CABLE RACKING

CABLE ARRANGEMENTS IN MANHOLES

1. GENERAL

1.01 This section covers the recommended cable racking positions and splice bay locations for each cable with reference to duct positions. To be able to rack the cables in the positions recommended, the order of duct selection shown in Part 2 should be adhered to. ***If care is not exercised in duct selection, ducts could be blocked and racking positions or splice bay locations obstructed thus reducing the maximum capacity of the manhole.***

1.02 This section is reissued to clarify the recommendations previously covered. Since this constitutes a general revision, the arrows normally used to indicate changes have been omitted.

1.03 The manholes covered in this section are precast or cast-in-place, A-, L-, and T-types—

- 5 feet wide by 12 feet long by 6 feet, 6 inches high, double bay, single rack, with a maximum capacity of 10-ducts.
- 6 feet wide by 12 feet long by 7 feet high, double bay, double rack with a maximum capacity of 20-ducts.
- Conduit entrances of 2-, 3-, and 4-duct wide configuration.

1.04 Where the manhole capacity exceeds 20 ducts, cable racking arrangements should be similar to the manholes covered in this section—from bottom to top "outer" cables and then bottom to top "inner" cables. For the purposes of this section, "outer" and "inner" cables are identified as shown in Fig. 1.

1.05 Because of the wide variations in duct arrangements for J-type manholes it is not practicable to have a single standard as regards cable racking positions and splice bay locations. Cable racking and duct utilization should be set-up for each new J-type manhole to meet the planned ultimate duct fill. Duct selection should be from the bottom up; however, with respect to the ***ducts entering the manhole from the direction of the central office,*** a definite vertical level should be established to differentiate between ducts reserved for cables that will ***leave*** through the end wall and those that will ***leave*** through the side walls. For example, the two lower tiers of ducts might be assigned for cables leaving through the end wall and the four upper tiers for cable leaving through the side walls.

2. RACKING ARRANGEMENTS

2.01 The method of racking cables, as shown in the following figures, should assure nearly complete duct utilization, orderly cable arrangement, and generally good housekeeping within the manhole. The characteristics and figure references for the A-, L-, and T-type manholes are listed in Table A. The cable configurations in the figures are not intended to be accurate representations of how the cables are formed at the ducts. They are shown as they are purely for illustrating convenience.

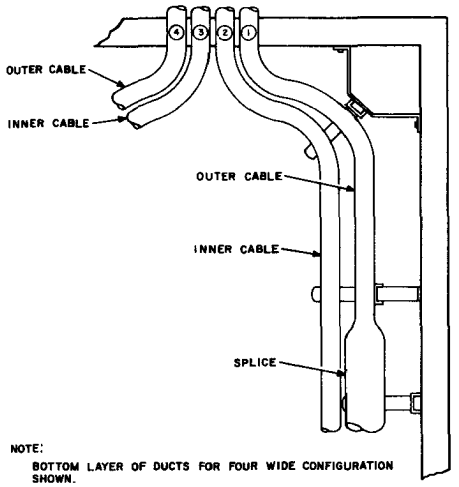


Fig. 1—Cable Positions from Ducts for Racking

2.02 With the cable hooks properly spaced, six levels for racking are available. Five of these are utilized in each of the examples shown in the figures, leaving the top level vacant for racking stubs or subsidiary cables and for horizontally racking loading coil or capacitor cases when the size of the case does not exceed available space. The cable hooks in each type of manhole illustrated are placed in the cable racks as follows:

(a) ***6 feet 6 inches headroom (5-feet wide)***—Bottom hooks are 12 inches from floor. Succeeding hooks are spaced 10-1/2 inches apart, leaving 13-1/2 inches between top hooks and manhole roof.

(b) ***7 feet headroom (6-feet wide)***—Bottom hooks are 12 inches from floor. Succeeding hooks are spaced 12 inches apart, leaving 12 inches between top hooks and manhole roof.

