BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G55.130.1
Issue 1, January, 1949
AT&T Co Standard

UNDERGROUND CABLE
PULLING CABLE INTO SUBSIDIARY DUCTS

Part **Page**

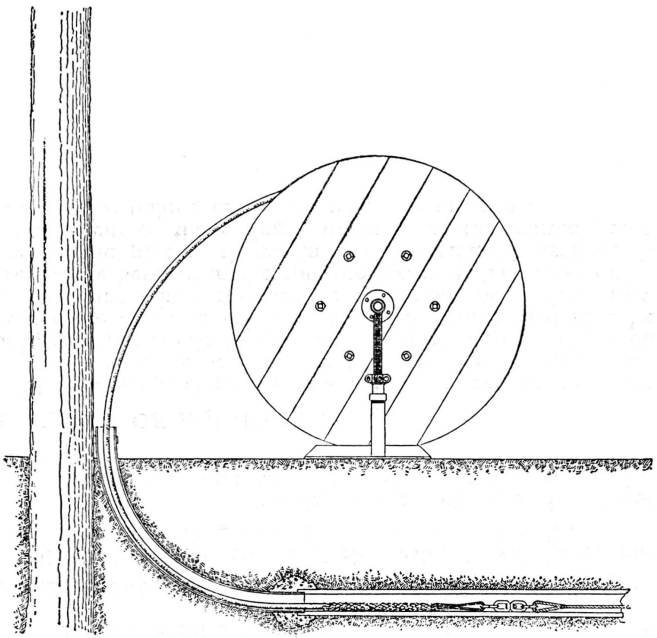
1. GENERAL

1.01 This section covers placing cable in subsidiary ducts and installing cable guards at poles or walls.

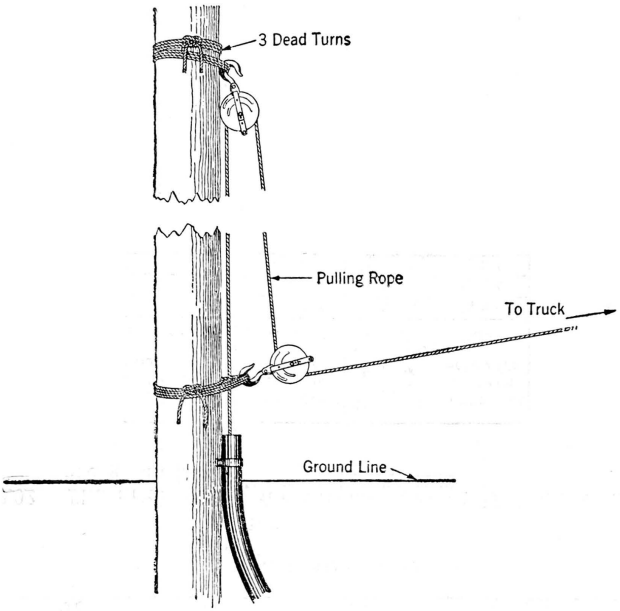
1.02 This section includes recent changes in Conduit Couplings and Cast Iron Caps. It replaces G55.130, Issue 2.

2. SET-UP OF EQUIPMENT

2.01 When placing cable in a subsidiary duct extending from a manhole or basement to the wall of a building or a pole, it is preferable to set up the reel at the end of the duct nearer the bend. In this way, the cable can be fed in a long smooth curve into the bend rather than be pulled upward around the bend from the opposite direction. The set-up of the reel at the pole is shown in the following illustration. The arrangement of the pulling equipment at the manhole is the same as for pulling cable into main conduit runs.



2.02 Where it is necessary to do the pulling at the pole, the cable can be pulled in by means of two blocks attached to the pole as illustrated below. Where it is impracticable to employ blocks, such as in pulling cable to a building wall, the pole derrick can be used instead of the set-up shown.



2.03 In pulling cable into a building where power from the truck cannot be employed, the pull should be made by hand. A block and tackle can be used to facilitate the work.

2.04 Unless the length of cable pulled is in excess of 150 feet it is usually unnecessary to lubricate the cable. In pulling corrosion protected cable or other cable having a rough surface, standard lubricant should be used for all but very short lengths. If the subsidiary conduit has two or more 90 degree bends or a total of 180 degrees of bend made up of lesser angles, the use of lubricant is advisable.

2.05 Sufficient cable should be left at each end of the duct to permit setting up and splicing. The cable should be lashed temporarily to the pole with houseline placed at intervals of about two feet. Care should be taken to see that there is proper clearance between the cable and foreign plant.

