CLEARANCES FOR AERIAL PLANT

(FOR USE IN CALIFORNIA ONLY)

Contents Page

1. GENERAL

1.01 This section specifies the MINIMUM clearances and climbing space requirements for all aerial telephone plant in California. It includes requirements for telephone plant in the proximity of swimming pools.

Note: If clearances specified in other Sections conflict with the values given herein, the minimum requirements of this section shall govern in all cases.

1.02 This section is reissued to:

- Update information on line-of-sight requirements.
- Include the appropriate legend on Page 1 in accordance with AT&T's "Guidelines and Procedures for Safeguarding Information" and Pacific Company's (PAC) System Instruction (SI) 178.

Note: Marginal arrows used to denote changes are omitted.

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1.03 It should be specifically understood that clearances and climbing space requirements shown in this section are the MINIMUM permitted by the California State law governing overhead line construction. Greater clearances shall be provided where necessary to ensure maintaining these clearances; or, where required by local ordinances or regulations; or, if safe working conditions cannot otherwise be obtained.

1.04 Vertical clearances specified herein are those which are required at 60°F with no wind. Greater clearances shall be provided if sag under conditions of maximum temperature and loading would reduce specified vertical clearances by more than:

- 5% over railroads transporting standard freight cars.
- 10% in all other cases.

1.05 Clearances between telephone plant and supply conductors or equipment are based on telephone plant being maintained at the lower level. As a safety measure this condition shall be met wherever possible. Where it is necessary to place telephone plant above supply conductors or equipment (other than supply service drops or trolley feeders and contact conductors), the matter should be referred to your supervisor for special construction methods.

1.06 Poles supporting power conductors above 25,000 volts (often called subtransmission lines) may present protection problems. Attachments may be made to a single pole supporting power conductors between 25,000 and 150,000 volts without special approval. However, pole-to-pole drop wire or C Rural wire runs are not allowed. Proposed pole-to-pole cable construction must be referred to the Protection Engineer.

1.07 The side of a pole to which conductors are attached is often governed by climbing space requirements. Where power rack construction is involved, the line facilities of each company should be attached to the same side of a pole to avoid possible violation of climbing space requirements.

1.08 In no case shall measurements actually be made to supply conductors. For methods to be used when making measurements to supply wires or equipment, refer to Section 620-255-980PT.

1.09 Among other requirements, the California Law provides that:

(a) Splices in Higher Voltage Circuits at crossings over any telephone toll line or any other telephone line of more than four conductors (open, paired, or in cable) shall not be made or permitted unless the consent of all parties involved in such crossing spans is obtained.

(b) Supply poles which are stubbed or carry pole top extensions at such crossings are prohibited. If the construction of telephone lines would create crossings as mentioned above, refer the matter to the Outside Plant Engineer.

1.10 Consent Agreements have been executed with some of the power companies operating in our areas to cover the requirements of 1.09 (a). It shall be the responsibility of the Outside Plant Engineer to verify that such agreement exists.

2. DEFINITIONS

2.01 For this section, the following definitions are given:

(a) ***Approximately Parallel*** — a guy and a conductor or two guys are approximately parallel when one guy does not intersect either the horizontal or vertical plane in which the conductor or other guy lies.

(b) ***Cable*** means a stranded conductor or a combination of conductors insulated from one another, excluding service drops.

(c) ***Clearance Crossarm*** means a crossarm supporting service drops (telephone or supply) installed on a pole of another line for the purpose of maintaining prescribed clearances which, if the other line did not exist, could be maintained without such clearance arm.

(1) The installation of a supply clearance crossarm on an existing telephone pole does not entail any change in climbing space or conductor arrangement on the pole.

(2) A clearance crossarm may accommodate more than one complete service drop providing none of the service drops originate from such arm. If any service drop originates from

the clearance arm, the pole shall be considered as a jointly used pole and the required clearances and climbing space provided.

(3) Where a new pole line is to be built or existing poles replaced and clearance crossarms are involved, the length of the new poles should be such that service drop attachments can be made with clearances and climbing space as required for jointly used poles.

(d) ***Collinear Lines*** are generally lines so situated that one line is wholly or partly over the other line.

(e) ***Conflicting Lines*** mean lines so situated with respect to each other (except at crossings) that the overturning of one line will result in contact of its poles or conductors with the poles or conductors of the second line, assuming no conductors are broken in either line.

Note: Lines on opposite sides of a thoroughfare are not considered as conflicting if separated by a distance not less than 60 per cent of the height of the higher pole line above the ground line and in no case less than 20 feet.

(f) ***Crossings*** occur when conductors and/or guys are attached to separate poles and intersect the vertical plane in which the other conductor and/or guy lies.

(g) ***Districts*** —

(1) ***Rural Districts*** are all areas not urban, usually in the country but in some cases within city limits.

(2) ***Urban Districts*** are thickly settled areas, whether in cities or suburbs, or where congested traffic often occurs. Highways on which vehicular traffic is often very heavy, or locations such as: picnic grounds, summer resorts, etc, where people congregate seasonally, are considered as urban.

Note: If poles are so located along roads or highways that there is any likelihood of heavy vehicular travel under the wires or cables supported on the pole line, they shall be considered as urban districts.

(h) ***Drop Wire Runs Along the Lead*** (sometimes called Drop Cables) are paired wire runs placed in lieu of open wire or cable, or are sections of drop wire attached to two or more line poles or between a pole and a span clamp.

(i) ***Guard Arms*** are wood crossarms installed on poles directly above and generally parallel to the messenger, cable, or conductor being guarded.

(j) ***Joint Use of Poles or Poles Jointly Used*** means occupancy of poles or structures by circuits of different ownership or by two or more of the following classes of circuits of the same ownership:

(1) Communication circuits for public use.

(2) Railway or trolley circuits.

(3) Supply circuits other than trolley circuits.

(k) ***Lateral Runs*** are conductors or cable extending in a general horizontal direction.

(l) ***Open Wires*** are communication conductors separately supported.

(m) ***Passing*** of a guy and a conductor or two guys occurs:

(1) When the guy and conductor or the two guys are attached to separate poles and the guy intersects the horizontal plane in which the conductor or other guy lies; or,

(2) When the guy and conductor or the two guys are attached to the same pole and the guy intersects either the horizontal or vertical plane in which the conductor or other guy lies.

(n) ***Pitch of a Roof*** means its inclination or slope as related to the horizontal span. A roof with less than a 3/8-pitch will rise less than 3 feet vertically in a horizontal distance of 4 feet.

(o) ***Premises Served*** means the property of one ownership which may have one or more buildings.

(p) ***Radial*** clearances are distances measured in any direction.

(q) ***Risers*** are cables or conductors, excluding ground wires, which extend below the ground line.

(r) ***Service Drops*** are conductors (power or telephone), cable or wire, extending from a pole line to a building or structure, a service and meter pole, or between buildings. The term "service drop" does not apply to any portion of a run extending between two or more line poles or between a pole and a span clamp.

(s) ***Supply Wires or Cables*** are those used to transmit a supply of electrical energy.

(t) ***Swimming Pool*** means that portion of any natural or artificially contained body of water which is 24 inches or more in depth at any point below the highest water level, which is intended for swimming, bathing or other similar recreational purposes, and which has a surface area exceeding 100 square feet.

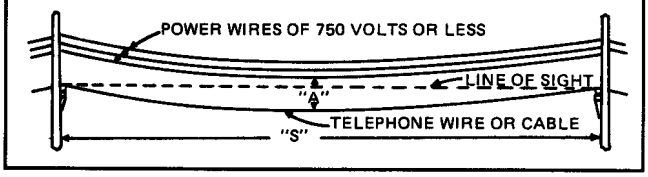
(u) ***Vertical Runs*** are conductors or cable attached vertically on poles, but which do not extend to the ground line.

3. LINE OF SIGHT REQUIREMENTS FOR TELEPHONE AND SUPPLY CONDUCTORS

3.01 The vertical separations between telephone wire or cable and supply circuits at Crossings or on Jointly Used Poles specified in this practice are minimum values, and it may be necessary to provide additional separation at the pole to meet the line of sight requirements. Sketches A through E and the associated tables indicate span/midspan requirements.

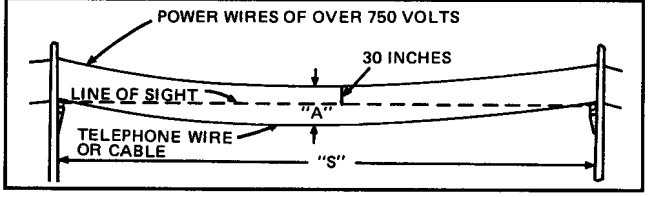
Note: Line of Sight Requirements are Bell System and PAC standards, but are not required under California law.

750 VOLTS OR LESS: INCLUDES NEUTRALS, OTHER THAN MULTIGROUNDED, ASSOCIATED WITH CONDUCTORS OF 750 VOLTS OR LESS	
SPAN LENGTH (S) IN FEET	**MIDSPAN SEPARATION (A) IN INCHES**
150 - LESS	30 (SEE ***NOTE***)
150 - 350	30 OR SAG OF TELEPHONE PLANT IF GREATER (SEE ***NOTE***)
NOTE: LOWEST POWER WIRE MUST BE ABOVE THE LINE OF SIGHT.	



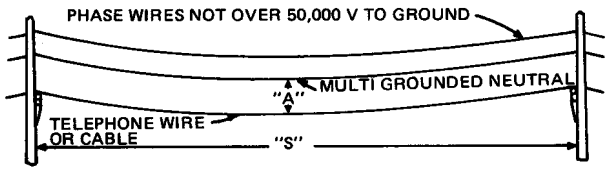
Power Conductors of 750 Volts or Less
Sketch A

GROUNDED POWER SYSTEMS OF UP TO 15,000 VOLTS BETWEEN WIRES (8700 VOLTS TO GROUND) AND OTHER SYSTEMS OF UP TO 8700 VOLTS BETWEEN WIRES	
SPAN LENGTH (S) IN FEET	**MIDSPAN SEPARATION (A) IN INCHES**
150 - LESS	30
150 - 350	30 PLUS SAG OF TELEPHONE PLANT
GROUNDED POWER SYSTEMS OF 15,000 - 86,500 VOLTS BETWEEN WIRES (8700 - 50,000 VOLTS TO GROUND) AND OTHER SYSTEMS OF 8700 - 50,000 VOLTS BETWEEN WIRES	
150 - LESS	45
150 - 350	45 OR TELEPHONE PLANT SAG PLUS 30 IF GREATER



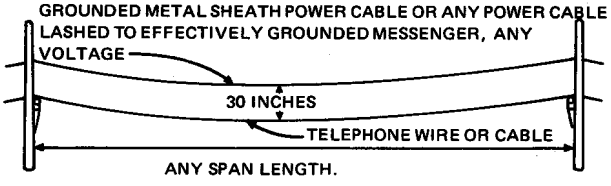
Power Conductors of Over 750 Volts
Sketch B

22,000 VOLTS OR LESS TO GROUND 38,000 VOLTS OR LESS BETWEEN WIRES	
SPAN LENGTH (S) IN FEET	**MIDSPAN SEPARATION (A) IN INCHES**
350 - LESS	30
22,000 TO 50,000 VOLTS TO GROUND 38,000 TO 86,500 VOLTS BETWEEN WIRES	
350 - LESS	30



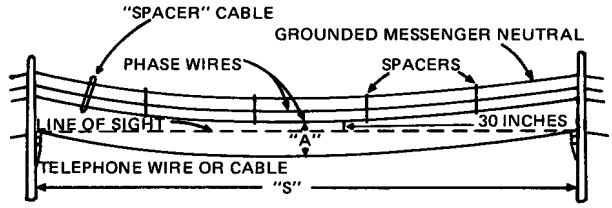
Multigrounded Neutrals
Sketch C

GROUNDED POWER CABLE (EXCEPT SPACER CABLE) GROUNDED METALLIC SHEATH, NON-METALLIC SHEATH CABLES LASHED TO GROUNDED MESSENGER, ETC.	
SPAN LENGTH (S) IN FEET	**MIDSPAN SEPARATION (A) IN INCHES**
ANY	30
NONGROUNDED POWER CABLES (SEE ***NOTE***) 8700 VOLTS OR LESS	
ANY	30
NONGROUNDED POWER CABLES (SEE ***NOTE***) 8700 - 50,000 VOLTS	
ANY	45
NOTE: GENERALLY EXCLUDES SPACER CABLE SINCE THE SUPPORTING MESSENGER IS USUALLY GROUNDED.	



Power Cables (Except Spacer Cables)
Sketch D

8700 VOLTS OR LESS TO GROUND 15,000 VOLTS OR LESS BETWEEN WIRES	
SPAN LENGTH (S) IN FEET	**MIDSPAN SEPARATION (A) IN INCHES**
150 - LESS	30
151 - OVER	30 PLUS SAG OF TELEPHONE PLANT
8700 - 50,000 VOLTS TO GROUND 15,000 - 86,500 VOLTS BETWEEN WIRES	
150 - LESS	45
151 - OVER	45 OR IF LARGER, 30 PLUS SAG OF TELEPHONE PLANT



Spacer Type Power Cables
Sketch E

3.02 To determine the clearances required from power conductors, it is necessary to know the voltage of the power wires and also whether they are, or are not, part of a grounded system. Clearances for grounded power systems are based upon their voltage to ground; for other systems, clearances depend upon the voltage between wires. Most grounded power systems include a grounded conductor which has many connections to ground. Such conductors are called multigrounded neutrals and are generally considered to be effectively grounded.

Caution: Power companies occasionally attach the neutral ABOVE the phase wire. Therefore, it is important to identify the neutral wire before determining separation requirements. The neutral can usually be identified by observing the presence of the following:

(a) The neutral is usually bonded to a vertical ground wire at least every 1300 feet and more often when transformers are present.

(b) The neutral is normally bonded to power guys which do not contain insulators.

(c) Neutrals are sometimes carried on smaller insulators than those carrying phase wires.

4. CLEARANCES FOR TELEPHONE POLES OR STUBS

A. FROM FIRE HYDRANTS, SIGNAL PEDESTALS, OR NEAREST PART OF ORNAMENTAL STREET LIGHTS MEASURED FROM POLE SURFACE.	3 FT
B. FROM RAILWAY TRACKS, MEASURED FROM SURFACE OF POLE TO NEAREST RAIL.	12 FT (SEE 4.01)
C. FROM CURB LINES, MEASURED FROM SURFACE OF POLE TO STREET SIDE OF CURB.	6 IN
D. FROM FOREIGN COMMUNICATION CONDUCTORS WHICH PASS BUT ARE NOT ATTACHED MUST MEET BOTH OF THE FOLLOWING REQUIREMENTS:	
1. MEASURED HORIZONTALLY FROM CENTER LINE OF POLE.	15 IN (SEE 4.02)
2. MEASURED HORIZONTALLY FROM SURFACE OF POLE.	5 IN (SEE 4.02)
E. FROM SUPPLY WIRES OR CABLES, INCLUDING TROLLEY FEEDERS, WHICH PASS BUT ARE NOT ATTACHED, MEASURED FROM CENTER LINE OF POLE.	(SEE 4.03)

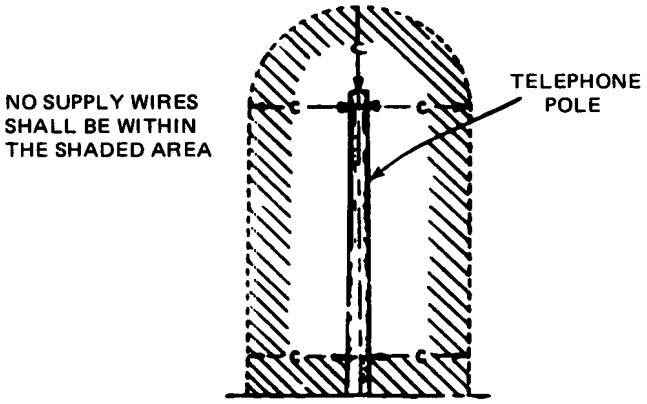
4.01 Where the 12-foot clearance cannot be obtained, the clearance may be reduced to not less than the following values with specific approval of the railroad concerned:

- For straight tracks — 6 feet 6 inches
- For curved tracks — 7 feet 6 inches

Note: Crossarms, guys, or other pole attachments located less than 23 feet above rails shall have a minimum horizontal distance from the rail of not less than that specified for the pole or stub.