TABLE A

MANHOLE CHARACTERISTICS

MANHOLE TYPE	WIDTH	DUCT CAPACITY	DUCT CONFIGURATION	RACKING	FIG. NO.
A	5 ft.	10	2-wide	Double Bay-Single Rack	2
A	5 ft.	10	3-wide	Double Bay-Single Rack	3
A	6 ft.	20	4-wide	Double Bay-Double Rack	4
A	6 ft.	20	3-wide	Double Bay-Double Rack	5
L	5 ft.	10	2-wide	Double Bay-Single Rack	6
L	5 ft.	10	3-wide	Double Bay-Single Rack	7
L	6 ft.	20	4-wide	Double Bay-Double Rack	8
L	6 ft.	20	3-wide	Double Bay-Double Rack	9
T	5 ft.	10	2-wide	Double Bay-Single Rack	10
T	5 ft.	10	3-wide	Double Bay-Single Rack	11
T	6 ft.	20	4-wide	Double Bay-Double Rack	12
T	6 ft.	20	3-wide	Double Bay-Double Rack	13

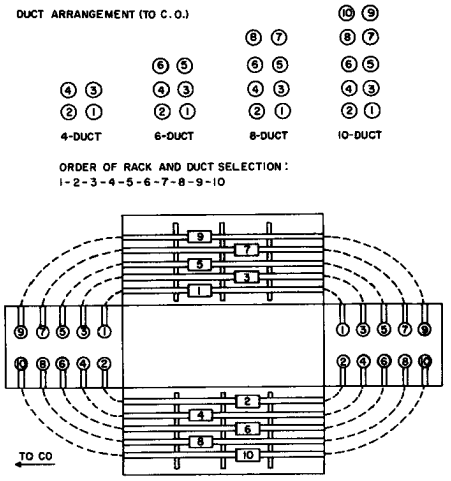


Fig. 2—Type A Manhole—5-Feet Wide—10-Duct Capacity—2-Wide Configuration

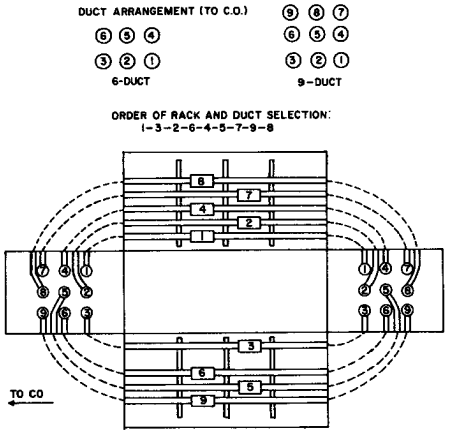
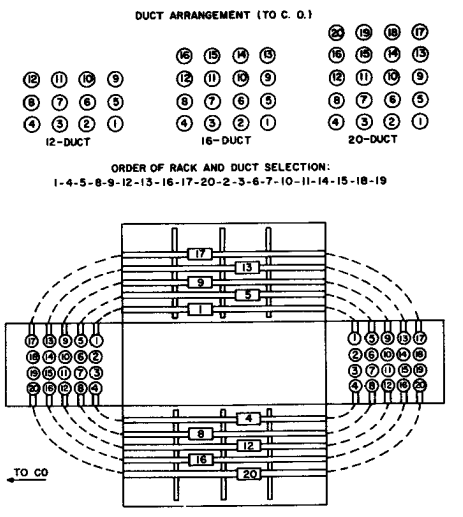


