BELL SYSTEM PRACTICES
Outside Plant Construction and Maintenance

SECTION G55.601.1
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CABLE SPLICING—UNDERGROUND
GENERAL RULES—SETTING UP CABLE

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1. GENERAL

1.01 The arrangement of the cables in a manhole and the position of the splices is governed by the design of the manhole and the location of the duct entrances, together with the general plan of the conduit route.

1.02 Each cable should be set up in its assigned position with care being taken to avoid blocking other ducts.

1.03 The cables should not be in contact with the earth at the bottom of the manhole nor with iron pipes or other metal structures extending through the manhole.

1.04 The bottom cable should be racked no less than 10 to 12 inches from the bottom of the manhole.

1.05 The cables will usually be racked 4-1/2, 6 or 7-1/2 inches apart depending on the number of ducts entering the manhole, wall space available and the sizes of lead sleeves to be used.

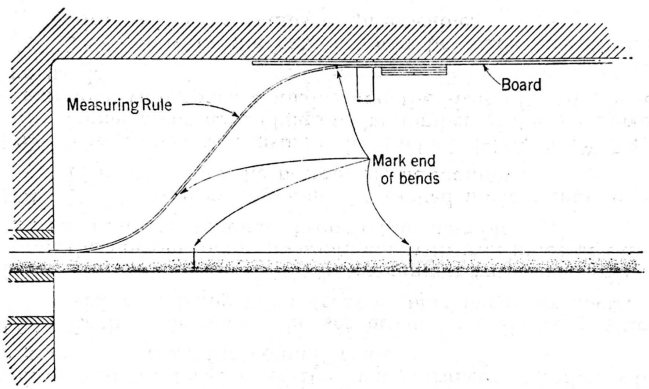
1.06 The bends in the cable should be made smooth and with as large a radius as practicable.

1.07 The methods of setting up cables with the various standard tools are covered in separate sections.

2. PREPARING CABLE FOR BENDING

2.01 In setting up the end of a cable the sealed end of the sheath should ordinarily be opened to release the wires so they will be free to move within the sheath. If this is not done a serious kink may develop in the sheath.

2.02 It is generally helpful to bend a measuring rule in the position to be occupied by the cable between the duct entrance and the end cable rack, as illustrated below. Note the length and location of each of the two bends and mark these on the cable sheath. Keep the cable straight for a distance of about two inches from the duct entrance before starting the first bend. The second bend should end just short of the end cable rack as shown on the following sketch.



2.03 In setting up cable, it is important to change the point about which the cable is bent, frequently, so as to distribute the sheath strain along the entire bend. Sharp jerks should be avoided. Otherwise, the strain would be concentrated at one point, causing serious kinks and weakening the sheath at that point.

2.04 Avoid making sharp bends. In racking a cable the radius of the bend should be as large as practicable. Bends in the smaller cables may be of smaller radius, depending upon the size of the cables. Do not flatten or kink the cable. Dress out any kinks or irregularities in lead sheath with a cable dresser, being careful not to weaken the sheath. Cable bending can best be done by exerting a slow, steady pressure. A sharp jerky push or pull usually results in kinking the cable.

2.05 The use of a cable bending shoe placed in the mouth of the duct will help in making the proper bend.