

**BELL SYSTEM PRACTICES**  
**Outside Plant Construction**  
**and Maintenance**

**SECTION G50.714.1**  
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**AT&T Co Standard**

**F-51691 SPLICE CASE**

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**1. GENERAL**

- 1.01 This section covers the description and installation of the F-51691 Splice Case.
- 1.02 The splice case is for use in buried distribution systems at locations where service wires are spliced to the cable. It can also be used for straight splices in small cables where it is practicable to use a 7-1/2-inch sheath opening.

**2. DESCRIPTION**

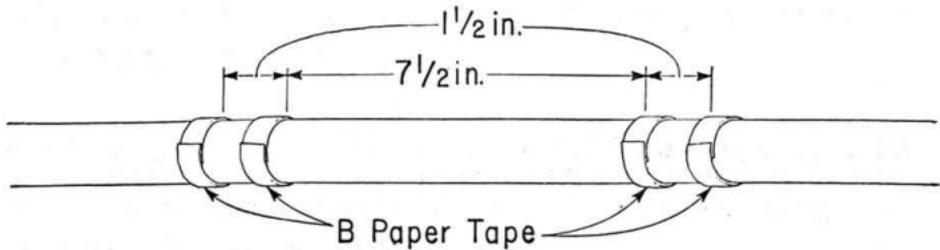
2.01 The splice case has an over-all length of 14 inches. It consists of two galvanized cast iron housings each casting being equipped with two 1/4-inch pipe nipples to accommodate wire or two pair cable for buried service entrances. Included with the case are all of the hardware and small parts required for the assembly.

2.02 The case will accommodate cables up to 1.6 inches in diameter. Two 129A Adapters are provided for use on cables up to 1.0 inches in diameter.

2.03 Filled plastic sleeves which are used to cover all conductor joints, B and D Sealing Washers, and B Sealing Tape and Cord, which are used in making the splice closure, must be ordered separately.

**3. SHEATH PREPARATION**

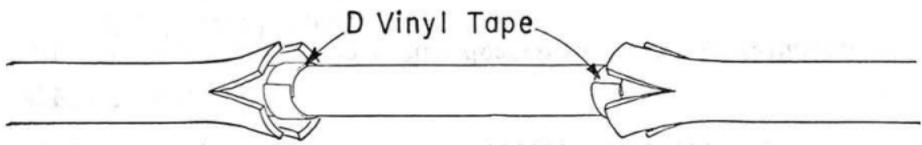
- 3.01 Locate the splice opening. Then place four markers of B Paper Tape on the sheath as illustrated.



3.02 Remove sheath between inner tape markers exposing core wrapper. Then remove inner tape markers.

3.03 Make four longitudinal cuts 90° apart through the sheath to the edge of the paper tape marker. The cuts should be made through the polyethylene and metal layers. Avoid injuring the core wrapper. On cables smaller than 1 inch in diameter make only three longitudinal cuts. Remove paper tape markers.

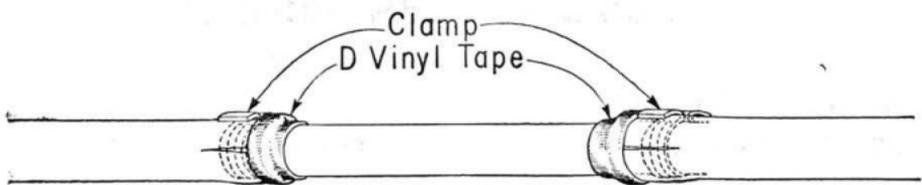
3.04 Carefully bend the tabs away from the core. Then place a collar of four turns of 3/4-inch D Vinyl Tape over the core wrapper.



3.05 Remove core wrapper between vinyl tape collars.

3.06 Insert clamps between the core wrapper and the sheath. The larger clamps are for use on cables more than one inch in diameter. The smaller clamps are for use on smaller cables.