4.02 An unobstructed climbing space must be maintained (see 13.07).

4.03 Where it is necessary to place telephone poles or stubs, which only support telephone attachments, under or adjacent to supply wires the horizontal and/or vertical clearance between the pole or stub and the nearest supply wire shall not be less than indicated in Fig. 1.



SUPPLY CONDUCTOR		MINIMUM CLEARANCE "C"
SUPPLY SERVICE DROPS	0 - 750 VOLTS	22 ½ INCHES
SUPPLY LINE WIRE	0 - 7,500 VOLTS	4 FEET
SUPPLY LINE WIRE	7,500 - 20,000 VOLTS	6 FEET
SUPPLY LINE WIRE	20,000 - 75,000 VOLTS	8 FEET
SUPPLY LINE WIRE	OVER - 75,000 VOLTS	(SEE ***NOTE***)

Note: 8 feet plus 1/2-inch for each 1000 volts in excess of 75,000 volts.

Fig. 1

5. HORIZONTAL CLEARANCES FOR TELEPHONE CONDUCTORS

Note: See Part 10 H for Clearances Between Telephone Conductors and Foreign Guys.

	TELEPHONE OPEN WIRE	TELEPHONE CABLES OR DROP WIRE RUNS ALONG THE LEAD	TELEPHONE SERVICE DROPS
A. FROM BUILDING WALLS. ***NOTE:*** AVOID OBSTRUCTING WINDOWS, DOORS, ETC, OR CAUSING INTERFERENCE TO FIREMEN OR WORKERS.	3 FT	NONE	NONE
B. FROM BRIDGES OR OTHER STRUCTURES UPON WHICH CRAFT PERSONNEL MAY WORK.	3 FT (SEE 5.01)	NONE	NONE
C. FROM STEEL TOWERS OR STEEL POLES SUPPORTING SUPPLY CONDUCTORS, AND TO WHICH TELEPHONE CONDUCTORS ARE NOT ATTACHED. (EXCLUDING ORNAMENTAL STREET LIGHT POLES.)	22-½ IN	22-½ IN	22-½ IN
D. FROM NONCLIMBABLE (ORNAMENTAL) STREET LIGHT STANDARDS.			
1. STANDARDS WHICH ARE FED BY AERIAL SUPPLY CONDUCTORS.			
a. METALLIC STANDARDS.	22-½ IN	22-½ IN (SEE 5.05)	NONE
b. NONMETALLIC STANDARDS SUCH AS CONCRETE.	3 IN	NONE	NONE
2. STANDARDS WHICH ARE FED BY UNDERGROUND SUPPLY CONDUCTORS.	3 IN	NONE	NONE
E. FROM CENTER LINE OF WOOD POLES TO WHICH TELEPHONE CONDUCTORS ARE NOT ATTACHED.			
1. POLES SUPPORTING FOREIGN COMMUNICATION CONDUCTORS ONLY.	15 IN (SEE 5.02)	15 IN (SEE 5.02)	22-½ IN
2. POLES SUPPORTING SUPPLY CONDUCTORS, ALL VOLTAGES.			
a. WHEN PASSING SUPPLY POLES LESS THAN 10 FEET FROM TELEPHONE POLES.	15 IN	15 IN	15 IN
b. WHEN PASSING SUPPLY POLES 10 FEET OR MORE FROM TELEPHONE POLES.	22-½ IN	22-½ IN	22-½ IN
F. FROM CENTER LINE OF WOOD POLES ON WHICH TELEPHONE CONDUCTORS ARE SUPPORTED ON CROSSARMS.			
1. TOLL CIRCUITS ON COMMUNICATION POLES SUPPORTING NO SUPPLY CONDUCTORS OTHER THAN SUPPLY SERVICE DROPS ON CLEARANCE CROSSARMS.			
a. STRAIGHT SECTIONS OF LINE.	9 IN	9 IN	—
b. CORNERS IN LINE.	(SEE 13.05(e))	9 IN	—
c. BUCK ARM CONSTRUCTION.	(SEE 13.06)	—	—
2. EXCHANGE CIRCUITS ON COMMUNICATION POLES SUPPORTING NO SUPPLY CONDUCTORS OTHER THAN SUPPLY SERVICE DROPS ON CLEARANCE CROSSARMS.			
a. STRAIGHT SECTIONS OF LINE.	15 IN (SEE 5.03)	15 IN	—
b. CORNERS IN LINE.	(SEE 13.05(e))	15 IN	—
c. BUCK ARM CONSTRUCTION.	(SEE 13.06)	—	—

	TELEPHONE OPEN WIRE	TELEPHONE CABLES OR DROP WIRE RUNS ALONG THE LEAD	TELEPHONE SERVICE DROPS
3. TOLL OR EXCHANGE CIRCUITS ON POLES SUPPORTING SUPPLY CONDUCTORS OTHER THAN SUPPLY SERVICE DROPS ON CLEARANCE CROSSARMS.			
a. STRAIGHT SECTIONS OF LINE.	15 IN	15 IN	—
b. CORNERS IN LINE.	(SEE 13.04(a)(2))	15 IN	—
c. BUCK ARM CONSTRUCTION.	(SEE 13.06)	—	—
G. WHEN TELEPHONE CONDUCTORS ARE ATTACHED TO WOOD POLES.	PART 13	PART 13	PART 13
H. FROM CONDUCTORS SUPPORTED ON CONFLICTING POLE LINES, ON POLE LINES APPROACHING CROSSINGS, AND ON COLLINEAR LINES.			
1. FOREIGN COMMUNICATION CONDUCTORS.	2 FT	2 FT	2 FT
2. SUPPLY WIRES AND CABLES, INCLUDING TROLLEY FEEDERS.	(SEE 5.04)	(SEE 5.04)	(SEE 5.04)
3. SUPPLY SERVICE DROPS (0-750 VOLTS).	(SEE 5.04)	(SEE 5.04)	(SEE 9.01)

5.01 If it is not practicable to obtain the 3-foot clearance from the walls or under side of the structure, the clearance may be reduced to 6 inches, or to 3 inches provided the conductor supports are not more than 50 feet apart.

5.02 In addition, telephone conductors ***must*** have 5 inches clearance from the pole surface and an unobstructed climbing space ***must*** be maintained (see 13.07)

5.03 This clearance may be reduced to not less than 9 inches under the following conditions:

(a) Where the conductors are supported on crossarms originally placed as toll crossarms and no cable is attached to the pole less than 2 feet below the conductors on the lowest crossarm.

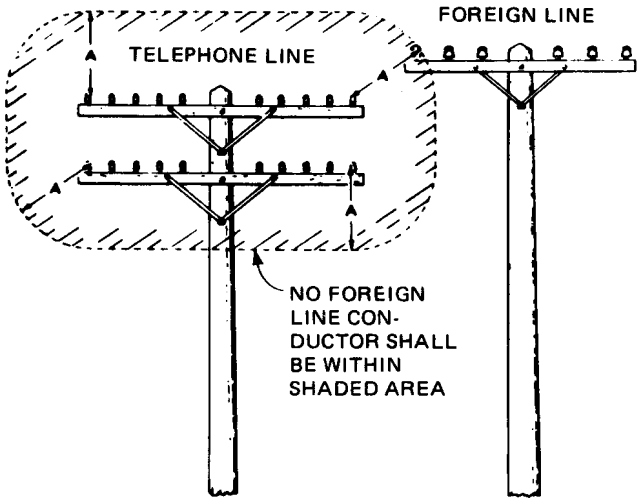
(b) Where conductors are supported on a crossarm in the pole top position in rural districts and no conductors are supported below such crossarm except supply service drops on clearance crossarms.

Note: Crossarms with 30 inch climbing space may be added to such leads provided that when the pole or top crossarm is replaced crossarms with 30 inch climbing space are used.

5.04 Clearances shown in the following figures shall be maintained between telephone conductors and conductors supported on other pole lines which are collinear, in conflict, or approaching crossings.

(a) Between telephone cable or wire and line conductors on foreign poles. (See Fig. 2)

(b) Between open wire telephone conductors and supply service drops attached to foreign poles. (See Fig 3.)



FOREIGN LINE	"A" IN FEET
COMMUNICATION	2
SUPPLY	
0 - 7,500 VOLTS	4*
7,500 - 20,000 VOLTS	6
20,000 - 75,000 VOLTS	8
OVER - 75,000 VOLTS	**

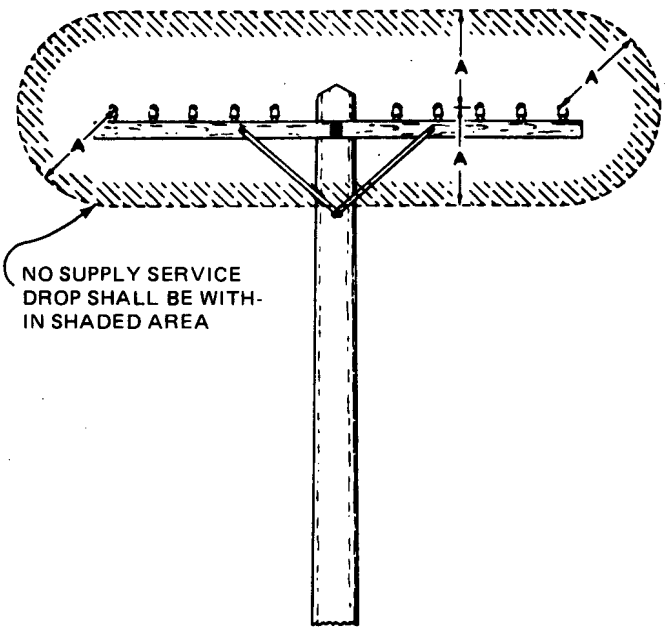
* WHERE SUPPLY CIRCUITS OF 750 TO 7,500 VOLTS CROSS OVER OR ARE ABOVE AND COLLINEAR WITH TELEPHONE CONDUCTORS WITHIN 6 FEET RADIALLY FROM A POLE SUPPORTING TELEPHONE CONDUCTORS, A CLEARANCE OF 5 FEET SHALL BE MAINTAINED.
** 8 FEET PLUS 1/2 INCH FOR EACH 1,000 VOLTS IN EXCESS OF 75,000 VOLTS.

Fig. 2

(c) Between telephone cables, extended messengers, or conductors supported on messengers and supply service drops. (See Fig. 4.)

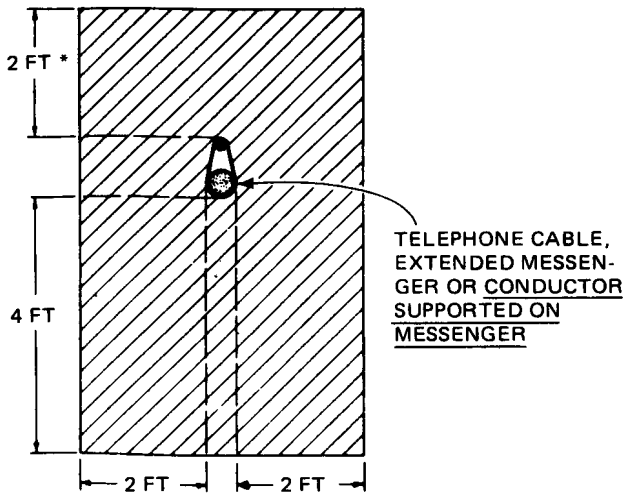
**Note:* If the point where the drop crosses the cable or passes the cable laterally is within 6 feet from any pole, this clearance shall be 4 feet.

5.05 This clearance is not required for drop wire runs along the lead providing mechanical protection is placed where necessary. This clearance is not required for telephone cable providing the cable and supporting messenger is suitably insulated for the street lighting voltage involved with a guard for a distance of 3 feet from the center line of the street light standard and mechanical protection is placed where necessary. See Section 627-360-200 for suitable insulation and protection guard.



DISTANCE OF CROSSING FROM NEAREST POLE	A
NOT MORE THAN 6 FEET	4 FEET
MORE THAN 6 FEET	2 FEET

Fig. 3



NO SUPPLY SERVICE DROP SHALL BE WITHIN SHADED AREA

Fig. 4

6. VERTICAL CLEARANCES FOR TELEPHONE CONDUCTORS ABOVE GROUND, RAILS, BUILDINGS, ETC.

A. WHERE WIRES OR CABLES CROSS OVER:	TELEPHONE WIRES, CABLES OR DROP WIRE RUNS ALONG THE LEAD	TELEPHONE SERVICE DROPS
1. PUBLIC THOROUGHFARES (HIGHWAYS, STREETS, ROADS, OR ALLEYS) IN RURAL OR URBAN DISTRICTS.	18 FT	18 FT (SEE 6.01)
2. RAILWAYS WHICH TRANSPORT STANDARD FREIGHT CARS **WHERE NOT OPERATED BY OVERHEAD TROLLEY WIRES.** *NOTE:* THE 25-FOOT CLEARANCE SPECIFIED SHALL BE INCREASED TO 27 FEET FOR TELEPHONE WIRES (INCLUDING DROP WIRES) THAT ARE NOT SUPPORTED BY A SUSPENSION STRAND, UNLESS A 25-FOOT CLEARANCE IS AGREED TO BY A PERMIT APPROVED BY THE RAILROAD COMPANY INVOLVED.	25 FT	25 FT
3. RAILWAYS AND ELECTRIC STREET BUSSES **WHERE OPERATED BY OVERHEAD TROLLEY WIRES.**	(SEE 6.02)	(SEE 6.02)
4. RAILWAYS NOT INCLUDED IN 2 OR 3, ABOVE.	18 FT	18 FT
5. PRIVATE THOROUGHFARES IN RURAL AND URBAN DISTRICTS INTENDED TO PROVIDE NORMAL ENTRANCE TO A PARTICULAR PREMISE FOR OCCUPANTS AND VISITORS.		
a. INDUSTRIAL, COMMERCIAL, OR AGRICULTURAL PREMISES.	18 FT	16 FT
b. RESIDENTIAL PREMISES.	18 FT	12 FT (SEE 6.03)
6. PRIVATE VEHICULAR ENTRANCES TO FIELDS, ORCHARDS, ETC. (IN RURAL DISTRICTS).	15 FT SEE 6.04	15 FT SEE 6.04
7. AREAS CAPABLE OF BEING TRAVERSED BY AGRICULTURAL EQUIPMENT.	15 FT	15 FT
8. ARID OR MOUNTAINOUS AREAS NOT UNDER CULTIVATION AND OVER WHICH THERE IS NO LIKELIHOOD OF VEHICULAR OR AGRICULTURAL TRAFFIC — INCLUDES AREAS ACCESSIBLE TO HORSEBACK RIDERS.	13 FT	13 FT
9. AREAS ACCESSIBLE TO PEDESTRIANS ONLY.		
a. INDUSTRIAL AND COMMERCIAL PREMISES.	8 FT	12 FT
b. ALL OTHER AREAS.	8 FT	10 FT (SEE 6.05)
10. ROOFS OF ALL BUILDINGS ON PREMISES SERVED.		
a. ROOFS HAVING PITCH LESS THAN 3/8. (SEE c BELOW.)	8 FT	3 IN
b. ROOFS HAVING PITCH OF 3/8 OR GREATER.	2 FT	3 IN
c. WHERE CONDUCTORS DO NOT OVERHANG BUILDING BY MORE THAN 6 FEET MEASURED HORIZONTALLY AND AT A RIGHT ANGLE TO THE CONDUCTORS — ROOFS OF ANY PITCH.	2 FT	3 IN
11. ROOFS OF BUILDINGS ON PREMISES OTHER THAN THE ONE SERVED.		
a. ROOFS HAVING PITCH LESS THAN 3/8. (SEE c BELOW.)	8 FT	8 FT
b. ROOFS HAVING PITCH OF 3/8 OR GREATER.	2 FT	2 FT
c. WHERE CONDUCTORS DO NOT OVERHANG BUILDING BY MORE THAN 6 FEET MEASURED HORIZONTALLY AND AT A RIGHT ANGLE TO THE CONDUCTORS — ROOFS OF ANY PITCH.	2 FT	2 FT
12. WATERWAYS — PROVIDE CLEARANCE AS SPECIFIED BY PROPER AUTHORITIES.	—	—
13. OTHER OBSTACLES, INCLUDING STRUCTURES ON WHICH WORKERS MAY WALK.	8 FT	8 FT

B. WHERE WIRES OR CABLES RUN ALONG HIGHWAYS, STREETS, ROADS OR ALLEYS	TELEPHONE WIRES, CABLES OR DROP WIRE RUNS ALONG THE LEAD	TELEPHONE SERVICE DROPS
1. IN URBAN DISTRICTS GENERALLY. SEE ITEM 4 BELOW.	18 FT	—
2. IN RURAL DISTRICTS GENERALLY. SEE ITEMS 3 AND 4 BELOW.	15 FT	—
3. IN RURAL DISTRICTS, ONLY WHERE NO PART OF THE LINE OVERHANGS THE PART OF THE THOROUGHFARE ORDINARILY TRAVELED, AND WHERE IT IS UNLIKELY THAT VEHICLES WILL CROSS UNDER THE LINE.	13 FT	—
4. IN BOTH URBAN AND RURAL DISTRICTS WHERE THE LINE IS LOCATED RELATIVE TO FENCES, DITCHES, EMBANKMENTS, ETC, SO THAT THE GROUND UNDERNEATH IS ACCESSIBLE TO PEDESTRIANS ONLY.	8 FT	—

6.01 This clearance may grade from 18 feet at a position not more than 12 feet horizontally from the curb line to a clearance of not less than 16 feet at the curb line, provided the clearance at the center line of any public thoroughfare shall in no case be less than 18 feet. Where there are no curbs the foregoing provisions shall apply using the outer limits of possible vehicular travel in lieu of a curb line.

