Figure 1. Dome-Off Interior Views of the EG and EB Series of BDO Pedlocks®
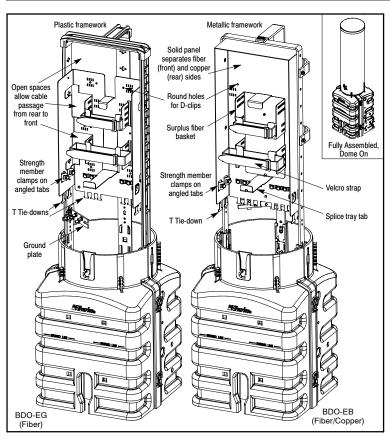
Cable Preparation, Termination and Splicing Instructions

for the

Charles® BDO-EG and BDO-EB Series of Fiber and Fiber/Copper Pedlock® OSP Pedestals

with

6", 8", 10", 12", and 14" Domes

1. GENERAL

1.1 Document Purpose. This document provides basic fiber-optic-cable connection instructions for the fiber cable technician to properly perform fiber cable preparations, routings, splicing, and terminations within the Charles Industries' Buried Distribution Optical (BDO ™) EG and EB series of Pedlock® pedestals. The BDO EG series offers an Expanded 2-piece base that supports a backboard designed for use in Greenfield (fiber only) applications, and the BDO EB series' backboard is designed for use in Brownfield (fiber/copper) applications. For BDO-EB applications, these backboard cabling instructions assume the copper cabling and connections are already complete. These instructions describe fiber CO/feed cable installations in loop-through (express) configurations, as well as fiber drop cable installations. Figure 1 shows an interior, dome-off view of one model from each BDO EG and BDO EB series. See Table 2 for information on all models in the series or call Charles Industries (see Part 3) to request more information or literature, and see Part 2 for application presumptions and probable conditions.

- *NOTE -*
Hereafter the Charles' Pedlock BDO-EG and BDO-EB pedestals may be referred to as the "BDO." Specific model numbers will be specified or referenced where important differences apply.

1.2 Document Status. The third printing of this document updates Table 2. Print 2 removed references to a Charles-provided cable bond clamp, updated Figure 1, Table 2, and Steps 1, 4, 9, 14, 19, 21, 28, 36, and 58 of Table 1 (and added Steps 18 and 22), and identified the round, 3/16", backboard holes used for D-clips in ribbon fiber applications.

1.3 Product Purpose and Description. BDO pedestals feature a non-metallic construction that offers superior OSP protection against floods, fire, dirt, weather, in-

sects, and impact. The bottom section of the pedestal is the base: a square-shaped, expanded-capacity, locking, 2-piece, split base designed to open and easily install around conduit-fed cable bundles in new/replacement construction or to accept less flexible cables. The top section of the pedestal is covered by a dome which protects the exclusive and interchangeably-designed interior backboard that allows technicians to route and attach cables and tubes as well as a variety of splice trays and splitters, with room to perform any required in-field splicing. The BDO-EB series uses a solid panel to separate the copper cables on the rear side of the backboard from the fiber cables on the front side.

1.4 Product Mounting. This Installation Guide assumes the BDO pedestal base is properly installed in a hole or trench, up to the ground line indicator on the base, at the FTTP or FTTH distribution point. The pedestal backboard, where all cable preparations, routings, connections, splicings and splice tray mountings are performed (as described in this document), mounts to the base. Once all cable connections are complete, the dome is placed over and attached to the base to protect all cabling and connections. The base contains holes or knock-outs at the rear and both sides which accept an optional, metallic, mounting stake or a pole-mount stake.

2. CABLE INSTALLATION AND SPLICING

The steps in Table 1 help the cable technician to perform all final, fiber, feed and drop cable preparations, routings, attachments/connections, and splicing, and presume the following conditions:

- **Cable Architecture/Deployment** - The fiber cable deployment is a CO/feed cable in a loop-through configuration,

- **Trench Setup** - The trench is either dug and open, or backfilled with the CO/feed cable already trenched, brought into, looped through, and then exiting from the bottom of the base (a few stub-end notations are given).