Fig. 3—Type A Manhole—5-Feet Wide—10-Duct Capacity—3-Wide Configuration



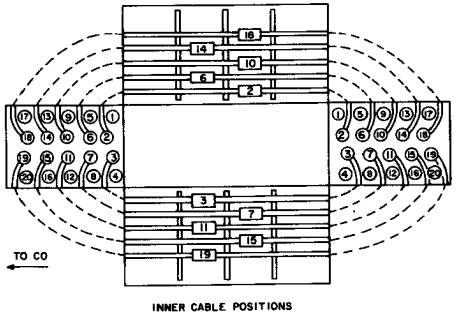


Fig. 4—Type A Manhole—6-Feet Wide—20-Duct Capacity—4-Wide Configuration

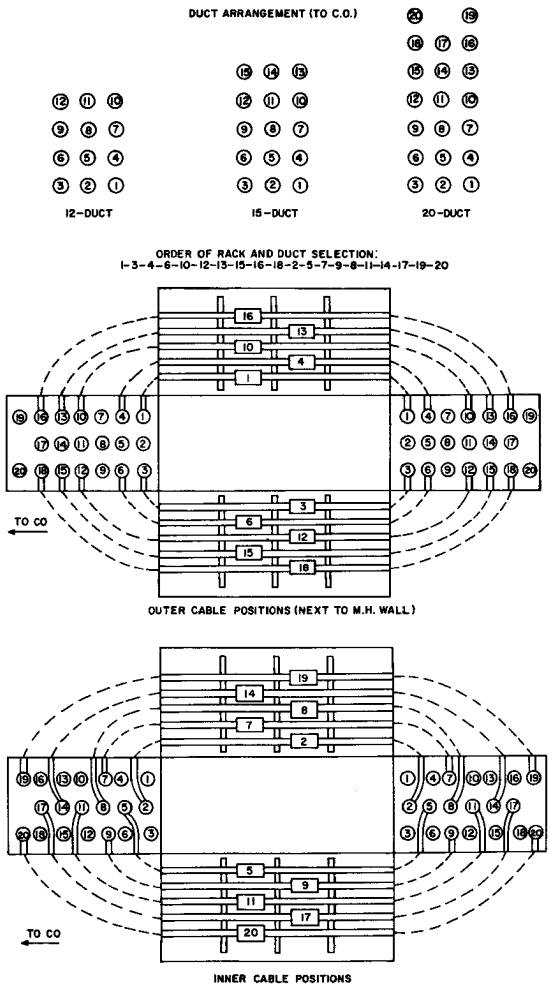


Fig. 5—Type A Manhole—6-Feet Wide—20-Duct Capacity—3-Wide Configuration