- Fig. 5 shows the typical points of measurement for service drops over public thoroughfares.

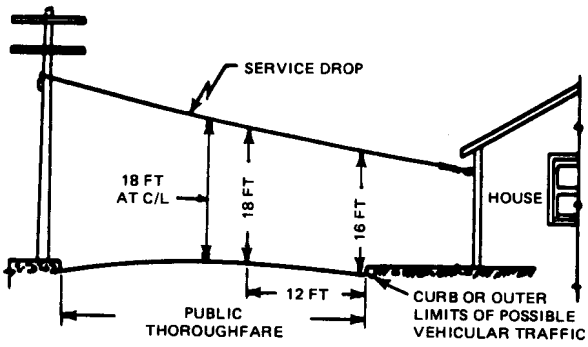


Fig. 5

6.02 These clearances shall be as follows, provided the required clearances between telephone wires, cables, or messengers and trolley contact conductors are maintained (see 7.04).

(a) Open Wire and Drop Wire Runs Along the Lead shall have a clearance above the rails of not less than the trolley throw and not less than 25 feet in any case.

(b) Cables or Messengers that are:

(1) Not protected by trolley guards shall have a clearance above the rails of not less than the trolley throw and not less than 25 feet in any case.

(2) Protected by trolley guards may have a clearance above the rails of less than the trolley throw provided the railway does not transport standard freight cars. If the railway transports standard freight cars, the clearance shall not be less than 25 feet.

(c) Service Drops shall have a clearance above the rails of not less than 26 feet where railways transport standard freight cars and not less than 23 feet over railways which do not transport standard freight cars.

6.03 If the building served does not permit an attachment which will provide this 12-foot clearance without the installation of a structure on the building, the clearance shall be as great as possible but in no case less than 10 feet.

6.04 This clearance shall be increased up to 18 feet where the height of farm machinery or vehicles which might pass underneath is such as to require greater clearance.

6.05 If the building served does not permit an attachment which will provide this 10-foot clearance without the installation of a structure on the building, the clearance shall be as great as possible but in no case less than 8 feet 6 inches.

7. VERTICAL CLEARANCES AT CROSSINGS BETWEEN TELEPHONE CONDUCTORS AND FOREIGN CONDUCTORS OR GUYS ON SEPARATE POLES

Note: The clearances shown in this table shall be increased where necessary to meet the Line of Sight Requirements of Part 3.

	TELEPHONE WIRES, CABLES OR DROP WIRE RUNS ALONG THE LEAD	TELEPHONE SERVICE DROPS	
		ABOVE	BELOW
A. SUPPLY WIRES, SUPPLY CABLES WITH UNGROUNDED SHEATH, AND TROLLEY FEEDERS.			
1. 0 - 750 VOLTS, EXCLUDING SERVICE DROPS.			
a. WHERE CROSSING IS 6 FEET OR MORE FROM A POLE SUPPORTING CONDUCTORS INVOLVED IN THE CROSSING.	4 FT	4 FT	2 FT
b. WHERE CROSSING IS LESS THAN 6 FEET FROM A POLE SUPPORTING CONDUCTORS INVOLVED IN THE CROSSING.	4 FT	4 FT	4 FT
2. 750 - 7,500 VOLTS			
a. WHERE CROSSING IS 6 FEET OR MORE FROM A POLE SUPPORTING **TELEPHONE** CONDUCTORS INVOLVED IN THE CROSSING.	4 FT	(SEE 7.01)	4 FT
b. WHERE CROSSING IS LESS THAN 6 FEET FROM A POLE SUPPORTING THE **TELEPHONE** CONDUCTORS INVOLVED IN THE CROSSING.	5 FT	(SEE 7.01)	5 FT
3. 7,500 - 20,000 VOLTS	6 FT	—	6 FT
4. 20,000 - 75,000 VOLTS	8 FT	—	8 FT
5. OVER 75,000 VOLTS	(SEE 7.02)	—	(SEE 7.02)
B. SUPPLY SERVICE DROPS, 0 - 750 VOLTS.			
1. ABOVE TELEPHONE WIRES OR CABLES.			
a. WHERE CROSSING IS 6 FEET OR MORE FROM A POLE.	2 FT	—	2 FT (SEE 9.01)
b. WHERE CROSSING IS LESS THAN 6 FEET FROM A POLE.	4 FT	—	4 FT
2. BELOW TELEPHONE WIRES OR CABLES.	4 FT (SEE 7.03)	2 FT (SEE 9.01)	—
C. SUPPLY CABLES WITH GROUNDED SHEATH — ALL VOLTAGES.	4 FT	4 FT	4 FT
D. OVER TROLLEY CONTACT CONDUCTORS.	(SEE 7.04)	(SEE 7.04)	—
E. FOREIGN COMMUNICATION WIRES OR CABLES WHICH ARE CONSTRUCTED, PROTECTED AND MAINTAINED SIMILAR TO THOSE OF THE TELEPHONE COMPANY.	2 FT	2 FT	2 FT
F. FROM FOREIGN COMMUNICATION WIRES AND CABLES WHICH DO NOT MEET TELEPHONE COMPANY PROTECTION STANDARDS. IF IN DOUBT AS TO PROTECTION STANDARDS INVOLVED, CONSULT YOUR SUPERVISOR.	4 FT	4 FT	2 FT
G. FROM FOREIGN GUYS, MESSENGERS, AND SPAN WIRES. ***NOTE:*** SEE PART 10-H FOR RADIAL CLEARANCES OF TELEPHONE WIRES OR CABLES WHICH ARE PASSING OR APPROXIMATELY PARALLEL TO FOREIGN GUYS.	2 FT	2 FT	2 FT

7.01 Telephone service drops may be carried over trolley feeders of 750 to 7,500 volts, upon the specific approval of your supervisor, if a separation of not less than 4 feet is maintained.

7.02 The vertical clearance for telephone wires, cables, and service drops from supply conductors of over 75,000 volts shall be 8 feet plus 1/2-inch for each 1,000 volts in excess of 75,000 volts.

7.03 The vertical clearance between telephone line conductors not supported on messengers, and supply service drops may be reduced to not less than 2 feet, provided the crossing is 6 feet or more from any pole involved in the crossing.

7.04 The minimum clearance for telephone wires, cables or service drops over trolley contact conductors or messenger strands supporting contact conductors shall be 4 feet for 0–750 volt systems and 6 feet for systems operating at over 750 volts provided the required clearances above the rails are also maintained at these crossings (see 6.02).

7.05 When all of the following conditions are met the 2-foot clearance can be reduced to 1 foot.

(a) Authorized licensee's cable and messenger involved in the crossing is constructed on a pole line joint with Telephone Company (TELCo) cable and messenger.

(b) Licensee's cable messenger is bonded to TELCo cable messenger at the first and last poles and at intermediate poles not to exceed every 1500 feet.

(c) Licensee's cable messenger and TELCo cable mesenger is attached at the crossing by TELCo personnel, as shown in Fig. 6.

8. CLEARANCES FOR TELEPHONE OR SUPPLY SERVICE DROPS ON CLEARANCE CROSSARMS

Note: See 2.01(c) for special instructions.

8.01 ***Telephone Service Drops*** attached to foreign poles for clearance reasons may cross above or below supply conductors or cables under the following conditions:

(a) ***Telephone Service Drops*** supported on clearance crossarms or attached directly to a foreign pole for clearance reasons shall have clearances from ***Supply Conductors*** (excluding supply cables) as shown in Fig. 7.

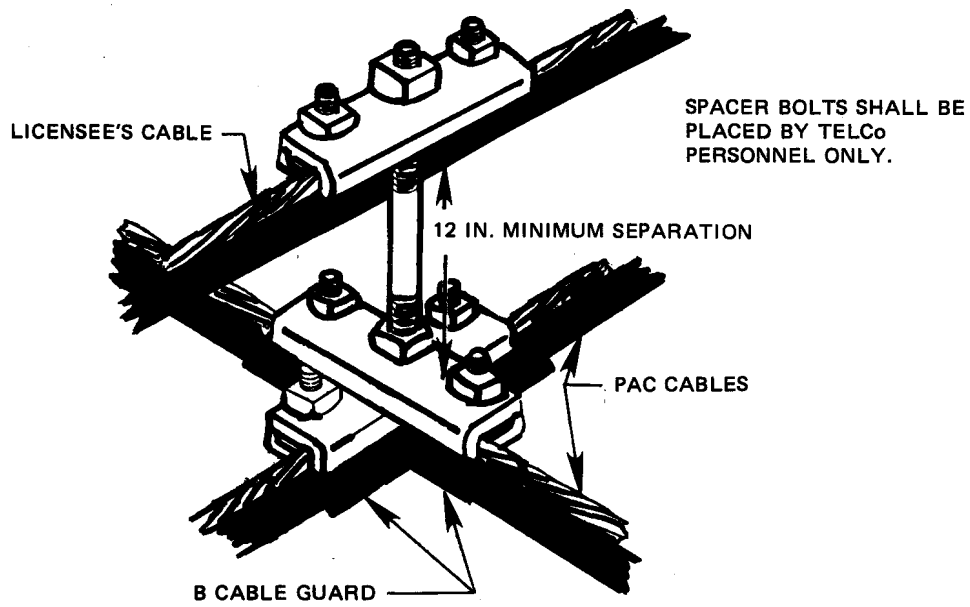


Fig. 6

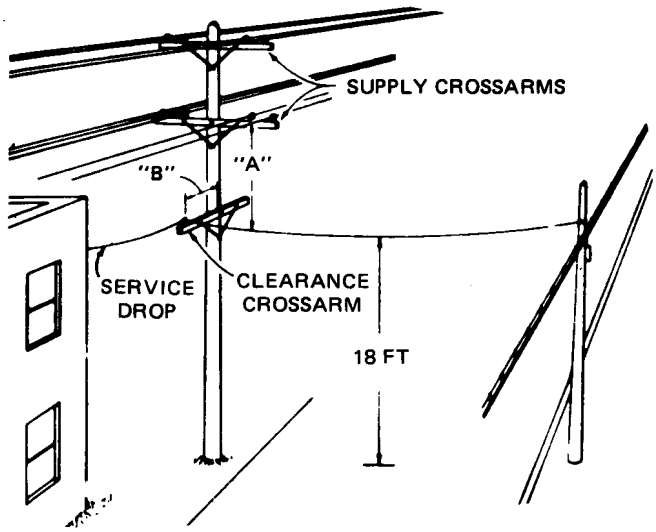


Fig. 7

Minimum clearances for Telephone Service Drops shall be as follows:

"B"	"A"		
	BELOW*		ABOVE**
	0-750 VOLT CIRCUITS	750-7500 VOLT CIRCUITS	0-750 VOLT CIRCUITS
ATTACHED TO SIDE OF POLE	6 FT	6 FT	4 FT
15 INCHES	4 FT	4 FT	4 FT
25 INCHES	2 FT	4 FT	2 FT

* TELEPHONE SERVICE DROPS BELOW SUPPLY CONDUCTORS OF OVER 7500 VOLTS SHALL HAVE A MINIMUM CLEARANCE OF 6 FEET.

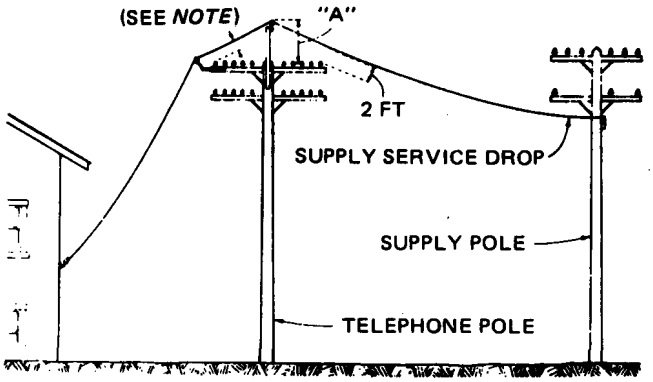
** TELEPHONE SERVICE DROPS SHALL NOT CROSS OVER SUPPLY CONDUCTORS OF OVER 750 VOLTS EXCEPT TROLLEY FEEDERS.

(b) ***Telephone Service Drops*** on clearance crossarms with no part of the drop less than 25 inches from the center line of the supply pole shall have clearances from ***Supply Cables*** as shown below:

SUPPLY CABLES WITH:	TELEPHONE SERVICE DROPS ON CLEARANCE CROSSARMS	
1. UNGROUNDED SHEATH	BELOW	ABOVE
a. 0-750 VOLTS	4 FT	2 FT
b. 750-7500 VOLTS	4 FT	—
c. OVER 7500 VOLTS	6 FT	—
2. GROUNDED SHEATH		
a. ALL VOLTAGES	4 FT	2 FT

8.02 ***Supply Service Drops*** on clearance crossarms attached to telephone poles for clearance reasons may cross above or below telephone conductors or cables under the following conditions:

(a) ***Supply Service Drops*** on pole top extensions with wood crossarms shall have clearances from telephone conductors, cables or messengers as shown in Fig. 8.