- **Equipment Installation** - A BDO™ base has been properly installed at the desired field site (for base installation information, see the pedestal base installation document from factory-attached to the base).

- **Installation Cable Type** - For BDO-EB/brownfield (copper/fiber combination) applications, the copper cabling/wiring is complete and installed at the rear of the pedestal backboard, leaving the pedestal ready for the fiber cable connections.

- **Feed Cable Design** - The CO/feed cable is a flexible loose-tube type with stranded (not ribbon) fiber. Note that 3/16" holes are provided in the backboard which accept D-clips, for ribbon fiber applications. D-clips are available from Charles.

- **Drop Cable Design** - The drop cables are a flexible loose-tube type with stranded fiber.

- **No Transportation Tubing** - protective but flexible transportation tubing is not required.

For information regarding other BDO installation applications or cable deployment/types, contact Charles Industries at the phone number provided in Part 3.

3. CUSTOMER TECHNICAL SERVICE

If technical or customer assistance is required, contact Charles Industries at:

847-806-8500 (Tech. Service local)   847-806-6300 (Customer Service)
800-607-8500 (Tech. Service toll-free)   847-806-6653 (Customer Service FAX)
847-806-8556 (Tech. Service FAX)   mktserv@charlesindustries.com (email)
techserv@charlesindustries.com (email) *www.charlesindustries.com* (website)

⚠ **- BODILY HARM WARNINGS -** ⚠

Risk of eye damage. Never look into the end of a fiber optic line/circuit. Always exercise caution when installing, testing, or performing maintenance on live circuits.

Cable and fiber cleaning solvents may contain hazardous materials or harmful ingredients. Always read and follow the manufacturer's precautions, warnings, and instructions when working with cleaning solvents or products.

Shards and cleaved glass fibers are very sharp and can easily pierce the skin. Use tweezers to pick up cut glass fibers and place them on a loop of tape or in a container specifically meant for this purpose. Good housekeeping is important.

Corrugated metal or armor that may be present in feed cables is very sharp when cut or exposed. Exercise extreme caution to prevent personal injury. Use protective work gloves when handling armored cable.

- CAUTION -

Perform all bonding and grounding prior to any electrical and communications connections.

⚠ **- CAUTION-** ⚠

Buffer tubes are sensitive to excessive pulling, bending, and crushing forces. Exercise great care when handling buffer tubes, as excessive bending will cause kinking which may damage the fibers inside.

In cold environments, some loose tube cable designs may exhibit low temperature induced signal attenuation when long lengths of buffer tubes have been exposed and then stored. Contact the cable manufacturer concerning recommended exposed buffer tube lengths in your installation area.

Table 1 – Loop-Through Configuration Installation

Step #	Instruction
1. ☐	**Obtain tools, materials and equipment.** Obtain the following tools and equipment to perform fiber feed/drop cable connections in the installed BDO pedestal. ☐ 216 tool/can wrench ☐ Properly installed base of BDO model ☐ Cable marking tool ☐ Pedestal dome and backboard (provided) ☐ Isopropyl alcohol & clean rags, to clean fibers ☐ Cable-entry tool or utility knife with hook blade (to cut feed cable) ☐ Gel removal compound, to clean stripped cables ☐ Optical Fiber Access Tool (to slit length of the buffer tube in continuous loop applications) ☐ Assorted cable ties ☐ Buffer tube stripper tool (to score/cut buffer tubes) ☐ Tape measure ☐ Fiber splicing tools and equipment ☐ Wrenches or socket set ☐ Bag of parts (provided with the pedestal) ☐ Work gloves (optional) ☐ Cable bond clamps ☐ Slotted screwdriver ☐ Ground wire of adequate length & gauge ☐ Labels for cables ☐ Tweezers & tape (for cleaved glass fibers/shards) ☐ Drop trenching equipment ☐ Proper lengths of drop cables ☐ Site clean-up tools ☐ Splice tray and labels for splice tray (not provided) ☐ Shovel (to gain access to drop cable hole)