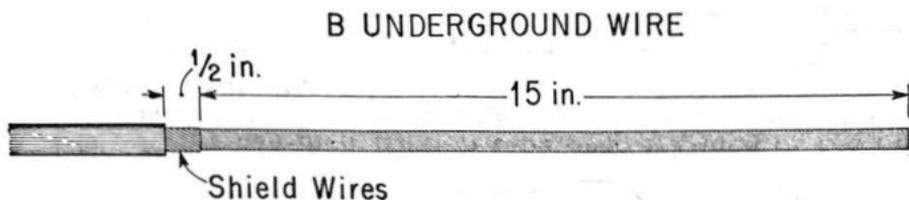
3.07 Bind down the ends of the tabs with about three layers of D Vinyl Tape extending about 1/2 inch over the core.



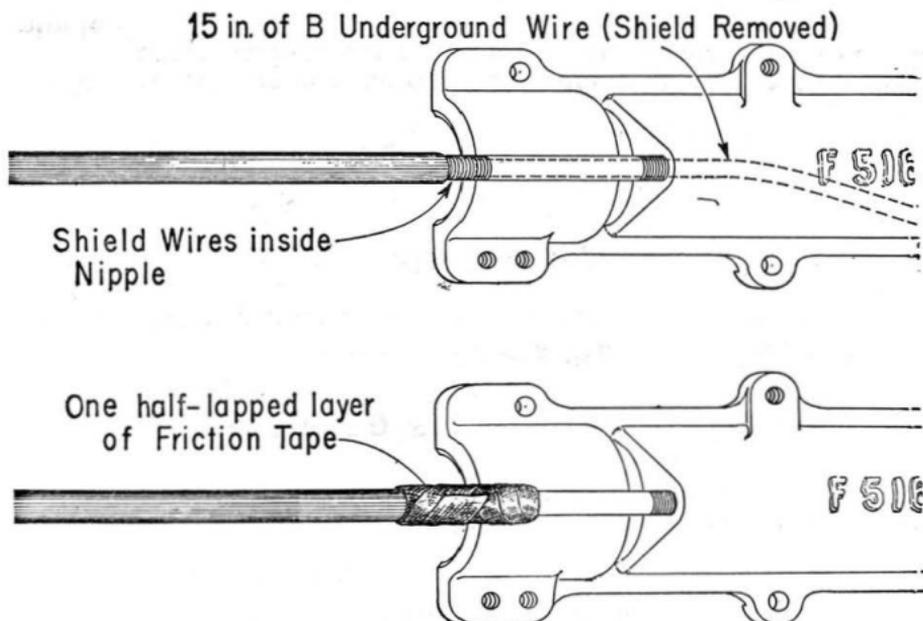
#### 4. INSTALLING SERVICE CABLE OR WIRE

##### B Underground Wire

4.01 Remove about 15 inches of the outer jacket. Then trim the shield wires to within approximately 1/2 inch of the outer jacket.



4.02 Insert the wire in one of the pipe nipples with the shield wires inside the nipple. Apply 3/4-inch friction tape to hold the wire in position.



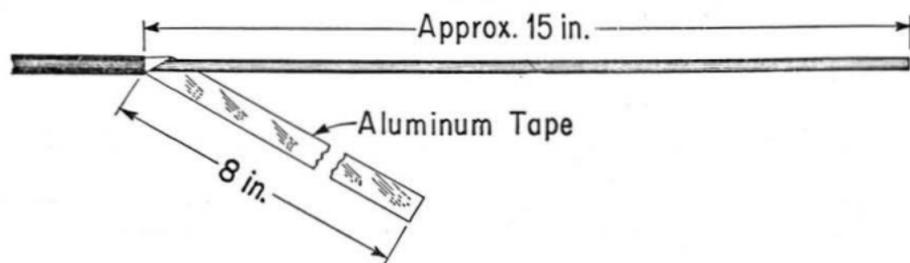
### C Underground Wire

4.03 The C Underground Wire is installed as outlined above except that the outer jacket should be left on and trimmed, if required, to permit entrance into the nipple.