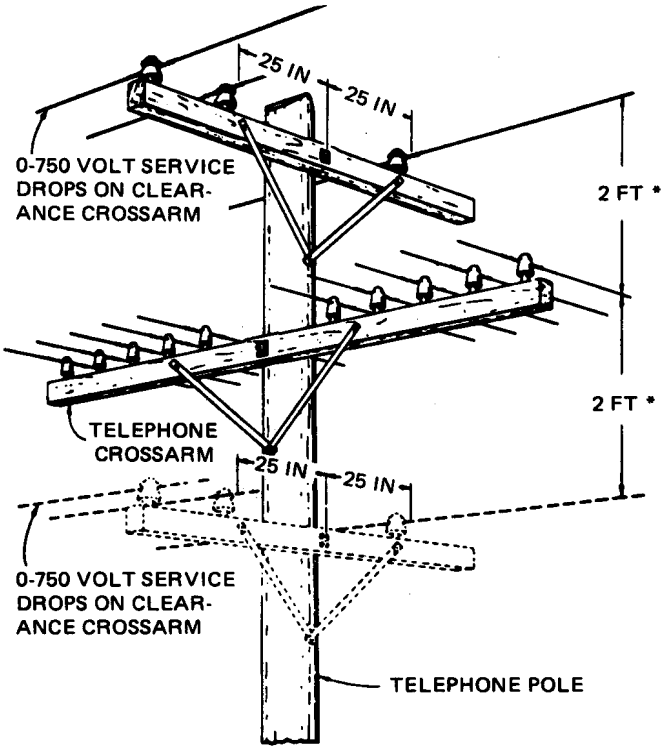


"A"	DISTANCE TO SUPPLY SERVICE DROP FROM CENTER LINE OF TELEPHONE POLE
2 FT	25 IN
4 FT	15 IN

Note: 1 foot or more when bracket supporting supply service drop is attached to end of telephone crossarm.

Fig. 8

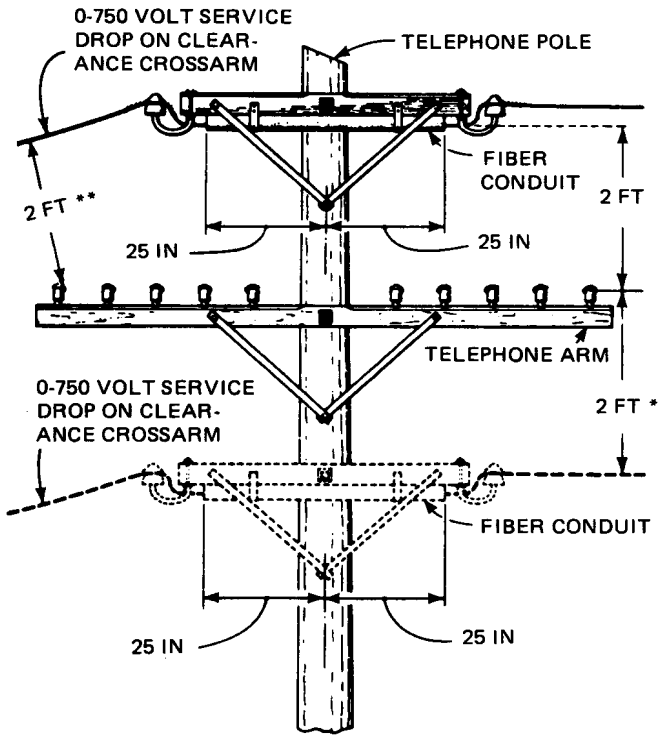
(b) ***Supply Service Drops*** on clearance crossarms shall have clearances from telephone conductors which are not supported on messengers as shown in Fig. 9.



**Note:* If this distance is 4 feet or more, the 25 inch dimensions may be reduced to 15 inches.

Fig. 9

(c) *Supply Service Drops* attached to brackets on the end of clearance crossarms shall have clearances from telephone conductors as shown in Fig. 10.



* *Note:* This clearance shall be 4 feet for telephone cable, extended messenger, or conductors attached to side of pole.

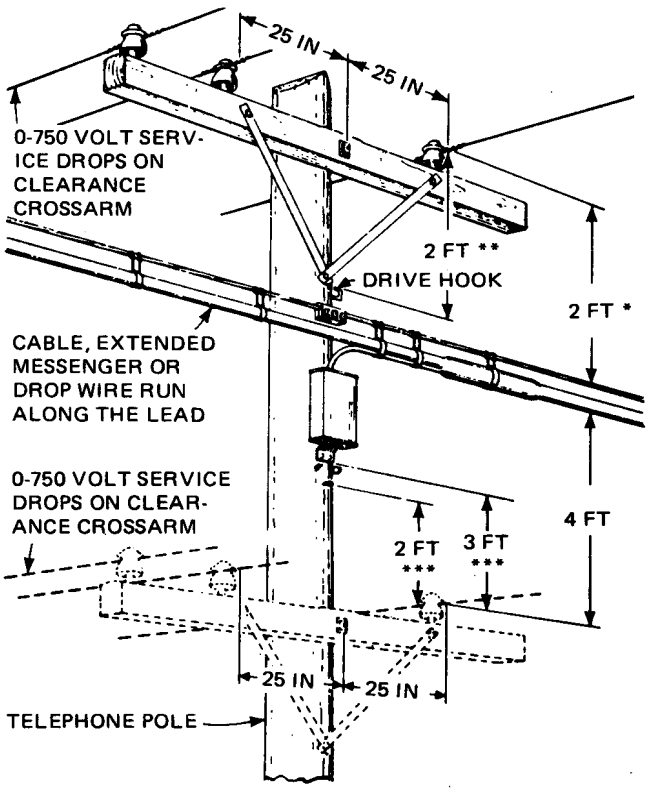
** *Note:* This clearance may be reduced to 1 foot if the supply service drop is attached to the end of the telephone arm by means of a bracket.

Fig. 10

(d) *Supply Service Drops* supported on clearance crossarms shall have clearances from telephone cable, messengers, conductors supported on messengers, or miscellaneous equipment as shown in Fig. 11.

9. CLEARANCES BETWEEN TELEPHONE AND SUPPLY SERVICE DROPS IN THE SPAN

9.01 Radial clearance between telephone service drops and supply service drops shall not be less than shown in Fig. 12.



Note: These distances shall be increased to the following where the clearance of the service drop to the center line of pole is less than 25 inches but not less than 15 inches.

*	With guard arm	4 feet
*	Without guard arm	6 feet
**		5 feet
***		40 inches

Fig. 11

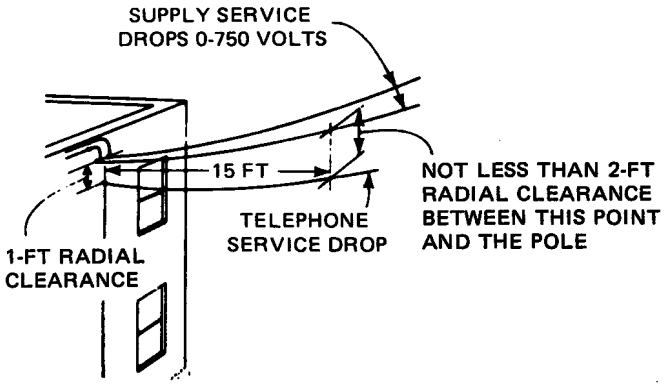


Fig. 12

10. VERTICAL CLEARANCES BETWEEN TELEPHONE CONDUCTORS AND SUPPLY CONDUCTORS, GUYS, EQUIPMENT, OR POLICE AND FIRE ALARM CIRCUITS ON THE SAME POLE

Note: The clearances shown in this table shall be increased where necessary to meet the Line of Sight Requirements of Part 3.

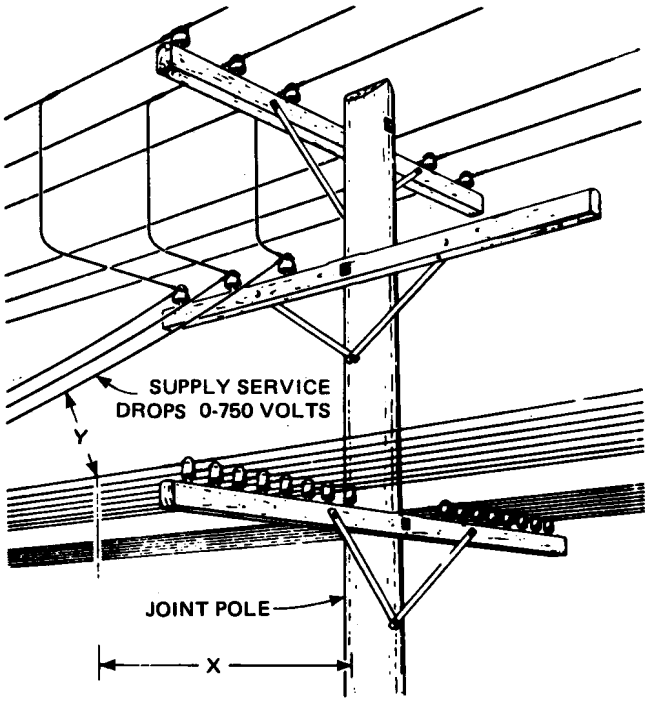
	TELEPHONE WIRES, CABLES OR DROP WIRE RUNS ALONG THE LEAD			TELEPHONE SERVICE DROPS	
	ON WOOD CROSSARMS	ATTACHED TO POLES		ON CROSSARMS OR GUARD ARMS	ATTACHED TO POLES
		GUARDED	UNGUARDED		
A. FROM SUPPLY WIRES OR SUPPLY CABLES WITH UNGROUNDED SHEATH (EXCEPT DRIP LOOPS AT END OF VERTICAL RUNS OR RISERS).					
1. SUPPLY SERVICE DROPS.	(SEE 10.01)	(SEE 10.01)	(SEE 10.01)	—	—
2. 0-750 VOLTS. (INCLUDING TROLLEY FEEDERS)	4 FT	4 FT	6 FT (SEE 10.02)	4 FT	5 FT (SEE 10.03)
3. 750-7,500 VOLTS.	4 FT	6 FT	6 FT	4 FT	6 FT
4. OVER 7,500 VOLTS.	6 FT	6 FT	6 FT	6 FT	6 FT
B. FROM SUPPLY CABLES WITH GROUNDED SHEATH — ALL VOLTAGES.	4 FT	4 FT	6 FT	4 FT	5 FT (SEE 10.03)
C. FROM DRIP LOOPS AT UPPER END OF VERTICAL RUNS OR RISERS OF SUPPLY CONDUCTORS.					
1. 0-750 VOLTS.	3 FT	3 FT	3 FT	3 FT	3 FT
2. 750-7,500 VOLTS.	4 FT	4 FT	4 FT	4 FT	4 FT
3. OVER 7,500 VOLTS.	5 FT	5 FT	5 FT	5 FT	5 FT
D. FROM UNENERGIZED SUPPLY EQUIPMENT SUCH AS TRANSFORMERS, SWITCH CASES, ETC.					
1. ABOVE TELEPHONE CONDUCTORS. ALL VOLTAGES	40 IN (SEE 10.04)	40 IN (SEE 10.04)	5 FT (SEE 10.04)	40 IN (SEE 10.04)	5 FT (SEE 10.04)
2. BELOW TELEPHONE CONDUCTORS. 0-7,500 VOLTS ONLY.	(SEE 10.05)	(SEE 10.05)	(SEE 10.05)	(SEE 10.05)	(SEE 10.05)
E. FROM STREET LIGHT EQUIPMENT, INCLUDING ALL PARTS OF DROP WIRES, STREET LAMPS, AND THEIR SUPPORTING RODS, BRACES AND GUYS.	(SEE 10.06)	(SEE 10.06)	(SEE 10.06)	(SEE 10.06)	(SEE 10.06)
F. FROM TROLLEY BRACKETS, INCLUDING SPAN WIRES, RODS, AND BRACES.	(SEE 10.07)	(SEE 10.07)	(SEE 10.07)	(SEE 10.07)	(SEE 10.07)
G. FROM POLICE AND FIRE ALARM CIRCUITS.	4 FT (SEE 10.08)	4 FT (SEE 10.08)	4 FT (SEE 10.08)	4 FT (SEE 10.08)	4 FT (SEE 10.08)

	WIRES, CABLES, DROP WIRE RUNS ALONG THE LEAD OR SERVICE DROPS	
	PASSING (RADIAL)	APPROX PARALLEL
H. FROM FOREIGN GUYS, MESSENGERS AND SPAN WIRES.	3 IN (SEE 15.09)	9 IN

SEE 10.09 FOR ILLUSTRATIONS.

10.01 Supply service drops shall have the following clearances from telephone conductors, cables, or messengers which are supported by the same pole:

(a) Clearances between supply service drops and telephone conductors which are ***not supported on messengers*** are shown in Fig. 13.



HORIZONTAL DISTANCE OF CROSSING FROM SUPPORTING POLE X	MINIMUM RADIAL CLEARANCE AT POINT OF CROSSING Y
LESS THAN 5 FEET	12 INCHES
5 FEET TO 10 FEET	18 INCHES
MORE THAN 10 FEET	24 INCHES

Fig. 13

(b) Clearances between supply service drops and telephone cables, messengers, or conductors, ***supported on messengers*** are shown in Fig. 14.

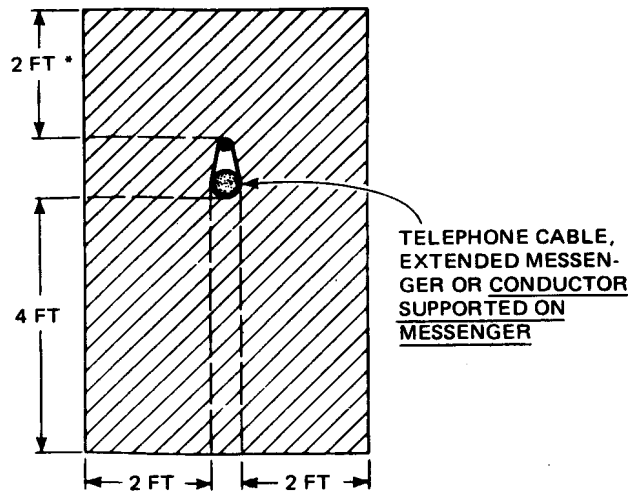


Fig. 14

10.02 These clearances may be reduced under the following conditions:

(a) The clearances may be reduced to 4 feet for 0-750 volt trolley feeders located below the telephone conductors.

(b) One paired or one open wire telephone circuit may be attached directly to poles on private property with a vertical separation of not less than 5 feet from 0-750 volt supply circuits without a guard arm, provided the supply and telephone circuits ***serve one and the same party,*** and further provided that where open wire is used, both telephone attachments are made to the same side of the pole.

10.03 This clearance shall be increased to 6 feet where telephone service drops from open wire lines are attached to the surface of a pole.

10.04 These clearances may be reduced to not less than 1 foot where the transformers or regulators are installed on platforms and the following conditions are met:

(a) The transformer or regulator platforms have continuous flooring; and,

(b) The flooring extends not less than 1 foot horizontally outside of the vertical plane of all transformer or regulator leads and bus wires on the same pole or structure; and,

(c) The telephone conductors do not extend laterally beyond the platform.

10.05 Telephone cables and wires shall be located below transformers or regulators of supply systems unless approval of the supervisor is obtained. Where it is necessary to locate telephone conductors above such equipment, they shall be placed not less than 6 feet above, and all energized parts of the supply equipment shall be protected and guarded so as to afford the least possibility of contact.

10.06 Street lighting equipment attached to poles supporting telephone plant shall have clearances from the telephone plant as follows:

(a) All parts of street light drop wires, street lamps, and their supporting fixtures including rods, braces, and guys shall not be less than 1 foot above or 2 feet below the level of messengers or conductors supported by messengers. These vertical clearance requirements do not apply to those parts of such street lighting equipment which are 2 feet or more horizontally from the vertical plane of messengers, conductors supported by messengers, and metal boxes.

(b) All parts of street light drop wires, street lamps, and their supporting fixtures including rods, braces, and guys shall not be less than 1 foot radially from all communication conductors not supported on messengers, including separations between supporting bolts, screws or hardware extending into the pole.