Preparing and Opening the Pre-Installed BDO Pedestal

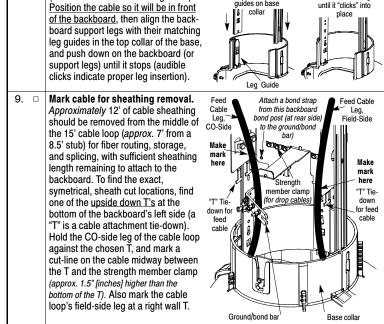| Step #	Instruction
2. ☐	**Verify pedestal is installed & inspect.** Find the BDO pedestal installation site, and verify the pedestal is properly installed in the ground. Inspect it for damage.
3. ☐	**Remove dome from base (if on).** If not already removed, remove the dome with a 216 tool or can wrench: turn the snap lock's hex nut 1/4-turn counterclockwise, hold it in that position, then lift up on the dome. Set it aside until needed when the installation is complete.
4. ☐	**Remove plastic bag and verify contents.** Locate the clear plastic bag that is typically attached to the pedestal's interior backboard and verify the following remaining contents: ☐ 3 bonding straps ☐ Document ☐ 1 foam plug (may be installed in base)
5. ☐	**Remove backboard, if on (optional, to facilitate earth ground installation).** Remove the backboard, if on, and if needed to facilitate the earth ground installation, per company practice. Remove the backboard by first pressing one finger push tab located in one support leg, pulling up slightly on the leg, and then secondly, pressing the other one/two leg's push tabs and pulling up on the other leg(s). The push tabs are accessed through a hole in each leg, in the inside top collar of the base. Once the tabs are unlocked or released, pull the backboard out of the base and temporarily set it aside.
6. ☐	**Verify/prepare earth ground.** *Always follow local codes and company practice when grounding cables/equipment.* Per local company practice, verify the presence of an earth ground at the pedestal base. If earth ground is not present and local practice requires an earth ground, prepare one at this time, per company practice. Do not *connect* earth ground to the backboard until it is re-attached to the base.

Preparing the Loop-through Feed Cable

Step #	Instruction
7. ☐	**Verify sufficient feed cable length.** Verify approximately 15 feet of looped feed cable, ground line to ground line, is available at the pedestal base, and bring it up and out of the base (8.5' for cable stub configurations). Verify the cable is in front of the backboard, if installed (the Charles logo is on the front side of the base). See the base installation document for base installation instructions and routing cables into the base.

