

BELL SYSTEM PRACTICES

**Outside Plant Construction
and Maintenance**

SECTION G53.115.1

**Issue 1, May, 1952
AT&T Co Standard**

**BLOCK AND HOUSE CABLE
CLAMPING CABLES IN BUILDINGS**

Contents	Page
1. General	1
2. Fastening Cables on Walls and Ceilings	1
3. Paralleling Main Cable with Stub or Branch Cables	4
4. Turning Corners	8
5. Crossing Passageways	10
6. Passing Cables Through Walls	10
7. Terminals	10

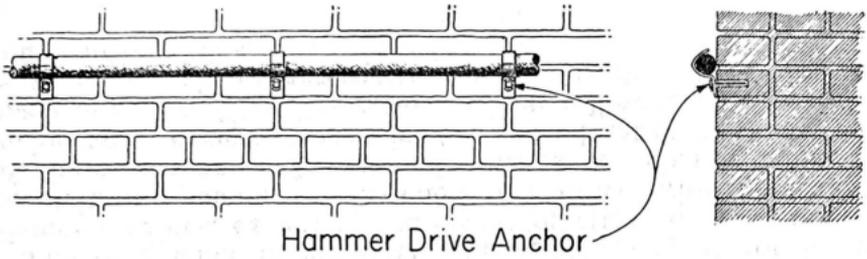
1. GENERAL

1.01 This section covers placing cables on walls and ceilings on the inside of buildings.

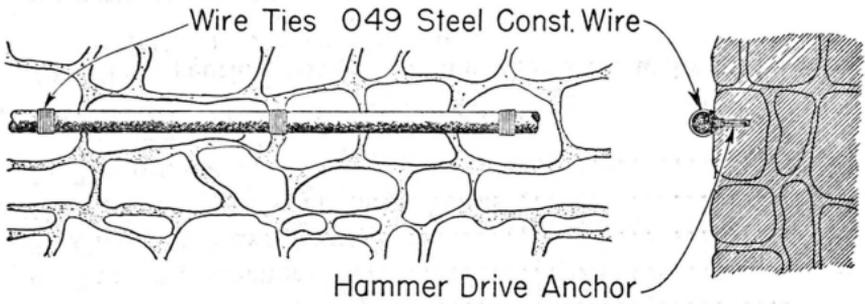
2. FASTENING CABLES ON WALLS AND CEILINGS

2.01 Cables run directly on walls and ceilings shall be attached with cable clamps or other means such as wire ties. For horizontal runs on walls and runs on ceilings these fasteners shall be located about 17 inches apart for cables 1 inch or smaller in diameter and 26 inches apart for larger diameter cables, except where beams or studs are encountered necessitating placing the fasteners to conform with the spacing of these members. On vertical runs, space clamps about 24 inches apart except where wire ties spaced not more than 4 feet apart are used. The illustrations which follow show how cable is to be attached on various types of backing that may be found in buildings.

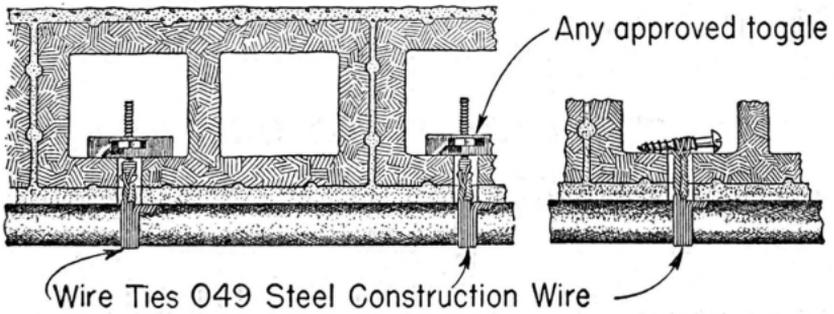
- (a) **Smooth masonry** such as brick, smooth concrete, smooth stone walls, etc.



