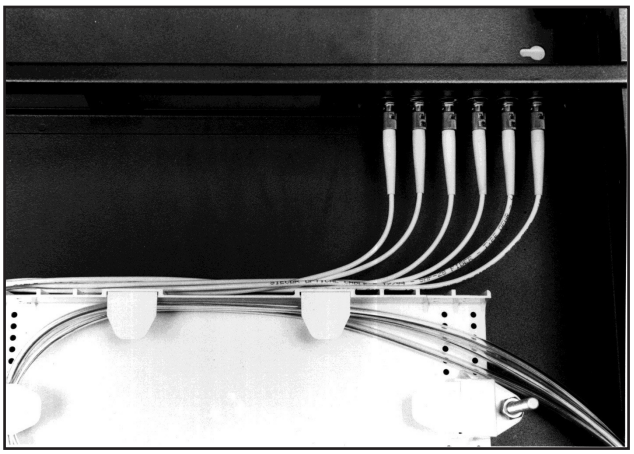

FIGURE 5 - ROUTE THE PIGTAILS

7.06 Carefully remove jacket on each pigtail up to the mark. Number or color code the connector strain relief and 900 micron tight buffer of each pigtail for fiber identification.

TIP: Optical Cable Corporation has pigtails available with different colored 900 micron tight buffer coatings to simplify fiber identification.

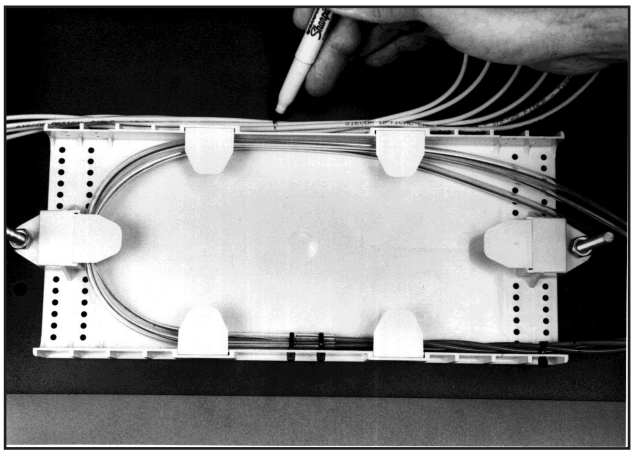

FIGURE 6 - MARK THE PIGTAILS

8.00 FIBER SPLICING AND ROUTING

8.01 Route the fibers of the feeder cable fibers and the Pigtail Tube Assemblies within the Transition Assembly so that they will exit at the front left corner of the Transition Assembly. (Figure 7)

8.02 Use two tie wraps to gently secure the Pigtail Assemblies to the back right side of the Transition Assembly. (Figure 7)

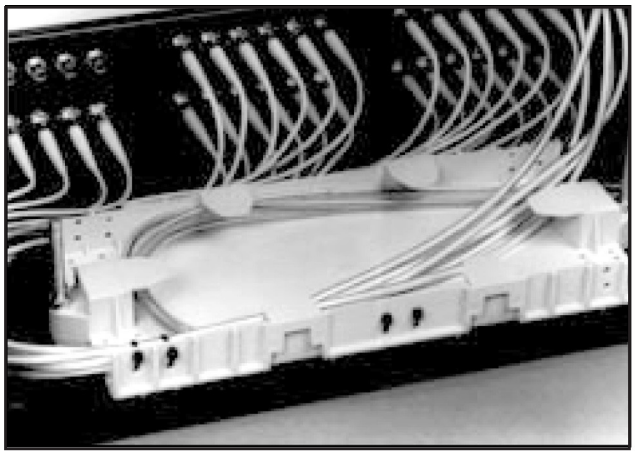

FIGURE 7 - ROUTE FIBERS IN TRANSITON ASSY

8.03 Place a Splice Tray on the threaded studs over the Transition Assembly.

TIP: Install the tie wraps into the Splice Tray tie down holes prior to installing the Splice Tray. (Figure 8, next page)