Step #	Instruction
8. ☐	**Attach backboard.** (Skip this step if the backboard is already installed.) Install the backboard so the fiber cable can be marked for the proper cable sheath removal locations. Larger diameter BDOs have three support legs instead of two. For two-legged models, install the backboard so the front of the backboard (see the front view in Figure 1) faces the front of the base (the side with the Charles logo on it). Position the cable so it will be in front of the backboard, then align the backboard support legs with their matching leg guides in the top collar of the base, and push down on the backboard (or support legs) until it stops (audible clicks indicate proper leg insertion).
9. ☐	**Mark cable for sheathing removal.** *Approximately* 12' of cable sheathing should be removed from the middle of the 15' cable loop (*approx.* 7' from a 8.5' stub) for fiber routing, storage, and splicing, with sufficient sheathing length remaining to attach to the backboard. To find the exact, symetrical, sheath cut locations, find one of the upside down T's at the bottom of the backboard's left side (a "T" is a cable attachment tie-down). Hold the CO-side leg of the cable loop against the chosen T, and mark a cut-line on the cable midway between the T and the strength member clamp (*approx. 1.5" [inches] higher than the bottom of the T*). Also mark the cable loop's field-side leg at a right wall T.
10. ☐	**Remove backboard, for sheathing removal (optional).** If desired, remove the backboard to facilitate the sheathing removal procedure. See Step 5 for details.
11. ☐	**Remove cable sheathing.** Per company practice, use the tool/method of choice to carefully remove the outer cable sheathing between the two marked locations on the cable loop to expose the inner buffer tubes and strength members (for stub-end cable, remove from the mark to the cable end). Discard the removed sheathing.
12. ☐	**Trim strength members to length.** Trim the cable strength member(s) to be approximately 4" longer than the cable sheathing cut (so 4 inches remains).
13. ☐	**Clean buffer tubes.** Per company practice and cable type, find, expose, and clean the loose buffer tubes, if needed.
14. ☐	**Attach bond clamp to cable.** Per company practice and manufacturer instructions, attach an approved bond clamp to the cable shield at each sheath cut location, before installing the backboard.
15. ☐	**Attach backboard.** If still removed, re-attach the backboard (see Step 8).
16. ☐	**Connect earth ground to ground/bond bar.** Per local code/company practice, install an earth ground wire of proper gauge from the earth ground to the pedestal at the ground/bond bar's ground lug (see Step 9 for location).
17. ☐	**Bond backboard to ground/bond bar.** Attach one end of a bond strap (provided) to a post on the ground/bond bar and the other end to the backboard's bond post (see figure in Step 9) in the lower-right backboard corner (when viewed from the *rear* side).
18. ☐	**Secure strength members in strength member clamps (if applicable).** *Perform this step per company practice and in conjunction with Step 19 to assure proper cable placement against the backboard.* Terminate strength members in the clamp provided for them in the angled tab on the backboard's side wall. First choose the mounting "T" that will be used to secure the cable (use rear-most T's first). Next, loosen the hex screw in the strength member clamp above the selected T, and slide or otherwise route the strength members under the clamp (see Step 40). Raise or lower the cable slightly to place the cable at the proper vertical position against the backboard, hold the cable in this position, then firmly tighten the clamp's hex screw.
19. ☐	**Secure cable to backboard.** The upside-down "T's" on the backboard side walls are designed for attaching cables. Secure the cable to the selected T with a hose clamp (*use rear-most T's first*). Raise or lower the cable so the sheath cut is about 1.5" above the bottom of the T. Repeat for each feed cable (leg).
20. ☐	**Bond cable to ground/bond bar (per company practice).** Bond straps are provided to bond the cable to the backboard. Attach a bond strap from the cable bond clamp to a bond post on the ground/bond bar.

21. ☐ **Separate working fiber buffer tube from bundle, and loop/store bundle.** Find and separate from the fiber bundle the loose buffer tube containing the fibers to be spliced.
For the BDO EG models, keep the working fiber buffer tube at the front side of the backboard and route the remaining, bundled express tubes to the rear side: route the cable bundle up the side walls, through the top opening, then crisscross the bundle legs, loop them down on the rear of the backboard, crisscrossing again to create another loop if necessary. Finally, store the loop within the confines of the four cable management tabs on the rear side.
For the BDO EB models with copper on the rear side, keep the entire feed cable on the front side. Route the legs of the express multi-tube bundle up the front side walls, crisscross the bundle legs near the top, then hang the cable legs over the top of the splice-tray tab, allowing the looped bundle to droop down on the front side (make 2 loops if necessary). Finish by securing the entire bundle to the backboard with cable ties at regular intervals.

BDO EG Front View, Feed Cable Routing

Crisscross cable bundle to loop it on back side

Loop the length of working fiber tube in basket (under splice tray tabs)

Fiber tube basket area

Cable bundle (runs up side wall)

Separate the working fiber tube from bundle

Affix hose clamp around T & cable

"T" tie-down for cable (feed T's on side walls)

Cable, with sheathing

Cable sheath cut line (cable bond clamp not shown)

Clamps to secure strength members (for drops)

BDO EG Rear View with cable routing

22. ☐ **Manage ribbon fiber (optional).** *If ribbon fiber is used,* order ribbon clips for easy fiber routing and management, and insert 10 clips into the 3/16" holes provided for them, as shown below (4 on front side, 6 on rear side). Separate the working ribbon from the loop-through bundle, and route the bundle in the clips as shown herein.