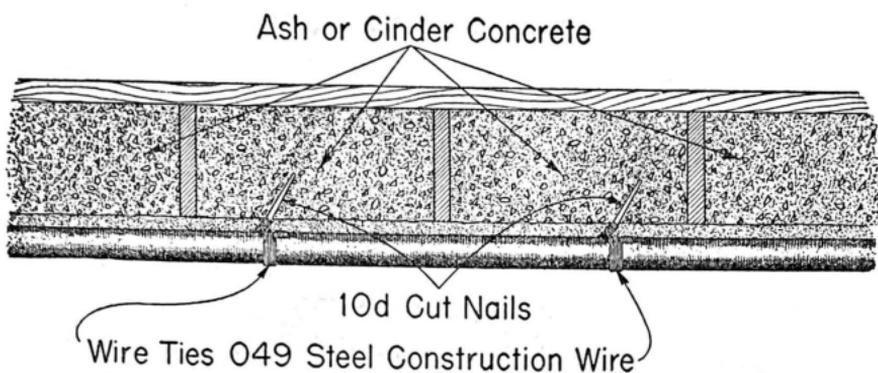
- (b) **Rough masonry** such as stone walls, rough concrete, rustic masonry surfaces, etc.



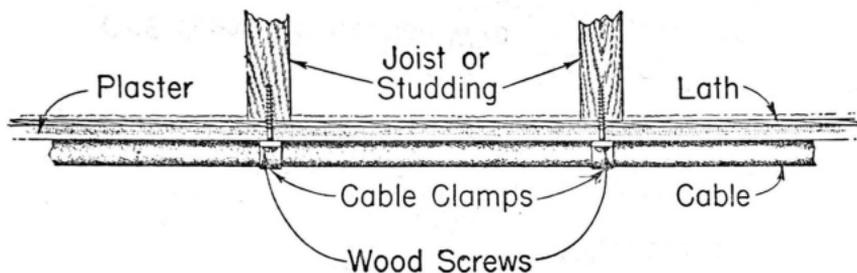
- (c) **Hollow backing** such as tile, metal lath, etc.



- (d) **Porous masonry** such as cinder blocks, concrete blocks, etc.



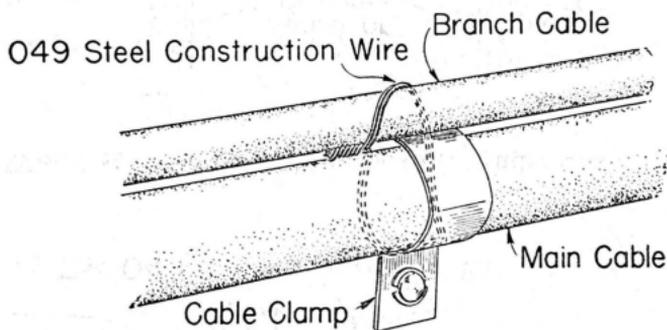
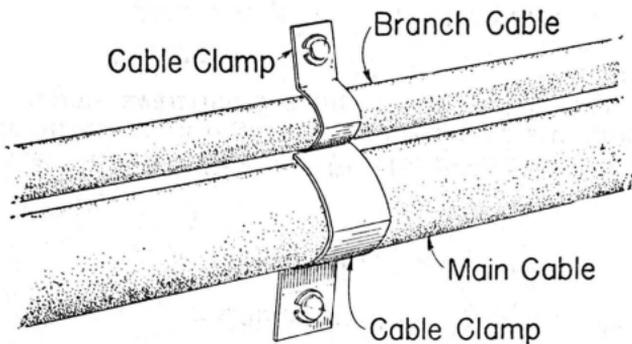
- (e) **Wood structures** such as beams, studs, etc.



2.02 Refer to Bell System Practices—Anchoring Devices, for information regarding the types of attaching devices and cable clamps available for this work.

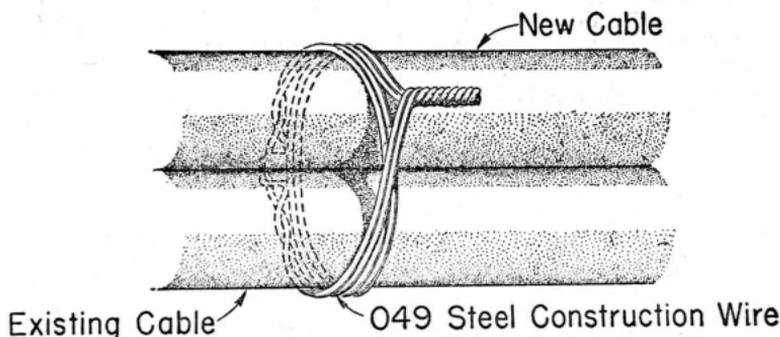
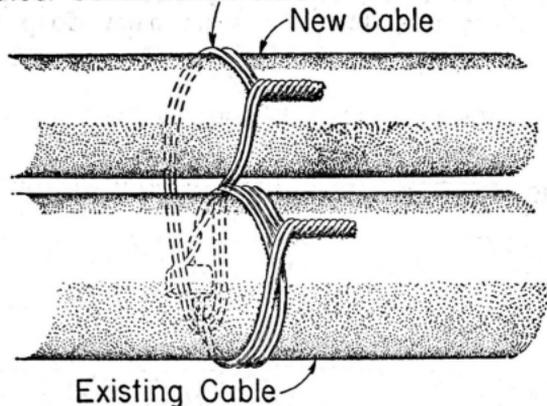
3. PARALLELING MAIN CABLE WITH STUB OR BRANCH CABLES