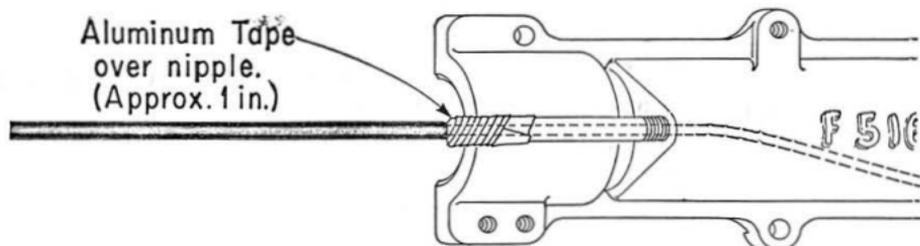
### B Buried Service Wire

4.04 Remove approximately 15 inches of the outer jacket. Then unwind and cut the spiral aluminum tape.

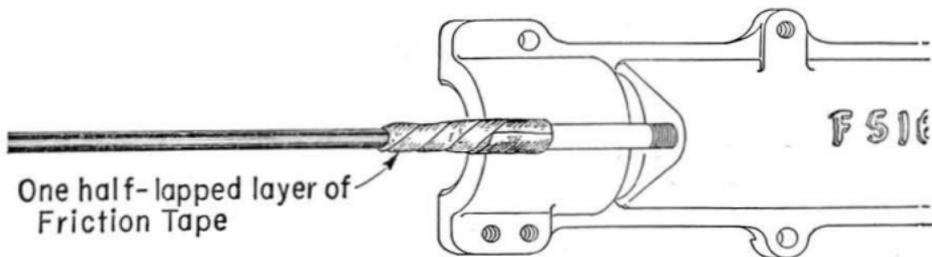
#### B BURIED SERVICE WIRE



4.05 Insert the conductor in the nipple up to the end of the outer jacket. Then wrap the aluminum tape over the nipple.



4.06 Apply 3/4-inch friction tape over 1/2 inch of the outer jacket, the aluminum tape and 1/2 inch of the nipple to hold the wire in position.

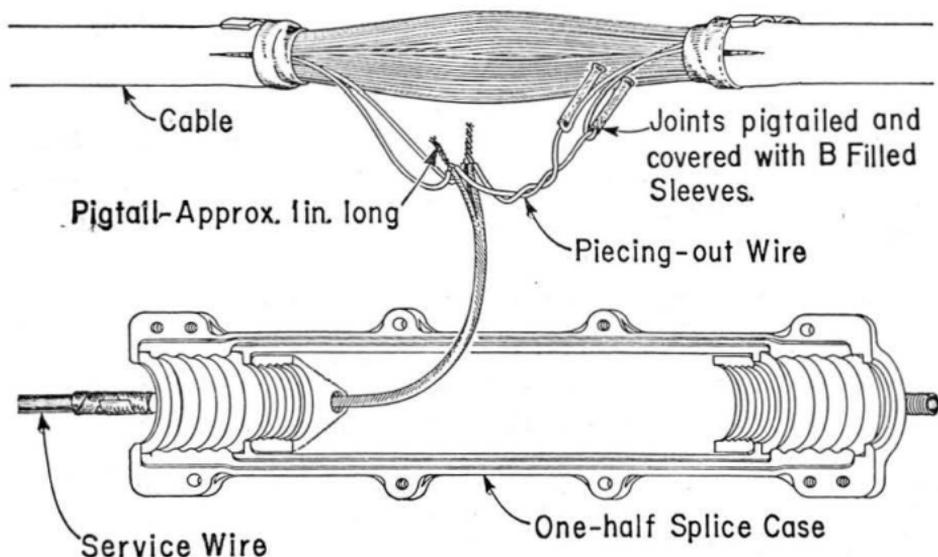


## Lead Sheath Service Cable

- 4.07 Remove about 17 inches of corrosion or mechanical protection from the end of the cable.
- 4.08 Remove approximately 15 inches of lead sheath and place a collar of two turns of D Vinyl Tape over the core wrapper adjacent to the sheath butt.
- 4.09 Insert the service cable in the pipe nipple and solder the sheath to the nipple with a torch or soldering iron.