Front Side
Clip #3
Route express or loop-through fibers through front side ribbon clips, route to rear side, then criss-cross and loop ribbon through clips on rear side
Rear Side
Clip #6
Clip #1
Clip #4
Clip #5
Clip #7
Clip #8
Press peg through hole
Separated working ribbon
Loop Through ribbon tubing (routed through clips)
Clip
Lower holes not used on Feed Side
Cable Sheath Cut-line
Clip #9
Clip #10

23. ☐ **Route and secure the tube.** In the fiber tube basket area (the area behind the splice tray when one is installed), loop/coil the loose working-fiber buffer tube, then (optionally) secure it to the back wall, leaving enough unsecured slack to allow a splice tray to be pulled away from the pedestal once the tube is attached to the tray.

24. ☐ If splicing will not be performed at this time, it may be desirable to keep the buffer tube(s) intact until the drop cables are prepared and the fibers are spliced. Either proceed to the next step or skip to Step 31, according to local company practice.

Preparing Feed Buffer Tube(s) and Exposed Feed Fibers

25. ☐ **Mark, score, and remove the loose buffer tube with the working fibers.** Per company practice, mark symetrical cut-lines on the buffer tube where the tube will attach to a splice tray (allow min. 32" of fiber to enter the tray). Use an appropriate tool to score the tube, then completely remove the buffer tube between the two marks.

26. ☐ **Clean fibers.** Per company practice, expose and clean the fibers.

27. ☐ **Prepare a splice tray for tube attachment.** Prepare a splice tray (not provided) by removing the cover and starting two cable ties at a top tray corner, using any available tie-down slots.

Cable tie-down slots
Cable ties
Choose a tray corner

28. ☐ **Attach buffer tube ends to tray.** Overlap both buffer tube ends onto a splice tray corner *(see Step 30, overlap about 1", enough to assure the tube ends will be under the installed tray cover)*, then affix both tube ends to the tray with the positioned cable ties.

29. ☐ **Cut fibers.** If splicing is to be performed at this time, cut the assigned fibers to the appropriate length, per company practice.

30. ☐ **Store fibers in splice tray.** Per company practice, wrap and store the exposed working/dead fibers in the splice tray for later use, and attach the tray cover.

Secured cable ties
Feed tube, with fibers inside
Fiber strands (32" min.)

31. ☐ **Label the tubes.** Label both tube ends where they exit the cable bundle near the sheathing cut(s) and before entering the splice tray, per company practice.

32. ☐ **Close the pedestal (optional).** If drop cables will be attached at a later time, perform Steps 62-63 to secure the splice tray, to perform pedestal housekeeping, and to close the pedestal. Continue with Step 33 if drop cables are to be installed now.

Installing Fiber Drop Cables in the BDO Pedestal

33. ☐ **Dig trench from premises to pedestal.** Per company practice, prepare a trench to run the drop cable from the customer premises to the pedestal. Clear the soil from the bottom front of the base, where the cable enters at the cable knockout hole.

34. ☐ **Run the drop cable.** Starting and extending from the customer premises/NID box, route the drop cable through the trench to the pedestal base.

35. ☐ **Bring cable into base through drop cable channel or conduit.** Per company practice, route the drop cable through the hole at the bottom front of the base and push it up through the channel (or conduit). At the top of the channel, guide the cable between the foam plug (installed at the top of the channel) and the back wall of the channel. If the plug dislodges during cable routing (after all cables are routed through the base, as described in Step 36), re-install the plug by placing it in front of the cables (cables at the back of the channel), angling the plug's front edge down and forward toward the first rib of the base front, and sliding it down and for- ward until it rests on top of the bases' first rib. Press down on the back edge of the plug until it rests gently on the bent flange provided for it on the rear of the channel.