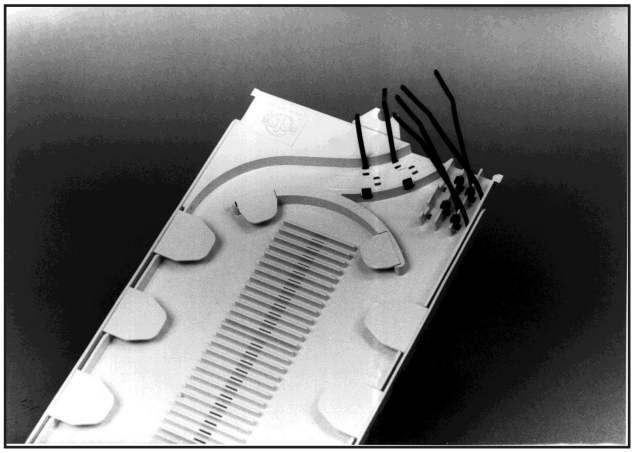

FIGURE 8 - INSTALL TIE WRAPS INTO SPLICE TRAY

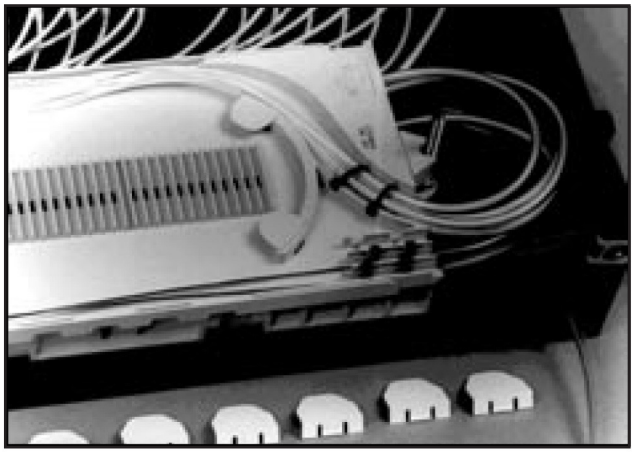

FIGURE 10 - SECURE FIBERS TO SPLICE TRAY

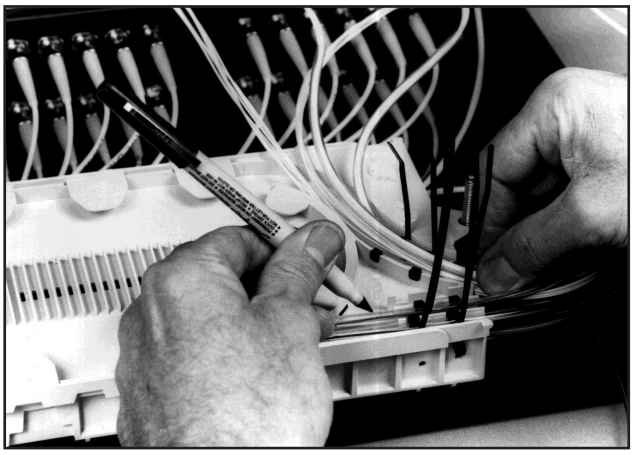

FIGURE 9 - MARK GROUPS IN SPLICE TRAY

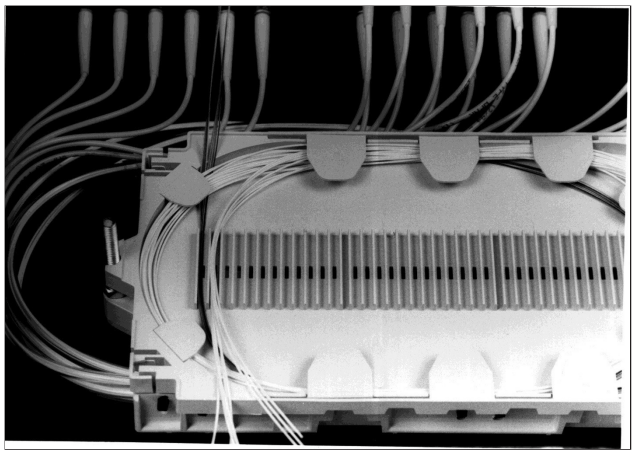

FIGURE 11 - ROUTE FIBERS IN SPLICE TRAY

8.04 Select four Pigtail Assemblies and fibers for installation onto the Splice Tray.

8.05 Lay the Pigtail Assemblies within the wide entry slot of the Splice Trays and the provider fibers within the first two narrow slots and mark the groups slightly beyond the tie down locations.(Figure 9)

8.06 Carefully cut the groups at the marks and remove the excess length.

8.07 Secure the Pigtail Assemblies and Fibers to the Splice Tray with the tie wraps. (Figure 10)

8.08 Route the Pigtail and feeder cable fibers one complete turn around the Splice Tray and into the splice groove farthest from the entry point of the unitubes. (Figure 11)

TIP: Temporarily remove the retaining tabs from the Splice Tray to ease fiber placement.

8.09 Splice feeder cable fibers to pigtail fibers per accepted company practices. Place each splice in groove, starting from the farthest groove from the tube entry.

8.10 Repeat Steps 8.03 through 8.09 for the additional Splice Trays.

8.11 Secure Splice Tray(s) in place with Splice Tray Hold Down Strap.

TABLE 1

ADAPTER PLATE ASSEMBLIES	
Catalog#	**Description**
616MMST	Plate equipped with 6 multimode ST adapters
616SMST	Plate equipped with 6 singlemode ST adapters
616MMSC	Plate equipped with 6 multimode SC adapters
616SMSC	Plate equipped with 6 singlemode SC adapters
616MMFC	Plate equipped with 6 multimode FC adapters
616SMFC	Plate equipped with 6 singlemode FC adapters
616MMDLC	Equipped with 3 multimode duplex LC adapters
616SMDLC	Equipped with 3 singlemode duplex LC adapters
600	Blank Filler Plate (no port holes or adapters)
12 FIBER PIGTAIL ASSEMBLIES	
Catalog#	**Description**
P5ST12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 50μm multimode ST connectors
P6ST12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 62.5μm multimode ST connectors