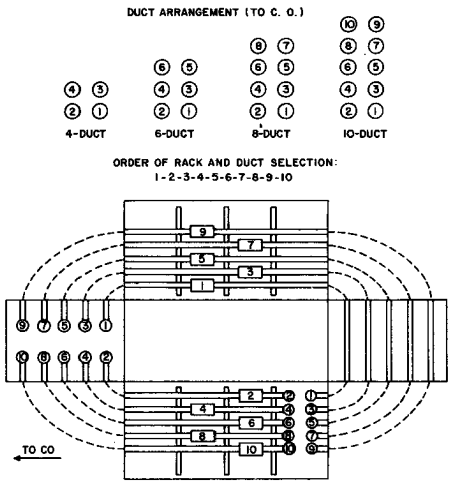


Fig. 6—Type L Manhole—5-Feet Wide—10-Duct Capacity—2-Wide Configuration

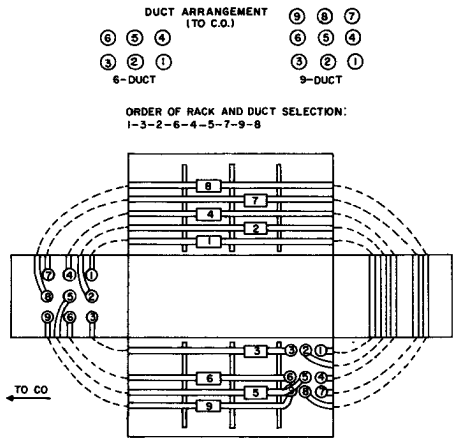


Fig. 7—Type L Manhole—5-Feet Wide—10-Duct Capacity—3-Wide Configuration

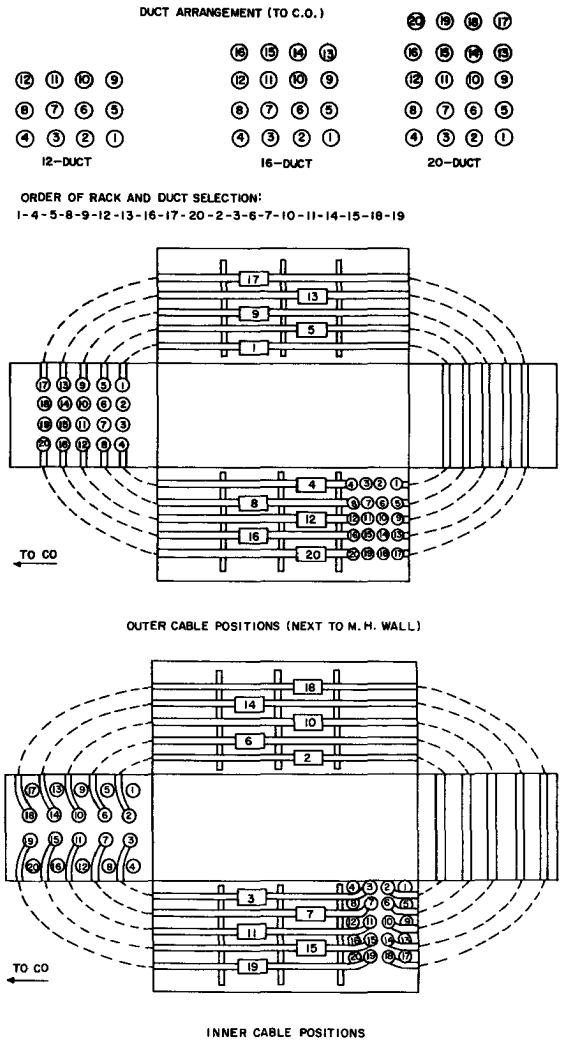


Fig. 8—Type L Manhole—6-Feet Wide—20-Duct Capacity—4-Wide Configuration