10.07 Trolley span wires or brackets, including through bolts, which support trolley contact conductors shall have the following minimum vertical clearances:

(a) From telephone conductors on crossarms:

- Bracket above ..... 1 foot
- Bracket below ..... 2 feet
- Span wires above or below ..... 1 foot

(b) From telephone cables, messengers or drop wire runs along the lead attached to pole ..... 1 foot

(c) From telephone terminals, protector mounting, etc. ..... 1 foot

(d) From telephone bridle wire rings or drive hooks ..... 3 inches

10.08 Police or fire alarm circuits on crossarms located not less than 2 feet below 0-750 volt supply conductors, which have a clearance of not less than 25 inches from the center line of the pole and have a weather resistant covering may have a vertical clearance of not less than 2 feet from telephone plant. Police and fire alarm circuits which meet all clearance requirements of communication circuits may be treated as communication circuits. (See Part 11.)

Note: Specified clearances between telephone and supply conductors shall be maintained at all times.

10.09 The illustrations in this paragraph show various clearance requirements as given in this section, and typical points of measurements. These illustrations are to be used as a guide and ***should not*** be given precedence over specifications as written.

INDEX OF ILLUSTRATIONS

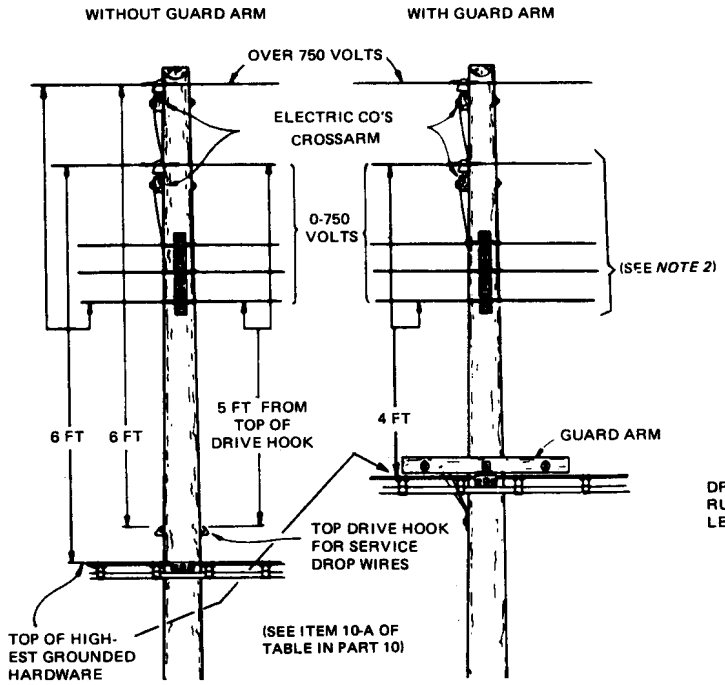


Fig. 15

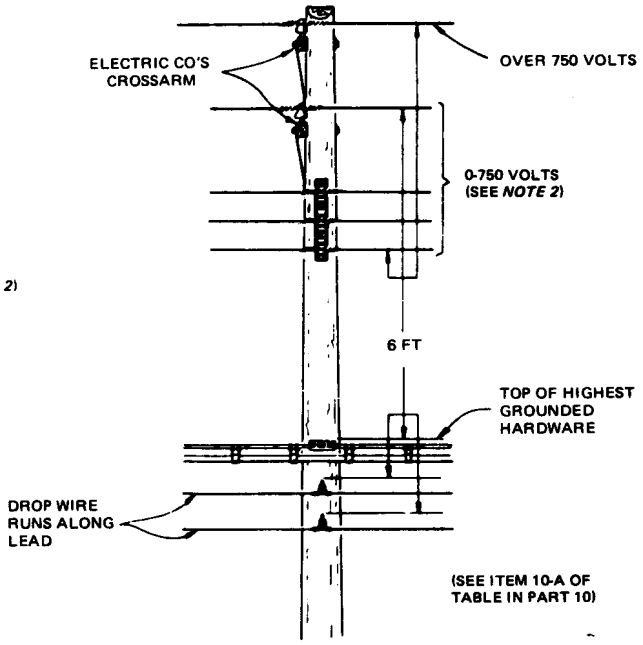
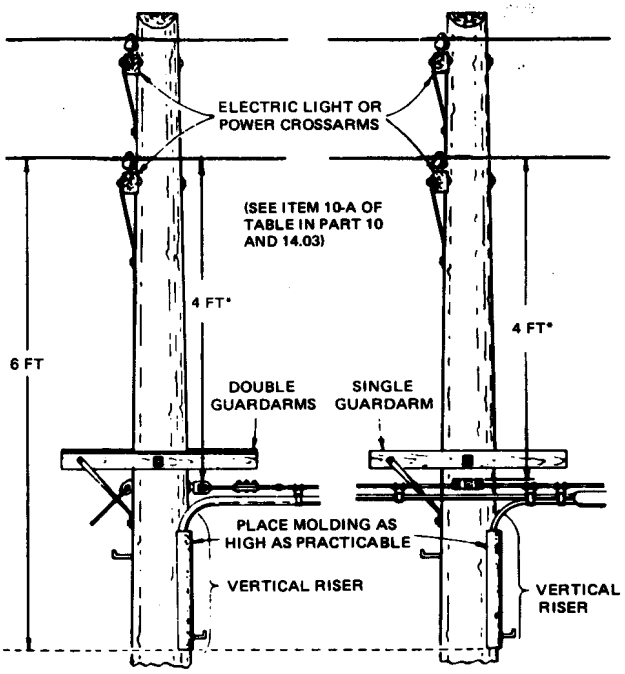


Fig. 16

Notes:

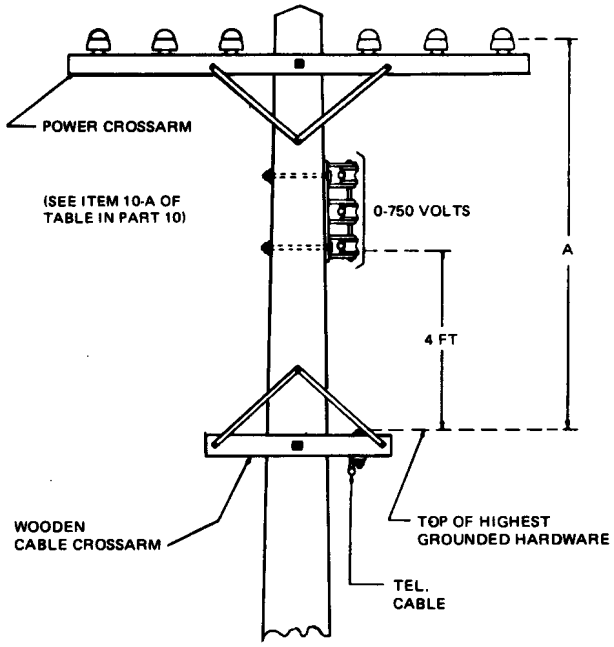
1. Service drops may be attached to the sides but not to the top of guard arms. The point of attachment to guard arms shall be 15 inches or more from the center line of the pole. See 12.03 covering lateral runs of bridle wire or drop wire on crossarms or guard arms.

2. 0–750 volt conductors may be installed as (a) open conductors on cross-arms, (b) open conductors supported on insulated racks in vertical configuration, or (c) as multiconductor cables with bare neutral supporting messenger.



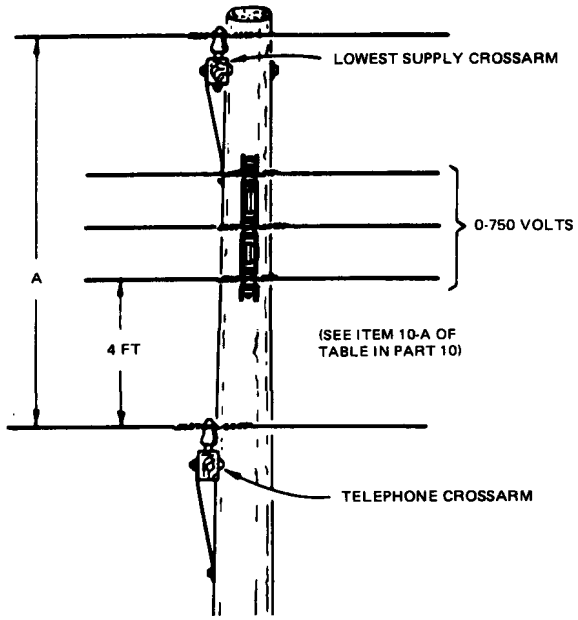
* The 4-foot vertical clearance applies only to circuits of less than 750 volts. If a 6-foot clearance can be obtained, guard arms and molding are not required.

Fig. 17



DIMENSION	VOLTAGE	MIN. CLEARANCE
A	0 - 7500	4 FT
	OVER 7500	6 FT

Fig. 18



DIMENSION	VOLTAGE OF SUPPLY CIRCUIT CONCERNED	MINIMUM CLEARANCE
A	0 — 7500	4 FT
	OVER 7500	6 FT

Fig. 19

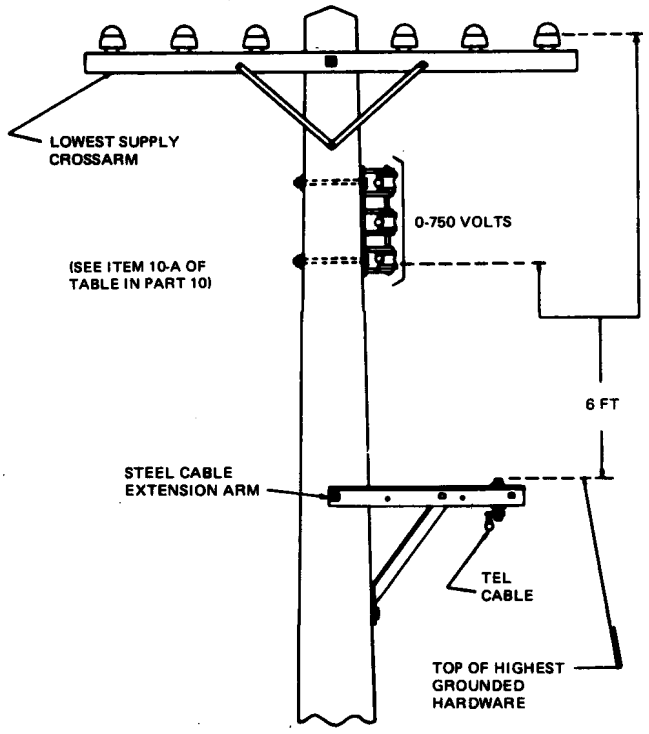
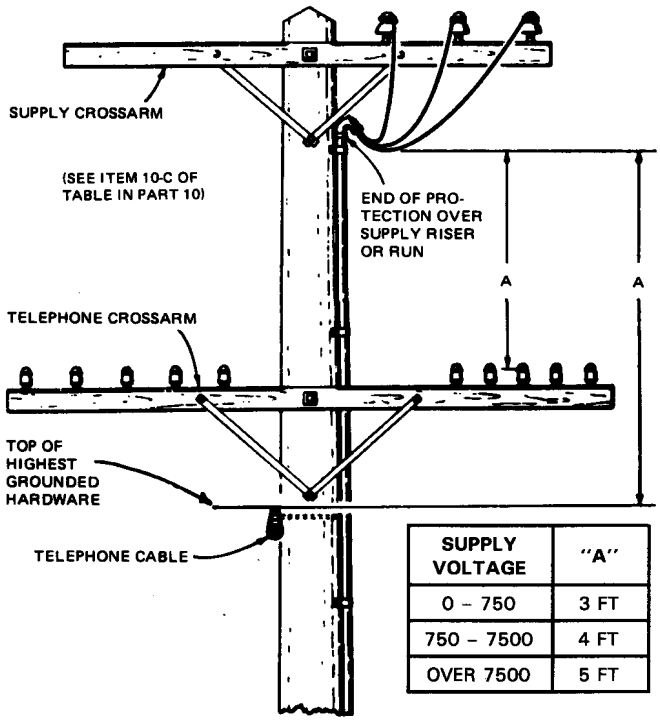


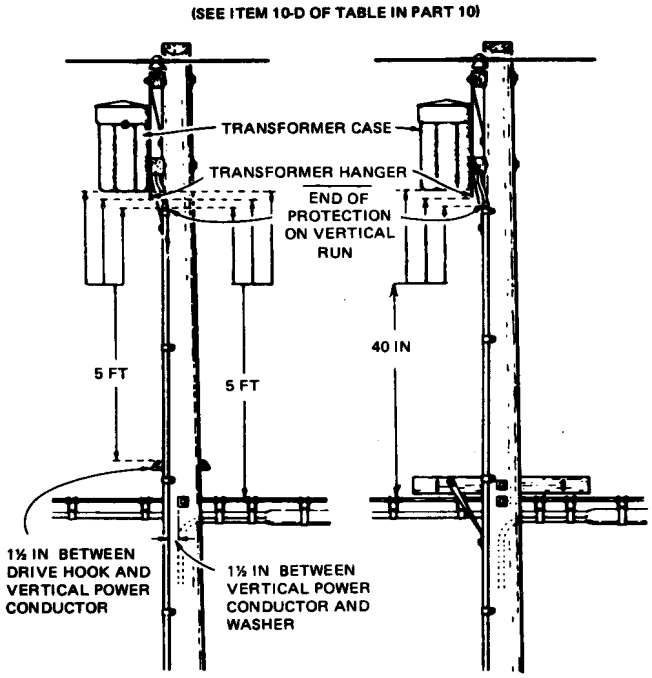
Fig. 20



SUPPLY VOLTAGE	"A"
0 - 750	3 FT
750 - 7500	4 FT
OVER 7500	5 FT

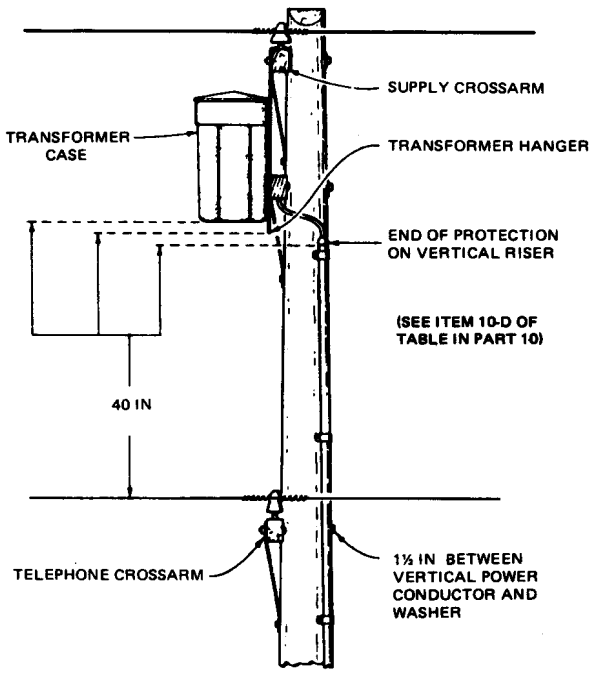
Note: The clearances shown are applicable to drop loops of supply runs and risers only.

Fig. 21



Note: The above clearances are also applicable for cases, regulators, capacitors and similar unenergized metal power equipment.

Fig. 22



Note: The above clearances are also applicable for switch cases, regulators, capacitors and similar unenergized metal power equipment.