3.01 When placing a new run of cable it is often necessary to parallel the main cable with branch cables or terminal stubs. If the main run is to be clamped to the wall either of two methods may be followed as illustrated below.



3.02 If wire ties are used the cables shall be fastened as shown below.

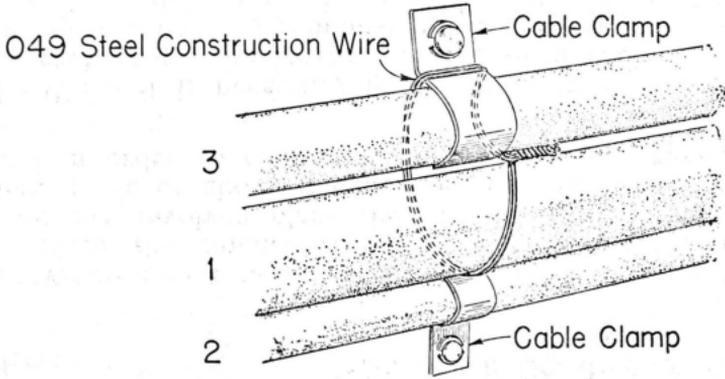
049 Steel Construction Wire



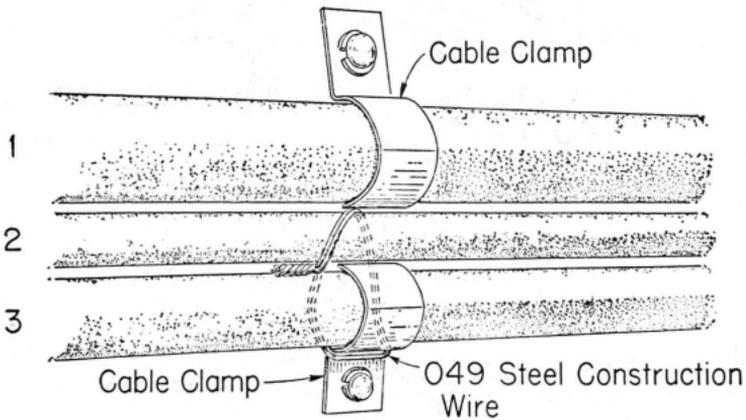
3.03 When two cables are run parallel, it is desirable to place the smaller cable above the larger cable. If terminals are involved place the terminal stub either below the main cable or above it depending on the location of the terminal in order to eliminate the necessity of crossing the cable.

3.04 When it is necessary to run three cables parallel to each other, the location of the third cable should be selected on the basis of minimizing the amount of rearrangements and conflict with existing stubs, laterals, wiring runs,

etc. It may, therefore, be located above or below existing cables, wiring runs, etc., unless otherwise specified on the detail plans. Three cables may be fastened as shown below.