Base Interior Views, Front Half
Foam plug
(Fits at top of channel on bent flange & first rib of base)
Drop cable hole
Bent flange
Channel, installed

36. ☐ **Cut the drop cable to length.** Verify a minimum of 8.5 feet of drop cable will extend up past the ground line indicator on the base, then, per local company practice, measure and cut the drop cable at the desired length and location.

37. ☐ **Mark drop cable for sheath removal.** The drop cable sheathing must be removed to expose the fiber to be spliced, but enough cable with sheathing must remain to allow firm attachment to the backboard's T tie-down. Choose a back wall T, hold the drop cable in it's proposed final position against the T, and mark the cable midway between the T and strength member clamp above it *(approx. 1.5" above the T bottom).*

38. ☐ **Cut and remove drop cable sheathing.** Cut and remove the drop cable sheathing per company practices. If the cable contains strength members and tracer wire, separate them from the drop cable and be sure to retain enough length (longer than the sheath cut) to attach or bond them to the backboard, per company practice.

39. ☐ **Ground the cable.** *Always follow local codes and company practice to ground cables/equipment.* Per local code, local company practice, and the type of drop cable used, perform any applicable drop cable or tracer wire bonding.

40. ☐ **Cut and secure strength members.** Per company practice, loosen the hex screw on the strength member clamp above the T tie-down, cut the/any strength members to the proper length, and route them up through the strength member clamp, between the back of the clamp and the backboard wall (read Step 41 to assure proper cable height/placement). Verify the fiber buffer tube is free and will *not* be fastened under the clamp or hex screw when the clamp is tightened. If the cable contains a tracer wire, attach/bond it per local company practice, or coil/guide it down or away from the clamp. With only the strength members under the clamp, firmly tighten the clamp's hex screw. Optionally trim the strength members, per company practice.

Strength members
Loosened hex head
Tracer wire
Tube
Clamp
Drop cable
T Tie-down

41. ☐ **Secure cable to T tie-down.** Hold the cable against the backboard's T tie-down and fasten the cable to the T with a hose clamp or cable tie (per local company practice) – the clamp/tie should be centered vertically on the T and the cable's sheath cut should be 1" above the clamp/tie. If using a cable tie, double it over the cable, crisscross it, and tighten the tie in this position, securing the cable to the T.

42. ☐ **Label drop cable.** Label the/all drop cable(s) with a cable marker or label. This facilitates later cable identification for splicing, troubleshooting, or future rework.

43. ☐ **Detach the splice tray.** Release the splice tray and Velcro strap(s) holding it and allow it to gently hang down/off to the side, so the fiber basket can be accessed.

44. ☐ **Wrap, store, and secure surplus tube length.** Route the drop cable buffer tube alongside and in the same direction/path as the feed cable tube, affixing cable ties to the multi-tube bundle at regular intervals. With cable ties, optionally secure the tube bundle to a wall of the fiber tube basket area (see Step 21), leaving enough unsecured buffer tube length to reach the splice tray for future splicing operations.

45. ☐ **Mark the drop tube cut-line.** Finish extending the drop tube alongside or following the feed tubes the remaining length needed to reach the splice tray, and mark the drop buffer tube where it overlaps the tray 1", so it can be cut to length.

46. ☐ **Cut drop cable buffer tube to expose fibers.** Cut the drop cable buffer tube at the marked cut-line, and remove the surplus tube length, according to company practice. After this tube routing and cutting procedure, this buffer tube should be the same length as the feed tube transportation tube, and a minimum of 32 inches of exposed fiber should be free to be placed in the fiber splice tray.

47. ☐ **Clean fibers.** Per company practice, clean the exposed fibers.