Fig. 23

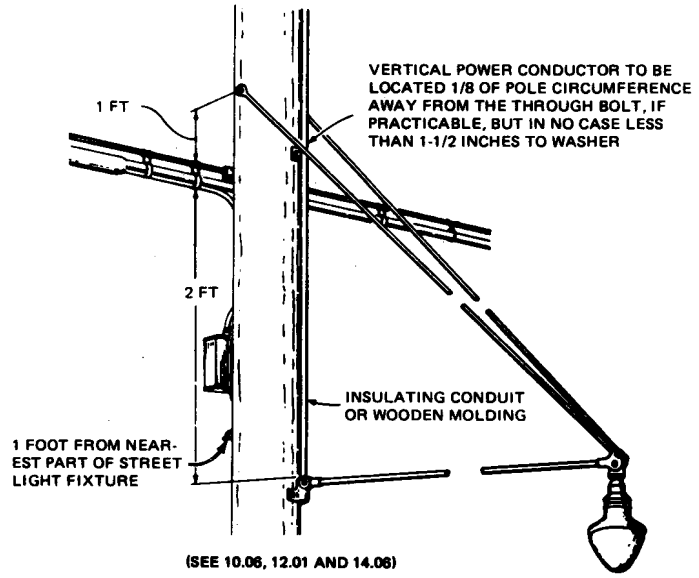
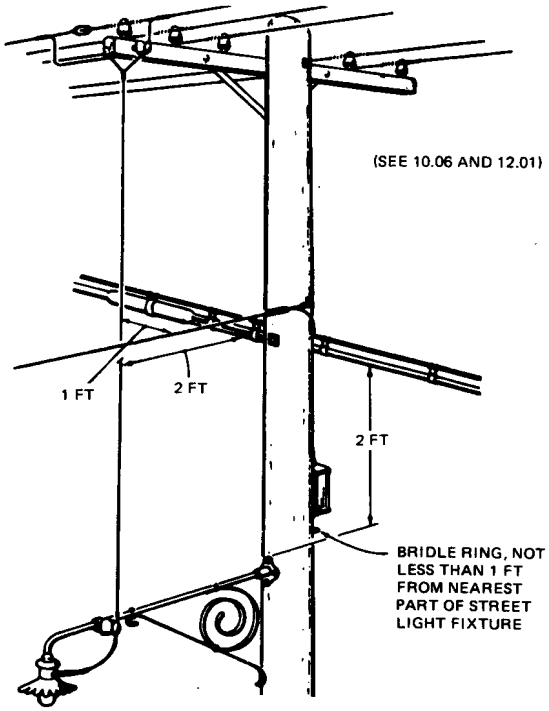


Fig. 24



Note: Where street light bracket is above cable, no part of the bracket shall be less than 1 foot from the messenger or drop wire.

Fig. 25

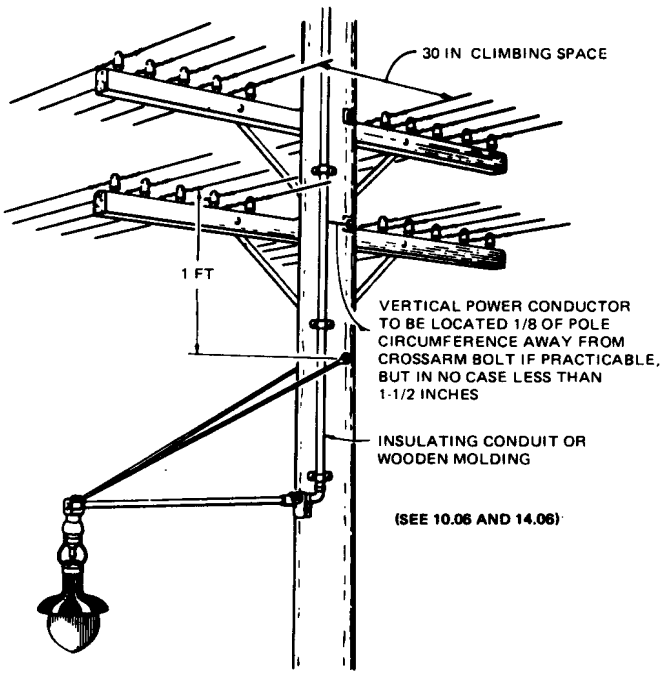


Fig. 26

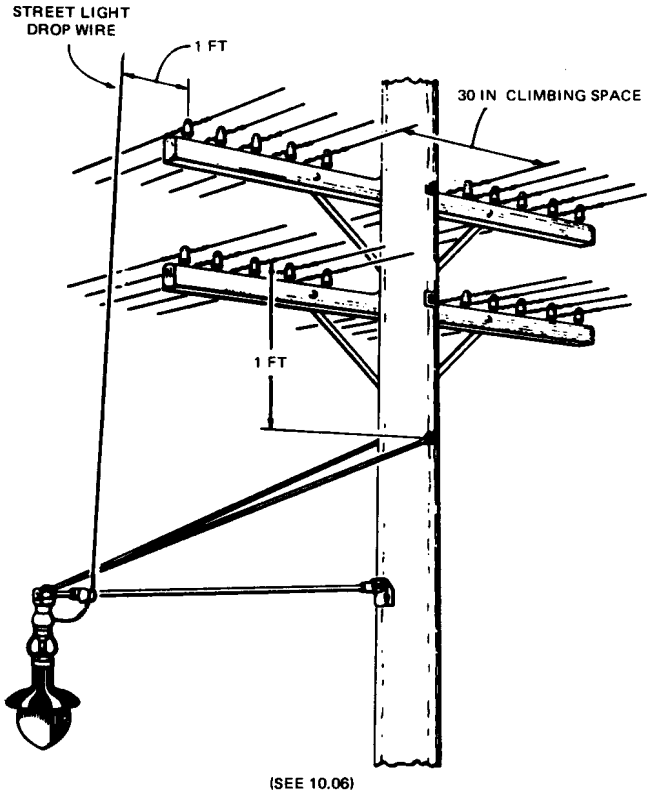


Fig. 27

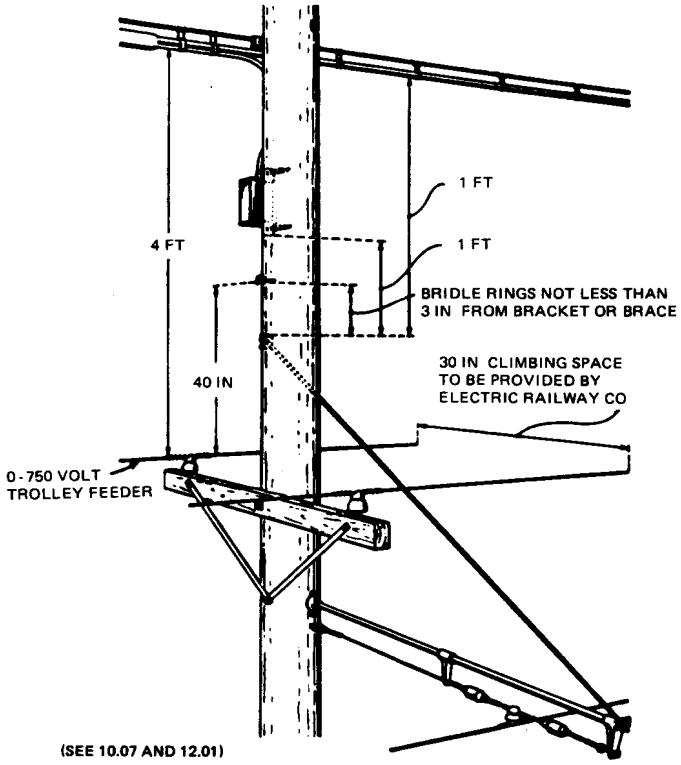


Fig. 28

(SEE ITEM 10-A OF TABLE IN PART 10 AND 10.07 AND 12.01)

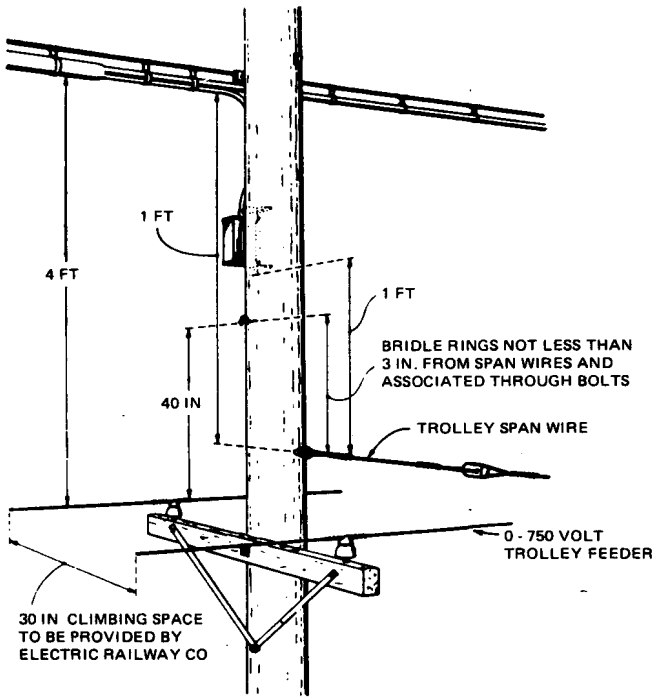


Fig. 29

(SEE ITEM 10-A OF TABLE IN PART 10 AND 10.07)

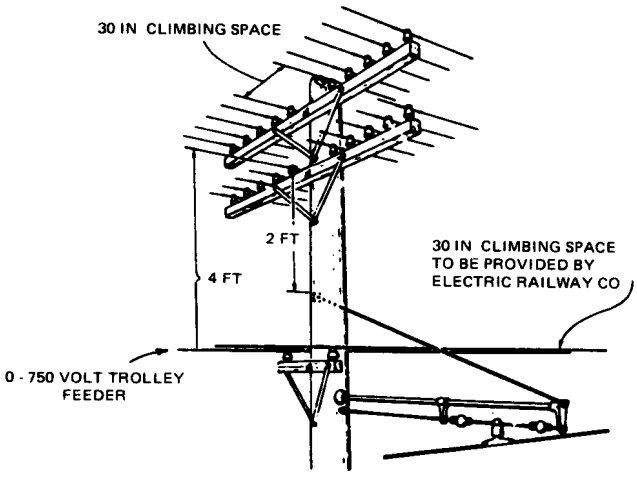


Fig. 30

(SEE ITEM 10-A OF TABLE IN PART 10 AND 10.07)

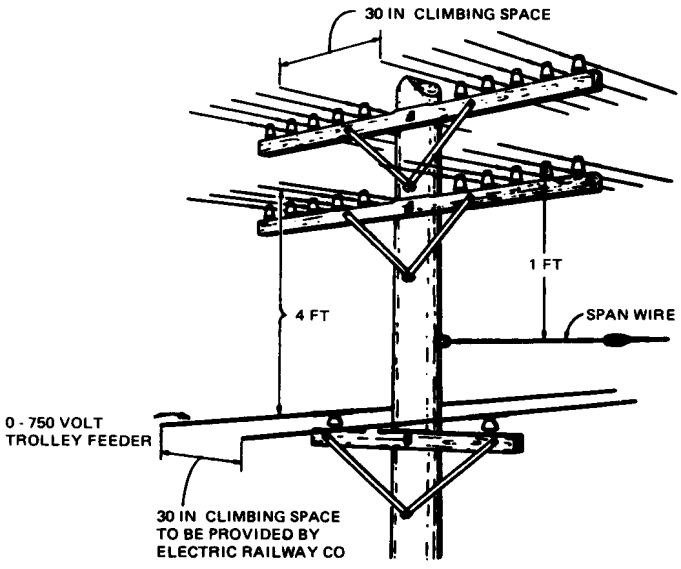


Fig. 31

11. VERTICAL CLEARANCES BETWEEN COMMUNICATION CONDUCTORS ON THE SAME POLE

A. BETWEEN COMMUNICATION CONDUCTORS OF DIFFERENT OWNERSHIP.	(SEE 11.01)
B. BETWEEN WIRES OR CABLES SUPPORTED ON ADJACENT LINE CROSSARMS.	2 FT (SEE 11.02)
C. BETWEEN WIRES SUPPORTED ON LINE CROSSARMS AND ASSOCIATED BUCK ARM.	6 IN
D. BETWEEN WIRES OR CABLES SUPPORTED ON LINE CROSSARMS AND WIRES OR CABLES ATTACHED TO SIDE OF POLE.	2 FT (SEE 11.03)
E. BETWEEN WIRES OR CABLES ATTACHED TO SIDE OF POLE.	1 FT (SEE 11.04)
F. BETWEEN WIRES OR CABLES ATTACHED TO SIDE OF POLES UNDER CONDUCTORS ON LINE CROSSARMS AT SIDE LEAD TERMINATIONS.	
1. CONDUCTORS OF DIFFERENT OWNERSHIP.	1 FT
2. CONDUCTORS OF SAME OWNERSHIP.	6 IN

11.01 Foreign communication conductors shall have clearances from TELCo conductors of not less than the clearances specified for telephone conductors alone. Clearances for cables owned by an Authorized Licensee shall be as directed in the "CONSTRUCTION GUIDE FOR CATV ATTACHMENTS." Increased clearances of not less than 4 feet from telephone conductors shall be obtained in the following cases.

(a) Where foreign communication conductors do not meet TELCo standards with respect to electrical exposures and protection; or,

(b) Where foreign communication conductors are used as control or signaling circuits etc, and which operate on supply voltages of 110 volts or more.

11.02 This 2-foot separation may be reduced to not less than 1 foot when:

(a) Specified on the detail plans; or,

(b) Upon approval of the supervisor when only exchange crossarms are involved; or

(c) Upon approval of the Outside Plant Engineer when toll crossarms are involved.

11.03 Cables may be attached to sides of poles less than 2 feet below conductors on the lowest crossarm or between crossarms under conditions outlined in 13.04(a)(1) or 13.05(d). If additional wires or cables are attached to sides of telephone poles which carry no supply conductors except supply service drops on clearance crossarms, see 13.05(c).

11.04 On poles which carry no crossarms and no supply conductors, communication conductors may have a vertical separation of less than 1 foot under the conditions outlined in 13.05(a).

12. CABLE TERMINALS, PROTECTOR MOUNTINGS, MISCELLANEOUS TELEPHONE EQUIPMENT, AND WIRING

12.01 Metal terminals, protector mountings, or similar equipment and their associated wiring which are less than 8 inches from the center line of a pole or are attached to the surface of a pole shall have minimum vertical clearances from supply conductors and equipment as follows:

(a) Six feet below supply conductors of any voltage, except as indicated in 12.01(b).

(b) Four feet below supply conductors of 0-750 volts provided such items are below and in the same quadrant of the poll as a guard arm or crossarm.

(c) Below unenergized supply equipment.

- 40 inches guarded.
- 5 feet unguarded.

(d) For clearances from supply service drops on clearance crossarms, see 8.02(d).

(e) For clearances from street lighting equipment, see Figs. 24 and 25.

(f) For clearances from trolley brackets, span wires, and feeders, see Figs. 28 and 29.

12.02 All parts of metal terminals, protector mountings, or similar equipment which are 8 inches or more from the center line of a pole shall not be less than:

(a) Four feet below supply conductors of 0-7500 volts.

(b) Six feet below supply conductors of over 7500 volts.

12.03 Lateral runs of bridle wire or drop wire which are less than 6 feet below 0-7500 volt supply conductors and are less than 15 inches from the center line of the pole shall be:

(a) Supported by and underneath the bottom surface of crossarms or guard arms; or,

(b) Supported on the side of crossarms or guard arms not less than 2 inches below the top surface thereof.

13. CLIMBING SPACE

13.01 ***General*** —

(a) Climbing space shall be provided on one side or quadrant of poles to permit ready access for workers to conductors and equipment attached to the pole.

(b) Except as provided herein a climbing space having horizontal dimensions of not less than 30 inches square shall be provided and maintained in the same position on the pole for a minimum vertical distance of 4 feet above and below each conductor level through which it passes. The position of the climbing space shall not be shifted more than 90 degrees around the pole within a vertical distance of less than 8 feet.

(c) Except as provided herein, climbing space shall be provided on the side of the pole opposite cable, messengers, wires, drop wire runs along the lead, or equipment attached to the pole.

13.02 ***Allowable Climbing Space Obstructions*** — Unnecessary impairment of the climbing space is prohibited, however, if climbing space cannot otherwise be obtained the following will be permitted:

(a) Terminals, protectors or similar equipment including their associated wiring, vertical runs or risers of cable, and guys will not be held to obstruct climbing space provided:

(1) Not more than one guy and one other of the above named obstructions are installed in any 4 foot vertical section of climbing space, and;

(2) Terminals, protectors or similar equipment do not extend more than 5 inches from the surface of the pole, and;

(3) On jointly used poles, vertical runs or risers of cable are covered with hardwood molding, and;

(4) Such obstructions do not interfere with the free use of pole steps.