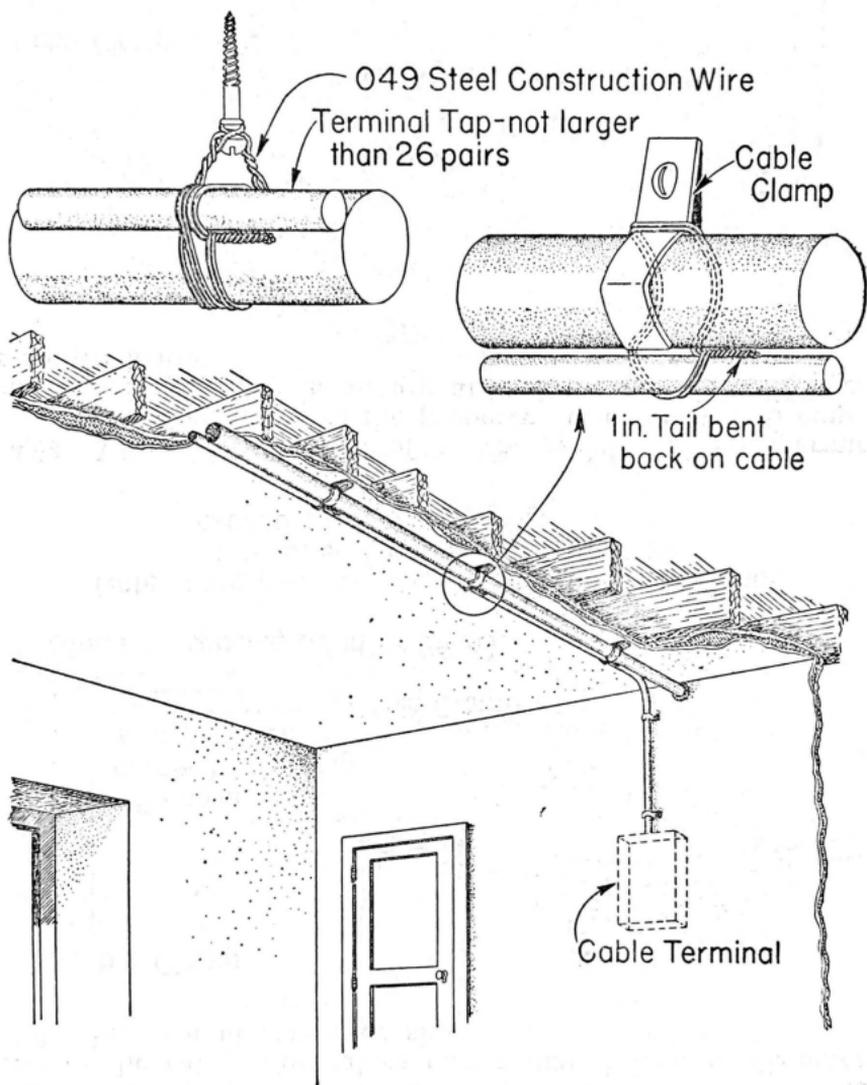
Where new cable 3 is placed above existing cables. Remove clamps on cable 1.



Cable 3 is new. Clamps on cable 2 removed.

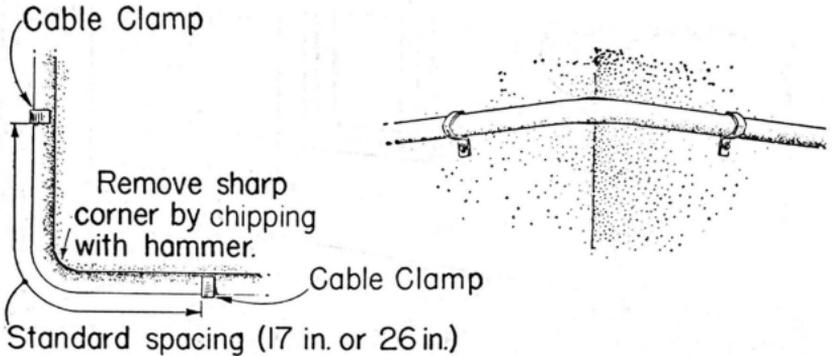
3.05 When drop wire runs are required to parallel cable runs, it is necessary that the lower cable be clamped in place with Drive Rings.

3.06 A main cable attached to a ceiling may have a stub paralleling it. In such cases attach stub cable to the clamps supporting the main cable. Where main cable is fastened with wire ties, attach stub to main cable with same tie as illustrated below.



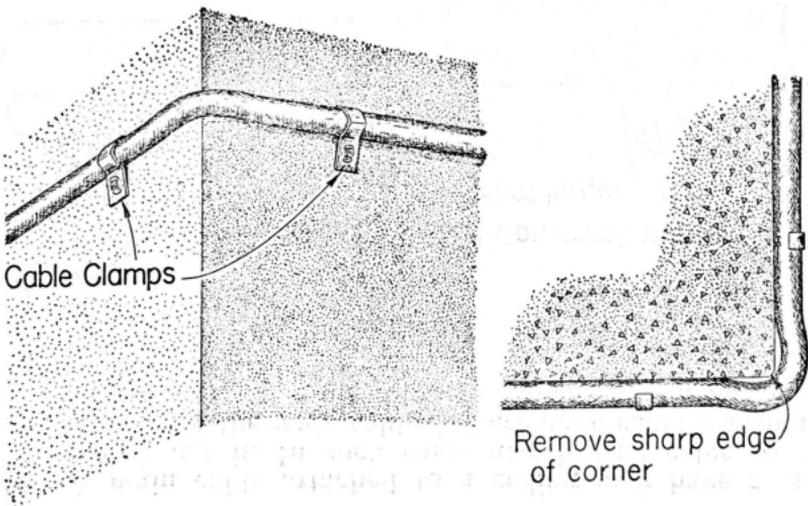
4. TURNING CORNERS

4.01 In turning outside corners with cable 1 inch or smaller in diameter, remove sharp edge of masonry wall to prevent damaging cable and to provide a small radius for the bend in the cable. For cables larger than 1 inch in diameter bend cable around corner as shown.