48. ☐ **Attach drop cable buffer tube to splice tray.** Per company practice or per splice tray manufacturer instructions, secure the drop buffer tube to the splice tray. While it is recommended that the installer use the same tray corner as the attached feed tubes (for neat and similar tube routing and management), keep the feed tube group tied separately from the drop tube (group). Use two new plastic cable ties to attach the drop tube, at the adjacent tray tie-down slots. As more drops are added, secure their/all drop tubes to the tray as a group and maintain the drop group integrity or unity by replacing the existing drop group's two cable ties one at a time, so at least one tie affixes the group to the tray at any one time.

New cable ties
Drop buffer tube (start a new group for drop tubes)
DROP
Cable ties for feed tube group
FEED
FEED
Corner of splice tray

49. ☐ **Wrap/store fiber in splice tray.** If splicing is not performed, wrap the drop fiber in the splice tray (similar to Step 30), per company practice. Attach the tray cover.

50. ☐ **Identify/label drop buffer tube.** Per company practice, identify the drop cable tube just before the buffer tube enters the splice tray (and also closer to the cable sheath cut). Doing this facilitates quick and easy, future, cable/tube identification.

51. ☐ **Label the splice tray.** Complete a splice tray label, if desired, per company practice.

52. ☐ **Prepare all drops.** Repeat Steps 33 through 51 for all customer drop cables ready for installation and connection at this time.

53. ☐ **If splicing is not performed, wrap up tubing and secure splice tray.** If splicing is not performed at this time, carefully wind and place all feed/drop tubes that are attached to the splice tray into the buffer tube basket, gently twisting or turning the splice tray as necessary to avoid excessively bending or kinking any tube (which can cause fiber damage). The final loop of the buffer tube should be placed over the tab above the buffer tube basket. Last, secure the splice tray in place against the provided splice tray tabs using the Velcro strap(s) provided.

54. ☐ **Re-check cable management.** Verify all cabling/tubing is neat and not kinked, and verify no cables, wires, cable ties or buffer tubes protrude beyond the backboard walls, to allow for smooth and safe dome placement.

55. ☐ **Close the pedestal.** Locate the dome and orient it so the snap lock faces the front (the front of the base has the Charles logo embossed on it). Slide the dome down over the backboard, aligning the dome's snap lock with the latch catch mechanism on the base. When correctly aligned, gently let the self-locking dome drop down in place until a "click" is heard, indicating the dome is locked.

Splicing Fibers at the BDO Pedestal

56. ☐ **Obtain tools.** Prepare the area for splicing, gather any required tools, and prepare any equipment needed to open the pedestal and splice the feed and drop fibers. Also review the cautions and warnings before Table 1.

57. ☐ **Remove dome from base.** If not already removed, remove the dome, per Step 3.

58. ☐ **Remove the splice tray from the backboard, and detach the splice tray cover.** Loosen the Velcro strap(s) holding the splice tray in place and carefully pull out the tray, gently unwinding and naturally rotating it and the coiled/wrapped buffer tubes attached to it. Detach the clear plastic cover from the splice tray.

Remove tray
Remove splice tray cover
Unwrap Velcro strap

59. ☐ **Perform splicing.** Unwrap the working fibers to be spliced, perform all fiber splicing at this time, and complete, route/place the spliced fibers back into the splice tray, all per local/company practice and product manufacturer's instructions.

60. ☐ **Label and identify splices/tray.** Per company practice, label/identify the splices.

61. ☐ **Cover splice tray.** Re-attach the cover to the splice tray.

62. ☐ **Attach tray.** Attach the splice tray to the backboard. To do this, gently wind/rotate the tubes and the tray as needed to loop/store the tubing in the buffer tube basket, and secure the splice tray to the splice tray tabs with the Velcro strap(s).

63. ☐ **Re-check cable management and close the pedestal.** Perform Steps 54 through 55 to carefully close up the pedestal.