(b) Crossarms are allowed in climbing spaces provided that, where buck arms are involved, any arms within climbing spaces are treated as double arms.

(c) A guard arm, cable, messengers, or drop wire runs along the lead will not be held to obstruct the climbing space where they are placed in the climbing space because of a building wall or similar obstruction on the opposite side of the pole.

13.03 ***Climbing Space Where Service Drops are Involved*** —

(a) Where telephone service drops are attached to a pole and other conductors are supported at a higher level on the pole, an unobstructed climbing space not less than 30 inches square shall be maintained through the service drops. To measure the 30 inch climbing space, use any one of the drops as one side of the climbing space and have one other side at a right angle to it and tangent to the surface of the pole.

(b) When cable is supported on the surface of a pole, telephone service drops may be attached to opposite sides of the pole but not more than two sides. Four drive hooks may be placed on each of the two sides so used for attaching the service drops, provided they are located within a space not more than 1 inch in width and 8 inches in height.

(c) When drive hooks are placed on the face or back of poles for distribution purposes, the pole step at the level nearest the space reserved for drive hooks shall be moved in a horizontal plane toward the climbing space about 1/8 the circumference of the pole. Fig. 32 shows the position of this step after it has been moved.

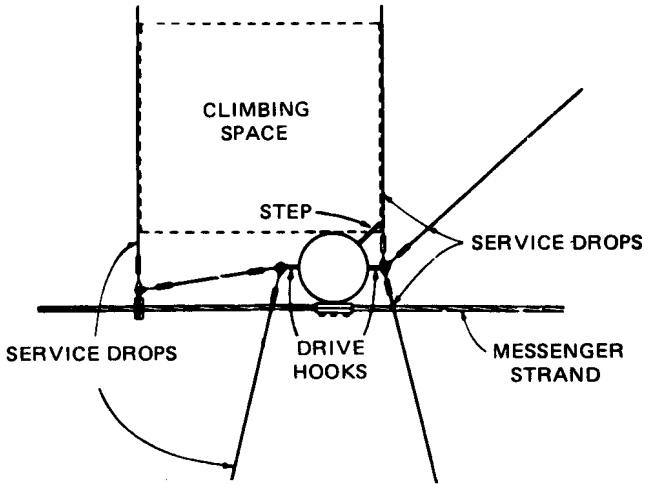


Fig. 32

(d) Fig. 33, 34 and 35 show typical service drop installations, and indicate how the climbing space can be obtained and how it should be measured in such cases.

(1) Where drive hooks and span clamps are used.

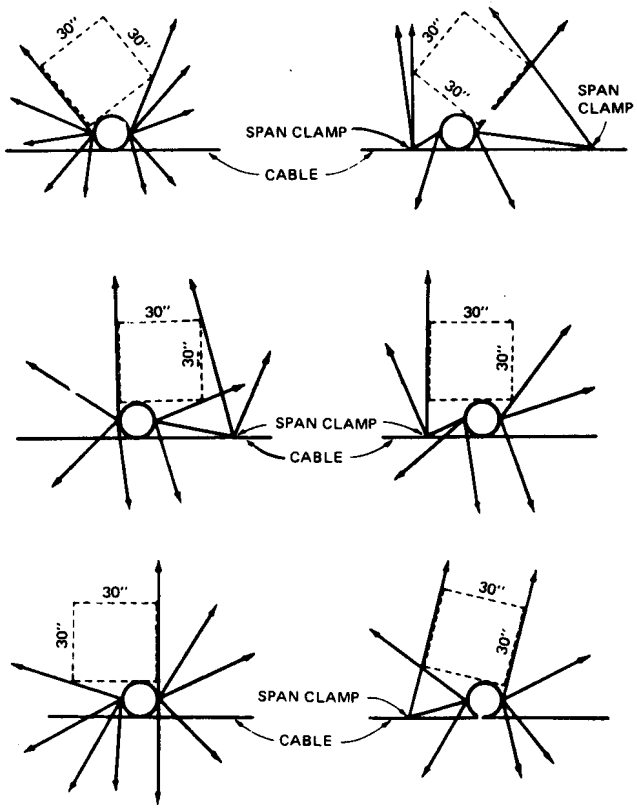


Fig. 33

(2) Where the required climbing space cannot otherwise be obtained, or where the number of drop wires or span clamps would cause congestion, a guard arm should be placed with the drop wires distributed as shown in Fig. 34.

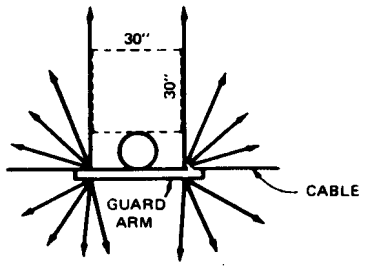


Fig. 34

(3) Where it is not practicable to provide the climbing space on the opposite side of the pole from the cable, due to buildings or similar obstructions, distribute the drop wires as shown in Fig. 35.

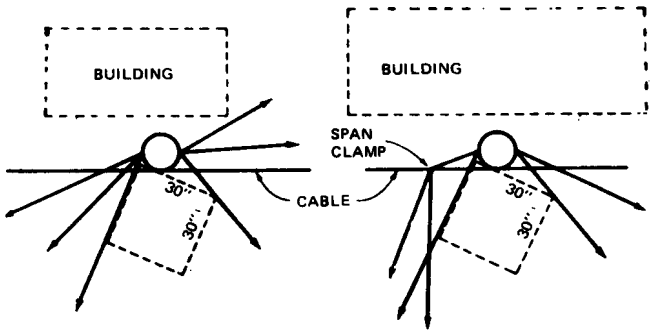


Fig. 35

13.04 ***Climbing Space on Poles Jointly Used with Supply Conductors —***

(a) On poles supporting telephone and supply conductors, other than supply service drops on clearance crossarms, an unobstructed climbing space not less than 30 inches square shall be provided except as indicated in the following sketch.

(1) Where telephone conductors are attached to the side of jointly used poles carrying telephone wires on crossarms the climbing space shall not be less than indicated in Fig. 36.

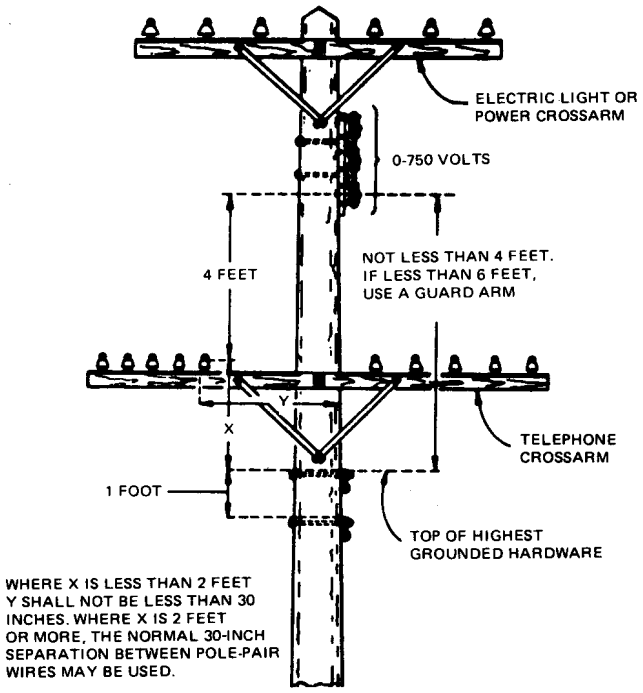


Fig. 36

(2) At corners in the line the climbing space shall not be less than indicated in Fig. 37.

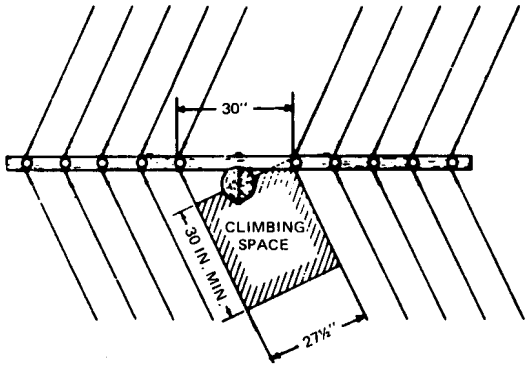


Fig. 37

(b) Telephone conductors attached to the surface of jointly used poles shall be attached to one side of the pole only, except that where branch leads or dead ends are involved such conductors may be attached to other sides of the pole provided the 30 inch square climbing space is maintained.

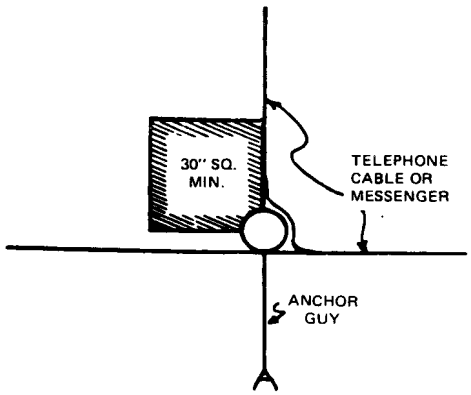


Fig. 38

13.05 ***Climbing Space on Poles Which Support Telephone Conductors Only*** —

(a) On poles which carry no crossarms, cables or wire may be placed in any position within the 3 feet below the topmost conductor provided a vertical separation of not less than 1 foot is maintained between cables and/or wires. This separation may be reduced to not less than 6 inches between cables or between wires. Below this 3-foot section cables or wires shall be attached to one side of the pole only. Not more than six cables or wires shall be attached below this 3-foot point and the vertical separation shall not be less than 1 foot.

(b) On poles which support telephone conductors on crossarms and which do not support supply conductors, except supply service drops on clearance crossarms, the normal 30 inch square climbing space may be reduced to not less than 18 inches in width and 30 inches in depth through the following types of telephone circuits:

(1) Toll circuits.

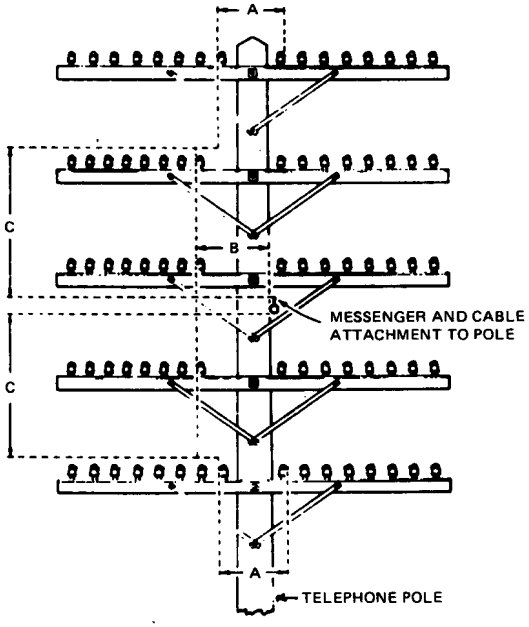
(2) Exchange circuits on crossarms originally placed as toll crossarms.

(3) Exchange circuits on crossarms in the pole top position in rural districts provided no conductors are supported below such crossarms except supply service drops on clearance crossarms.

Note: Crossarms with 30-inch climbing space may be added to such leads provided that when the poles or top crossarms are replaced crossarms with 30-inch climbing space are used.

(c) On poles which carry open wire on crossarms, two cables or two open wires may be attached to opposite sides of a pole at a vertical distance of not less than 2 feet below the level of the conductors supported on the lowest crossarm. Below this 2-foot point cables or open wires shall be attached to one side of the pole ***only*** with a vertical separation of not less than 1 foot. Not more than six cables or wires shall be so attached.

(d) On poles which carry open wire on crossarms, cables may be attached to the side of the pole between crossarms or less than 2 feet below the conductors on the lowest crossarm provided climbing space is maintained above and below the cables in accordance with Fig. 39.

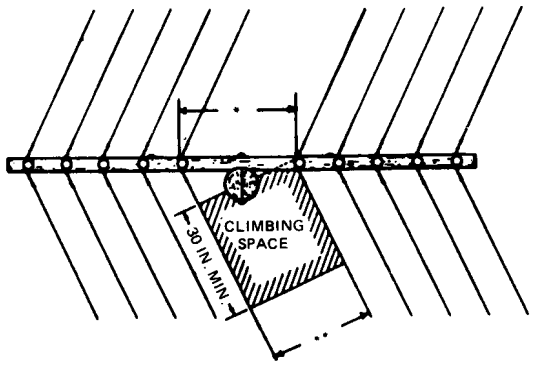


		MINIMUM VALUES — INCHES	
	A	B	C
EXCHANGE	30 IN	24	36
TOLL	18 IN	18	36

Note: Where the only cables involved are attached 2 feet or more below the conductors on the lowest crossarms, no change from normal wire spacing will be required.

Fig. 39

(e) At corners in the line the climbing space shall not be less than indicated in Fig. 40.



* THE NORMAL 30 INCH OR 18 INCH WIDTH CLIMBING SPACE SHALL BE MAINTAINED AT AND PARALLEL TO THE CROSSARM.

** THE NORMAL 30 INCH OR 18 INCH WIDTH CLIMBING SPACE MAY BE REDUCED TO 27-1/2 INCHES AND 16-1/2 INCHES RESPECTIVELY.

Fig. 40

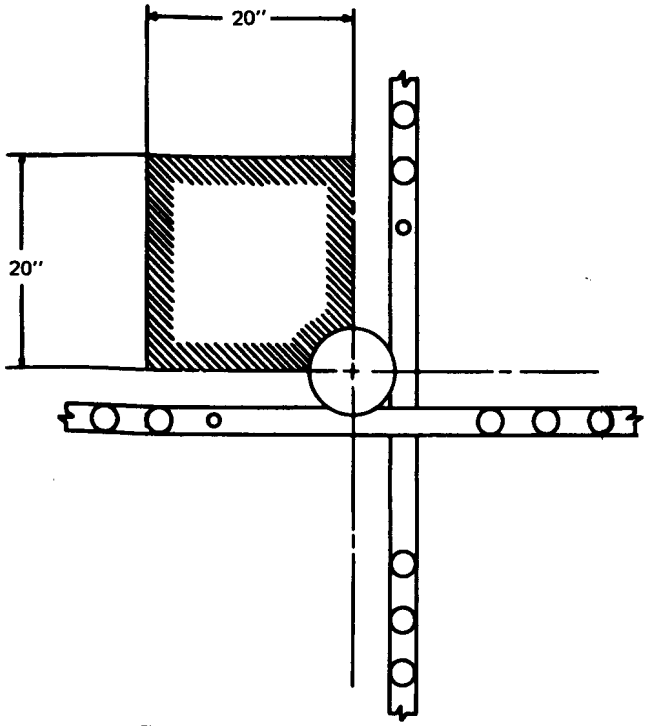
13.06 ***Climbing Space Where Buck Arms are Involved:*** Where buck arms are involved the horizontal dimensions of the climbing space shall be fixed according to the following:

Note: A metal back brace shall be considered as one of the crossarms of double crossarm construction, and where used the requirements for double arm construction shall be met.

(a) Where ***Single Line Arm*** and ***Single Buck Arm*** construction is involved and the climbing space is left open on the side of the pole opposite the crossarms, the climbing space shall not be less than 20 inches square measured horizontally from center line of pole. (See Fig. 41.)