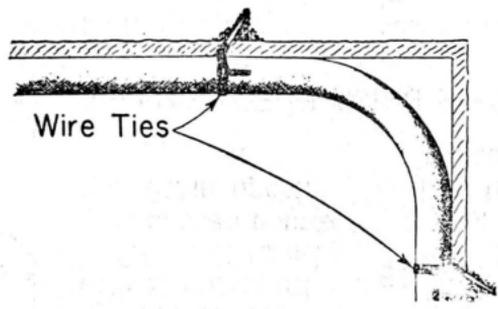
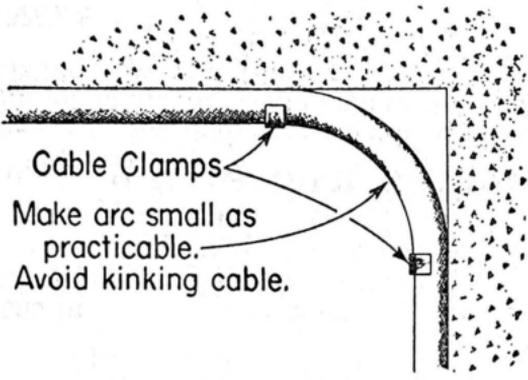


Note: As a general rule, distance between clamps at bend, should approximate but not exceed standard spacing.

4.02 Where the wall is of a type which will not permit chipping or where the property owner objects to chipping, bend the cable in an arc around the projecting corner as shown below.

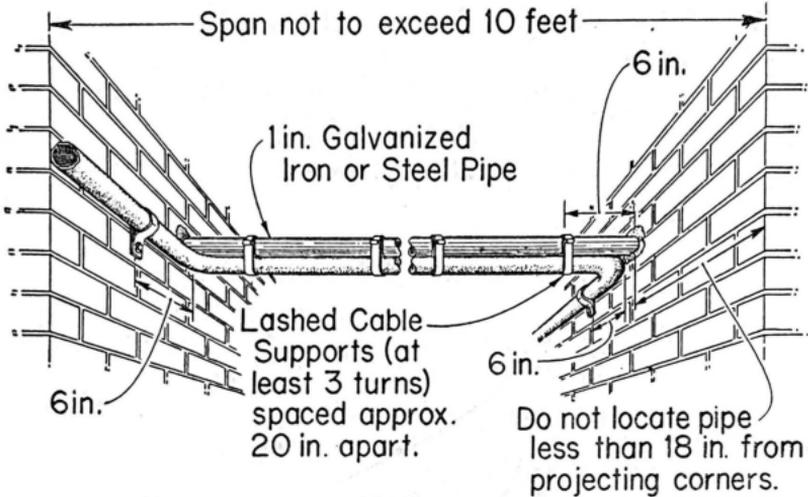


4.03 In turning inside corners, the cable shall be set up as shown below.

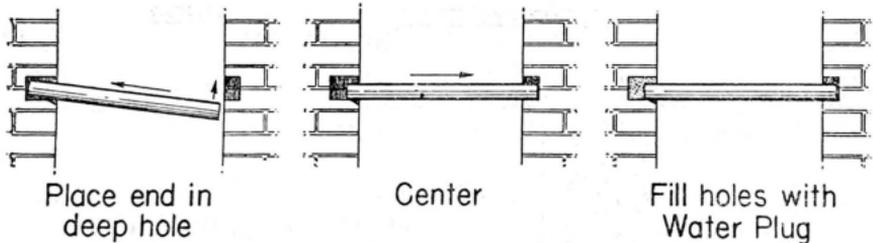


5. CROSSING PASSAGEWAYS

5.01 Iron or steel pipe may be used for support when crossing narrow passageways as shown in the following illustration. When spans exceed 10 feet, a strand crossing should be considered.



METHOD OF PLACING PIPE



6. PASSING CABLES THROUGH WALLS

6.01 When passing cables through walls, drill hole only large enough to accommodate the cable. Seal space around cable with Water Plug.

7. TERMINALS

7.01 When it is necessary to place terminals in buildings follow the methods specified in sections covering installation of terminals.