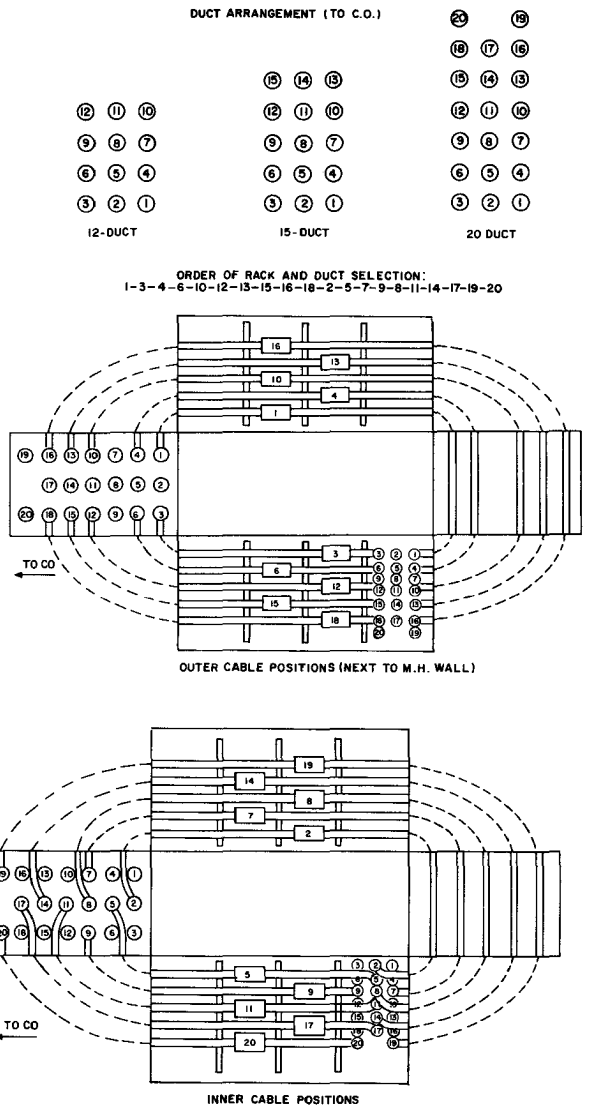


Fig. 9—Type L Manhole—6-Feet Wide—20-Duct Capacity—3-Wide Configuration

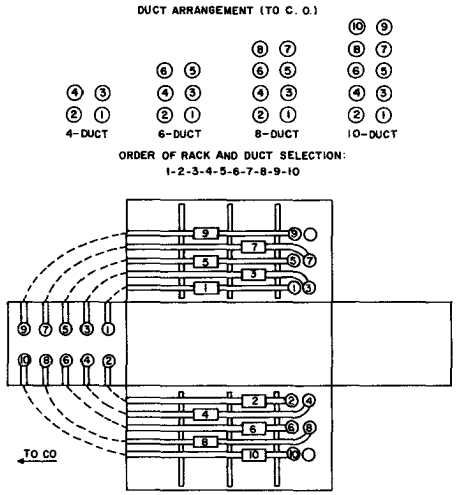


Fig. 10—Type T Manhole—5-Feet Wide—10-Duct Capacity—2-Wide Configuration

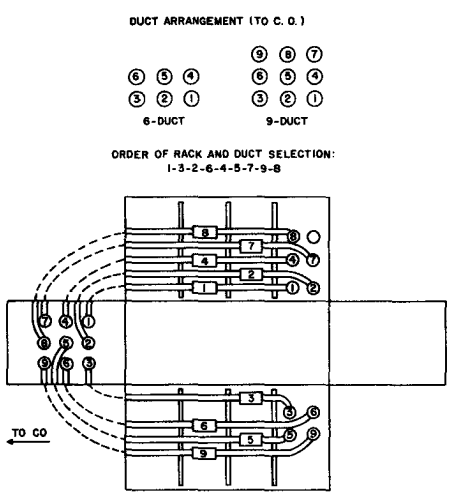


Fig. 11—Type T Manhole—5-Feet Wide—10-Duct Capacity—3-Wide Configuration