Table 1.   Loop-Through Configuration Installation

Model #	BDO™ Description
BDO 3-EG	Buried Distribution Optical (BDO™) Pedlock® Pedestal, with a 6" diameter dome, a square, Expanded-capacity/ split base, a removable "G" bracket (Greenfield applications) for fiber cable routing and storage, splice tray tabs and strap(s), and a ground/bond bar.
BDO 4-EG	Same as above but with an 8" diameter dome.
BDO 5-EG	Same as above but with a 10" diameter dome.
BDO 6-EG	Same as above but with a 12" diameter dome.
BDO 5-EB*	Same as BDO 5-EG but with a removable "B" bracket (Brownfield applications) for fiber and copper cabling and storage.
BDO 7-OB*	Same as BDO 5-EB but with a 14" diameter dome and a round base.

Round 14" base

Optional Equipment for Use with BDOs

UMS36-STD	36" universal metal mounting-stake, galvanized, with hardware to attach the BDO base to the stake.
UMS42-STD	Same as above, but 42" long.
UMB102A	24" universal metal pole-mount bracket, galvanized, with mounting hardware to attach the base to the bracket.
97-RIBNTUBEKIT	3M® ribbon transportation tube kit, 3 ft., 10 each.
97-RIBNTRAY144	Tyco® FOSC A/B ribbon splice tray (144 fibers), 1 each.
97-RIBNCLIPKIT (for BDO 3 & 4)	Ribbon saddle clip kit, holds up to 288 fibers, 40 ea.
97-RIBNCLIPLG (for BDO 5, 6, & 7)	Ribbon saddle clip kit, holds up to 576 fibers, 40 ea.
BDO-GLBBRKT	Grade level box mounting bracket with hardware (square base).
BDO-GLBBRKT-R	Grade level box mounting bracket with hardware (round base).

Pole mount bracket
UMS stake

Riser Pipes & U-Guards	
119 series (7/8" risers) 122 series (7/8" U-guards) 219 series (1.25" risers) 222 series (1.25" U-guards)	• Strong durable solution for protecting wires that are mounted to buildings and utility poles • PVC construction: lightweight and easy to cut • Various bends, lengths, offsets, and notches • Available in 7/8" and 1.25" diameters

Various replacement parts are available. Contact Charles Industries for more information.
* Used where copper plant is retained and fiber is located in the same pedestal. Always install fiber last.

Table 2.   Model Numbers and Ordering Information

Feature	BDO 3	BDO 4	BDO 5	BDO 6	BDO 7
Height, overall	42.75 in.	42.75 in.	42.75 in.	43.5 in.	40.5 in.
Height, base only, incl. collar	18 in.	18 in.	18.5 in.	18.5 in.	13.5 in.
Height, dome only	28.5 in.	28.5 in.	28.3 in.	28.7 in.	32 in.
Height, base bottom to ground line	8.5 in.	8.5 in	8.5 in.	8.5 in.	3.75 in.
Height, dome top to ground line	34.25 in.	34.25 in.	34.25 in.	35 in.	36.75 in.
Depth, base (front to back)	9.75 in.	10.8 in.	12.8 in.	15.1 in.	
Width, base (side to side)	10.25 in.	11.75 in.	13.9 in.	16.1 in.	
Diameter, base collar, O.D.	6.6 in.	8.1 in.	10.75 in.	12.75 in.	
Diameter, base collar, I.D.	6.2 in.	7.7 in.	10.3 in.	12.3 in.	
Diameter, dome, O.D. (not the cap)	7.1 in.	8.6 in.	11.25 in.	13.25 in.	14.5 in.
Diameter, dome, I.D.	6.7 in.	8.2 in.	10.85 in.	12.85 in.	14.1 in.
Diameter, base, O.D.					14 in.
Diameter, base, I.D.					13.5 in.
Weight	18 lbs.	21 lbs.	29 lbs.	33 lbs.	28 lbs.

NOTE: All dimensions and weights are approximate.

Table 3.   Physical Specifications