3. PLACING U CABLE GUARD

3.01 The sizes of Cast Iron Caps and U Cable Guards required at poles or building walls for various cable diameters and sizes of bends or couplings are given in the following table.

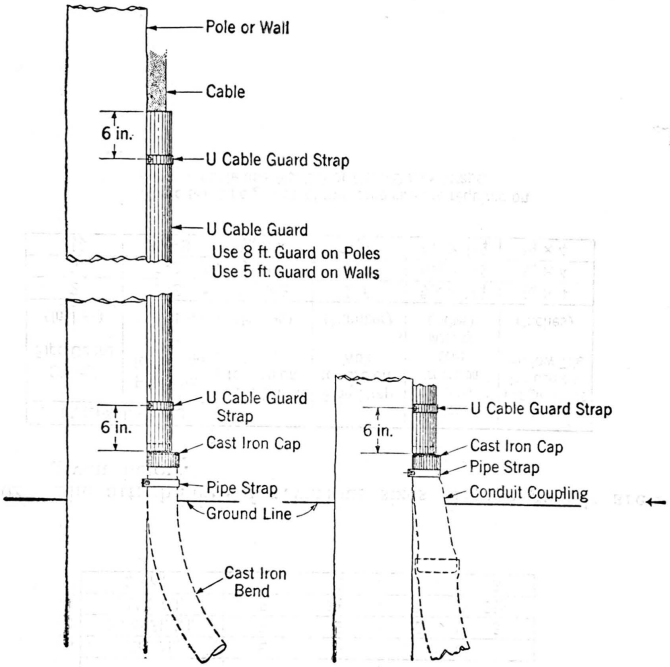
Conduit Terminates In	Materials Required where Diameter of Cable is					
	Up to 1 in.		1 in. to 1⅝ in.		1⅝ in. to 2⅝ in.	
Cast Iron Bend or Conduit Coupling (Number)	Cast Iron Cap (Number)	U-Cable Guard (Number)	Cast Iron Cap (Number)	U-Cable Guard (Number)	Cast Iron Cap (Number)	U-Cable Guard (Number)
2L C.I.	2-2	1A	2-2	2		
3R or 3L C.I. *	2-3½	1A	2-3½	2	3-3½	3
3½ L C.I.	2-3½	1A	2-3½	2	3-3½	3
D or W *	2-3½	1A	2-3½	2	3-3½	3

* Requires S Conduit Coupling

3.02 The attachments for various sizes of U Cable Guards are given below.

Material Required		Drive Screws for use on Poles (Inches)	Hammer Drive Anchors for use on Solid Masonry (Inches)	Toggle Bolts for use on Hollow Tile (Inches)
U-Cable Guard (Number)	U-Cable Guard Strap (Number)			
1A	1A	¼ × 2½	¼ × 1¼	¼ × 4
2	2	¼ × 2½	¼ × 1¼	¼ × 4
3	3	5/16 × 3	5/16 × 1¼	¼ × 4

3.03 The method of attaching the U guard is illustrated below.



4. PLACING STEEL PIPE GUARD

4.01 The type of Conduit Coupling and the size of pipe guard required for various cable diameters and sizes of bends or couplings are given in the following table.

Conduit Terminates In	Materials Required where Diameter of Cable is			
	Up to 1⅝ in.		1⅝ in. to 2⅝ in.	
Cast Iron Bend or Conduit Coupling (Number)	Conduit Coupling (Number)	Size of Pipe Guard (Inches)	Conduit Coupling (Number)	Size of Pipe Guard (Inches)
2L C.I.	E	2		
3R or 3L C.I.	B	2	C	3
3½ L C.I.	P	3½	P	3½
D or W	B	2	C	3

4.02 The attachments for various sizes of pipe guards are given below.

Material Required		Drive Screws for use on Poles	Pipe Strap for use on Wall	Hammer Drive Anchors for use on Solid Masonry	Toggle Bolts for use on Hollow Tile
Size of Pipe Guard (Inches)	Pipe Strap for use on Poles (Number)	(Inches)	(Number)	(Inches)	(Inches)
2	2-S *	5/16 × 3	2-F	5/16 × 1¼	¼ × 4
3	3-S *	⅜ × 4	3-F	5/16 × 1¼	¼ × 4
3½	3½-S	⅜ × 4	3½-S	5/16 × 1¼	¼ × 4

* Where two pipe guards of the same size are required on the same pole use No. 2 D or No. 3 D pipe straps.

4.03 The method of attaching steel pipe guards is illustrated in the following sketch.