P8ST12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 9μm singlemode ST connectors
P5SC12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 50μm multimode SC connectors
P6SC12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 62.5μm multimode SC connectors
P8SC12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 9μm singlemode SC connectors
P5FC12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 50μm multimode FC connectors
P6FC12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 62.5μm multimode FC connectors
P8FC12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 9μm singlemode FC connectors
P5LC12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 50μm multimode LC connectors
P6LC12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 62.5μm multimode LC connectors
P8LC12-3M	12 fibers with different colored 900μm buffers, 3 meters long, 9μm singlemode LC connectors

NOTE: Contact Optical Cable Corporation for additional adapter plates and pigtail assemblies.

9.00 JUMPER ROUTING

9.01 Clean the fiber connectors and attach the jumpers to front side of the Adapter Plates.

9.02 Gently bend the jumpers toward and through the grommet on either side of the cabinet.

9.03 Lightly secure the jumpers to the tie down post with the tie wraps provided.

9.04 Lightly secure the jumpers to the equipment rack with the tie wraps.

10.00 ACCESSORIES

10.01 Table 1 details the Adapter Plates and Pigtail Assemblies available for the Wall Mount Cabinets.

11.00 SAFETY CONSIDERATIONS

11.01 This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. Failure to follow these procedures may result in personal injury.

11.02 When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

11.03 For proper performance and personal safety, be sure to select the proper size Optical Cable Corporation product before application.

11.04 This product is intended for use by trained technicians only. The product **should not be used** by anyone who is not familiar with, and not trained to use it.

OPTICAL CABLE CORPORATION
5290 Concourse Drive • Roanoke, VA 24019 USA
Phone: 540-265-0690 • TOLL FREE 800-622-7711
Fax: 540-265-0724 • www.occfiber.com