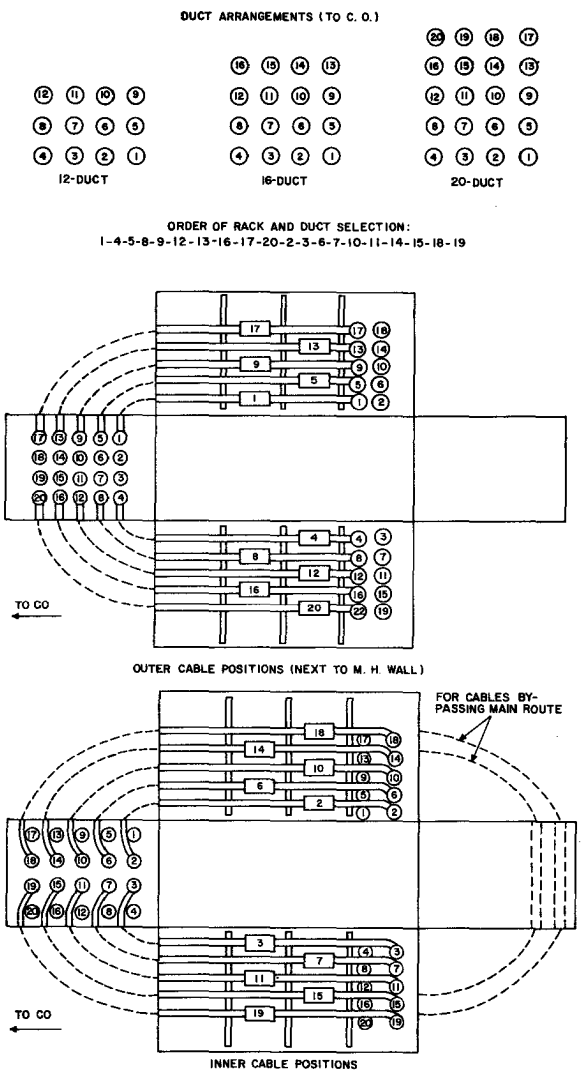


Fig. 12—Type T Manhole—6-Feet Wide—20-Duct Capacity—4-Wide Configuration

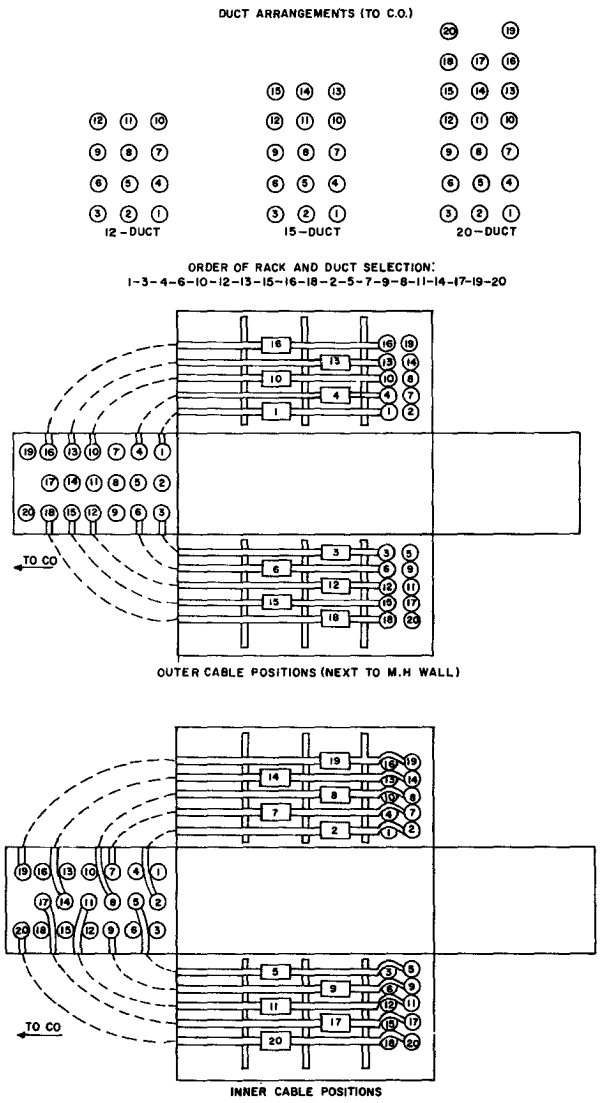


Fig. 13—Type T Manhole—6-Feet Wide—20-Duct Capacity—3-Wide Configuration

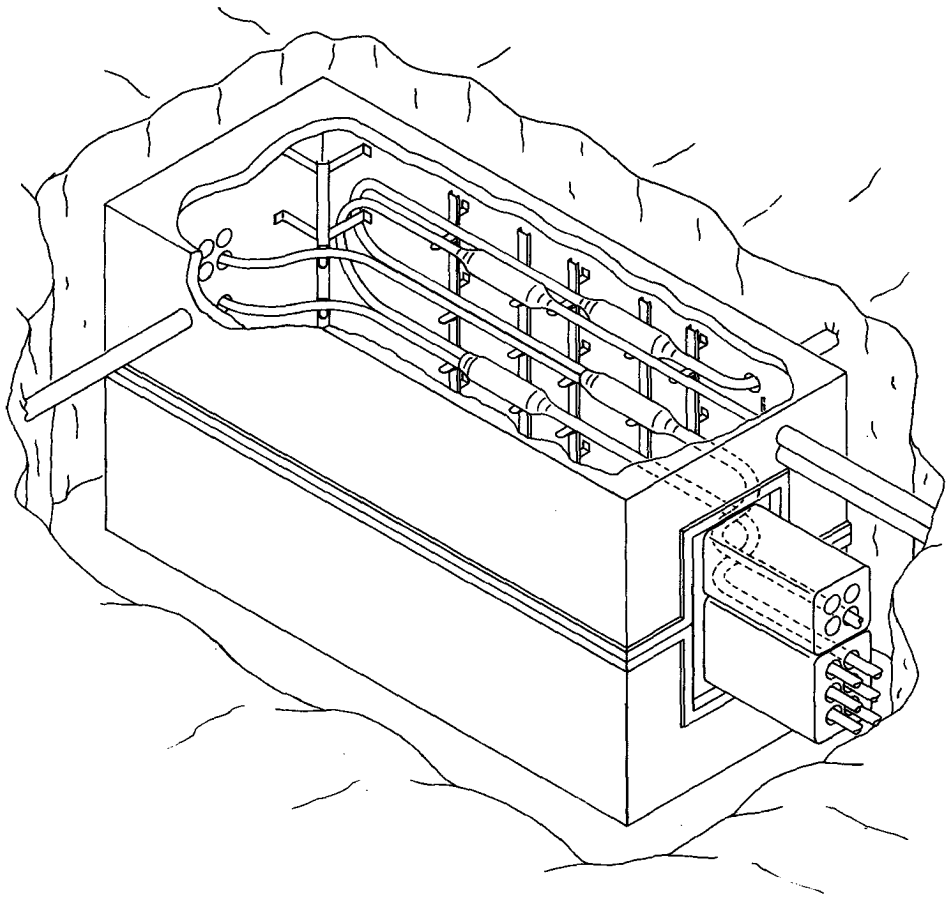


Fig. 14—Typical Stub Arrangement