## 5. SPLICING CONDUCTORS

- 5.01 Select the cable pair to be terminated.
- 5.02 Cut the cable pair at the center of the splice opening. Then piece out one side of the cable pair, make a pigtail joint and sleeve with a B Filled Sleeve of the proper size.
- 5.03 Pigtail together the two ends of the cable conductor and the service wire and cover with a B Filled Sleeve.



## 6. WRAPPING COMPLETED SPLICE

- 6.01 Bind down each bundle of plastic sleeves to the core with a few turns of D Vinyl Tape.
- 6.02 Starting at the center of the splice opening apply two half-lapped layers of B Polyethylene Tape, two inches wide over the splice opening. Secure the end with D Vinyl Tape.

## 7. INSTALLING SPLICE CASE

7.01 On cables smaller than 1 inch in diameter install 129A Adapters over the clamp as illustrated in Paragraph 7.06. Adapters are not used on larger cables.

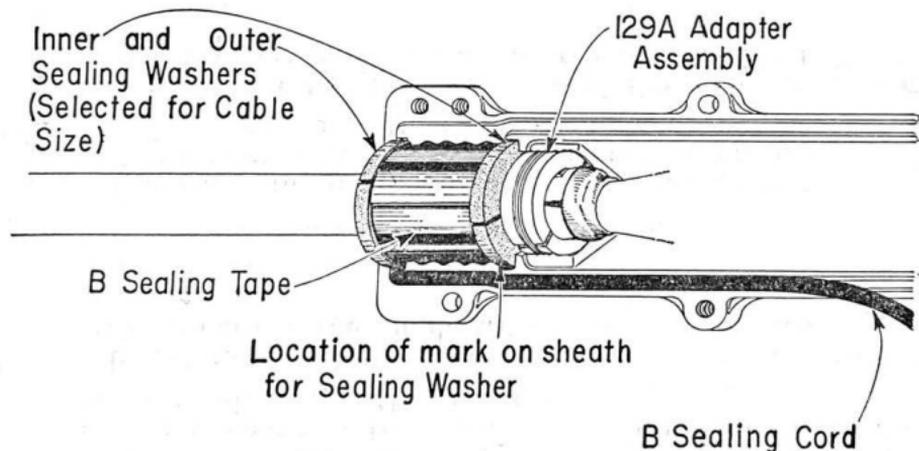
7.02 Position one half the case under the completed splice and mark the sheath in line with edge of sealing cord groove.

7.03 Remove splice case. Select the proper size B or D sealing washer. 200B Sealing Washers are used on cables 1.0 to 1.6 inches in diameter. 200D Sealing Washers are used on smaller cables. Place the inner washer on the sheath with the outer edge against the mark previously made.

7.04 Wrap a collar of B Sealing Tape around the cable and build up a collar flush with the diameter of the washer. Butt all joints between sealing tape strips. **The tape should be kept clean and should not be stretched.** Place outer sealing washer on cable.

7.05 Clean any dirt from the sealing cord grooves in the splice case with a brush or dry cloth. Place sealing cords in the side grooves. Avoid making flat spots in the cord.

7.06 The following sketch shows one end of a completed splice on a small cable with the 129A Adapter in place and the B Sealing Cord partially in position.



7.07 At cable ends the open end of the splice case can be filled with a sealing tape plug as outlined in another section of the practices.

7.08 Carefully position the two halves of the splice case over the sheath opening. Hold the case in position with two bolts placed diagonally opposite and tighten fingertight.

7.09 Place remaining bolts and alternately tighten around the splice case with the B Ratchet Wrench until metal to metal contact between the two halves of the case is obtained.

7.10 Remove friction tape. Then apply a thin layer of C Cement over approximately 2-1/2 inches of the nipple and 2-1/2 inches of the jacket of the service wire. Then, starting at the center apply two half-lapped layers of 3/4-inch DR Tape over the cemented area as illustrated below.

7.11 Close any unused pipe nipples with the caps provided for that purpose.

7.12 Secure the drop wires to the cable with several turns of friction tape.