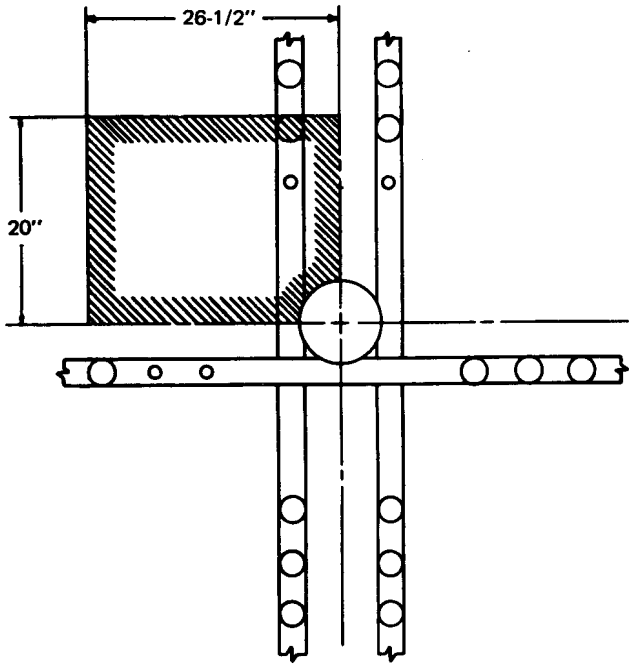
(b) Where ***Double Buck Arm*** and ***Single Line Arm*** (or vice versa) construction is involved, and the climbing space is left open on the opposite side of the pole from the single arm, the climbing space (measured horizontally from center line of pole) shall not be less than 20 inches at a right angle to the single arm, and not less than 26-1/2 inches at a right angle to the double arm. (See Fig. 42.)

(c) Where ***Double Line Arm*** and ***Double Buck Arm*** construction is involved, the climbing space shall not be less than 26-1/2 inches square measured horizontally from the center of pole. (See Fig. 43.)



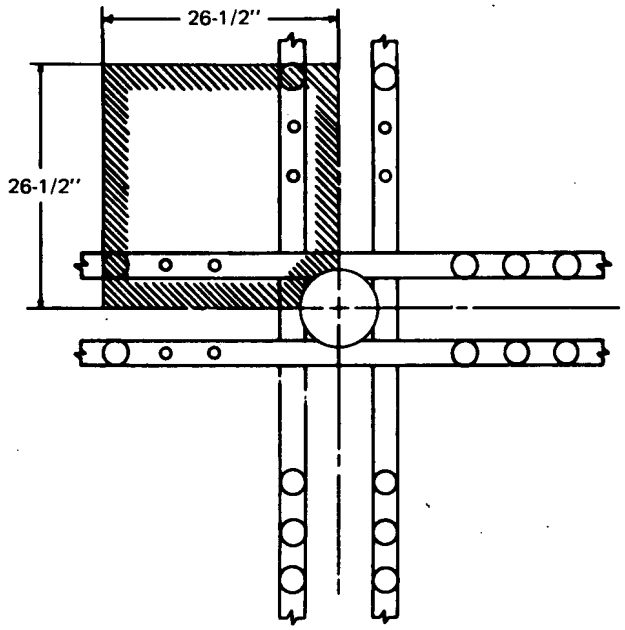
Note: Communication conductors ***shall not*** be located within the shaded area. If necessary, wires shall be relocated to meet this requirement.

Fig. 41



Note: Communication conductors ***shall not*** be located within the shaded area. If necessary, wires shall be relocated to meet this requirement.

Fig.42



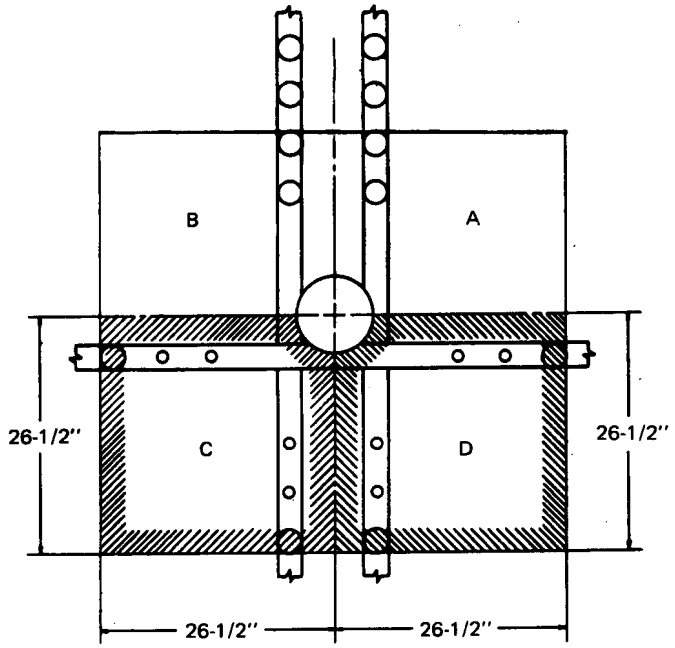
Note: Communication conductors ***shall not*** be located within the shaded area. If necessary, wires shall be relocated to meet this requirement.

Fig. 43

(d) ***Alternative Climbing Space*** for single line arm and single buckarm or double line arm and single buckarm (or vice versa); if it is impracticable to locate the climbing space on the side of the pole opposite the single arm or arms, (quadrant A or B) it may be located in quadrant C or D provided that any arm within such climbing space is treated as one of the arms of a double arm installation. (See Fig. 44.)

13.07 ***Climbing Space where Two Communication Lines are Collinear, Conflicting or Crossing*** shall be maintained on each pole involved. Where conductors carry less than 160 volts and 50 watts the climbing space may be 18 inches wide and 30 inches deep. However, the climbing space shall be 30 inches square for conductors carrying greater voltage and power. If in doubt as to the voltage and power of the conductors, consult your supervisor.

Note: Where conductors are less than 15 inches from the center line of pole or less than 5 inches from the surface of pole they shall be attached to the pole or the conductors supported by a crossarm.



Note: Communication conductors ***shall not*** be located within the shaded area. If necessary, wires shall be relocated to meet this requirement.

Fig. 44

14. VERTICAL RUNS, RISERS, AND GROUND WIRES

14.01 Vertical runs and risers of wires or cables shall be covered by metal cable guards or encased in steel or suitable plastic pipe for a distance of not less than 8 feet above the ground line. For buried cable risers, the 8 foot requirement may be reduced to not less than 7 feet.

14.02 Vertical runs that terminate in closures which afford ample mechanical protection may extend within 8 feet, but not less than 6 feet, of the ground line without protection. If the top of the closure is less than 6 feet above ground level, the vertical run above the closure shall be treated as a riser from the top of the closure to the point 8 feet above the ground line.

14.03 Vertical runs or risers of wires or cables shall be covered with 3/8-inch hardwood molding or suitable rigid plastic molding when within a vertical distance of 3 feet above or 6 feet below supply conductors on the same pole or on another pole within a radial distance of 6 feet. The molding may be omitted or additional molding shall be placed under the following conditions.

(a) When trolley feeders are located below the upper end of a riser, the hardwood or plastic molding shall extend downward to the top of the riser protection. (See Fig. 45.)

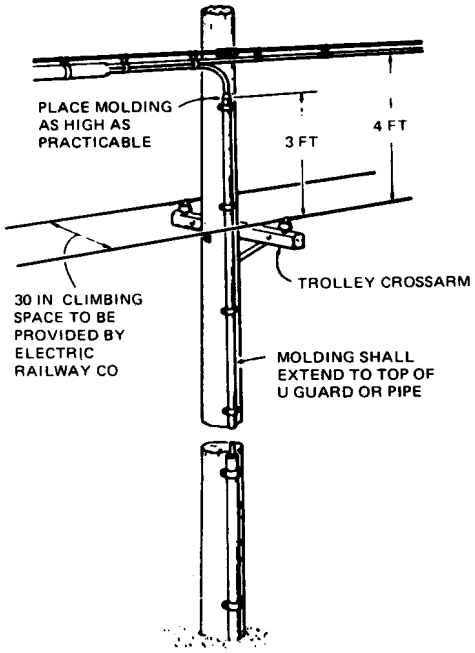


Fig. 45

(b) Cable terminal stubs and runs of wire need not be covered with molding if they are below and in the same quadrant of the pole as a guard arm or cable arm. Vertical runs of wire or cable terminal stubs shall be covered with molding unless they are located within quadrants A or B. (See Fig. 46.)

14.04 Ground wires, other than lightning protection wires not attached to equipment, shall be protected from mechanical injury by means of hardwood or plastic molding, or metal guards, for a distance of not less than 7 feet above the ground line.

14.05 Ground wires shall be covered with hardwood or plastic molding when within a 6-foot vertical distance from supply conductors supported on the same pole.

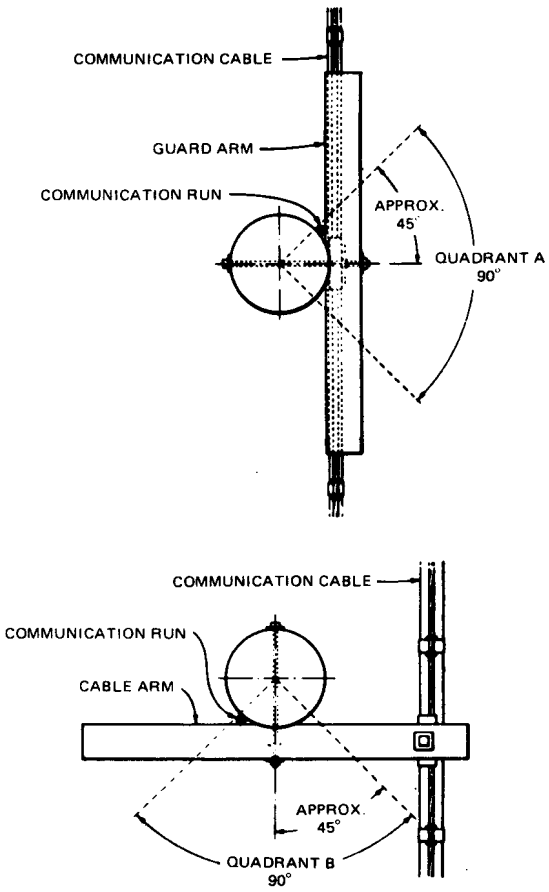


Fig. 46

14.06 On poles supporting telephone and supply conductors, vertical runs, risers, metal conduit of runs or risers, ground wires and hardware, including guys and attachments, shall be separated by 1/8 of the pole circumference from similar equipment of other ownership. If this separation is not practicable, this clearance may be reduced to not less than 1-1/2 inches, measured on the surface of the pole.

14.07 Where drive rings or bridle rings are placed on the surface of poles to support vertical runs of communication wires, they shall be spaced at intervals of not more than 24 inches.

14.08 Electric light or power risers shall be covered by a protective covering when they are within a vertical distance of 8 feet from the level of communication conductors supported on the same pole or supported by another pole that is within a 6-foot radial distance of the pole to which the riser is attached. Where subsequent telephone construction would cause an infraction of this requirement, arrangements shall be made for the installation of the protective covering over the supply riser.

15. TELEPHONE GUY CLEARANCES

A. HORIZONTAL CLEARANCES.	
1. FROM BUILDING WALLS. ***NOTE:*** AVOID OBSTRUCTING WINDOWS, DOORS, ETC, OR CAUSING INTERFERENCE TO FIREMEN OR WORKERS.	NONE
2. FROM BRIDGES OR OTHER STRUCTURES UPON WHICH WORKERS MAY WORK.	NONE
3. FROM STEEL TOWERS OR STEEL POLES SUPPORTING SUPPLY CONDUCTORS AND TO WHICH TELEPHONE GUYS ARE NOT ATTACHED.	3 IN
4. FROM SURFACE OF WOOD POLES TO WHICH TELEPHONE GUYS ARE NOT ATTACHED.	(SEE 15.01)
5. FROM VERTICAL PLANE OF NEAREST RAIL OF RAILWAYS OVER WHICH TELEPHONE GUYS DO NOT CROSS.	12 FT (SEE 15.02)
6. FROM FIRE HYDRANTS.	3 FT
B. VERTICAL CLEARANCES ABOVE GROUND, RAILS, BUILDINGS, WATERWAYS, OBSTACLES, ETC.	
1. ABOVE GROUND AT CROSSINGS OVER HIGHWAYS, STREETS, ROADS OR ALLEYS. EXCLUDING DRIVEWAYS.	18 FT
2. ABOVE GROUND NOT NORMALLY ACCESSIBLE TO VEHICLES, ALONG HIGHWAYS, STREETS, ROADS, OR ALLEYS, EXCLUDING ANCHOR GUYS.	
a. In URBAN DISTRICTS.	18 FT (SEE 15.03)
b. IN RURAL DISTRICTS.	15 FT (SEE 15.03)
3. ABOVE GROUND ACROSS AREAS CAPABLE OF BEING TRAVERSED BY AGRICULTURAL EQUIPMENT, EXCLUDING ANCHOR GUYS.	15 FT
4. ABOVE GROUND ACROSS AREAS NOT UNDER CULTIVATION AND OVER WHICH THERE IS NO LIKELIHOOD OF VEHICULAR OR AGRICULTURAL TRAFFIC — INCLUDING AREAS ACCESSIBLE TO HORSEBACK RIDERS — EXCLUDING ANCHOR GUYS.	13 FT
5. ABOVE GROUND OVER ENTRANCES TO PRIVATE PROPERTIES ACCESSIBLE TO VEHICLES — INCLUDING OVERHEAD GUYS AND PORTIONS OF ANCHOR GUYS OVER SUCH DRIVEWAYS.	
a. OVER ENTRANCE FROM PUBLIC THOROUGHFARES.	
(1) URBAN DISTRICTS.	
(a) TO COMMERCIAL OR INDUSTRIAL PREMISES.	16 FT
(b) TO RESIDENTIAL PREMISES.	14 FT (SEE 15.04)
(2) RURAL DISTRICTS.	15 FT
b. WITHIN BOUNDS OF PRIVATE PROPERTY, OVER ROADS OR PROPERTY ACCESSIBLE TO VEHICLES.	
(1) URBAN DISTRICTS.	14 FT (SEE 15.04)
(2) RURAL DISTRICTS.	16 FT
6. ABOVE GROUND ACCESSIBLE TO PEDESTRIANS ONLY, EXCLUDING ANCHOR GUYS.	8 FT
7. ABOVE RAILS OF RAILWAYS WHICH TRANSPORT STANDARD FREIGHT CARS **WHERE NOT OPERATED BY OVERHEAD TROLLEY WIRES.**	25 FT
8. ABOVE RAILS OR RUNNING SURFACE OF RAILWAYS AND STREET BUSES **WHERE OPERATED BY OVERHEAD TROLLEY WIRES.**	(SEE 15.05)
9. ABOVE WATERWAYS, INCLUDING ANCHOR GUYS.	CLEARANCES AS SPECIFIED BY PROPER AUTHORITIES
10. ABOVE ROOFS OF BUILDINGS.	
a. ROOFS HAVING PITCH LESS THAN 3/8.	8 FT
b. ROOFS HAVING PITCH 3/8 OR GREATER.	2 FT
11. OTHER OBSTACLES, INCLUDING SIDEWALKS AND STRUCTURES ON WHICH WORKERS MAY WALK.	8 FT

C. VERTICAL CLEARANCES FROM CONDUCTORS.					AT CROSSINGS
1. FROM SUPPLY CONDUCTORS EXCEPT CABLES WITH GROUNDED SHEATH AND TROLLEY CONTACT CONDUCTORS.					
a. 0-750 VOLTS INCLUDING SUPPLY SERVICE DROPS.					2 FT
b. 750-20,000 VOLTS.					3 FT
c. 20,000-75,000 VOLTS.					6 FT
d. OVER 75,000 VOLTS.					(SEE 15.06)
2. FROM TROLLEY CONTACT CONDUCTORS.					(SEE 15.05)
3. FROM SUPPLY CABLES WITH GROUNDED SHEATH — ALL VOLTAGES.					2 FT
D. VERTICAL AND RADIAL CLEARANCES FROM CONDUCTORS, GUYS OR SPAN WIRES. (SEE 15.07 AND 15.08)	**CROSSING**		**PASSING (RADIAL)**		APPROX PARALLEL (RADIAL)
	VERTICAL	**RADIAL**	**ON SAME POLE**	**ON SEPARATE POLES**	
1. FROM COMMUNICATION CONDUCTORS OR CABLES.	2 FT	9 IN	3 IN (SEE 15.09)	9 IN	3 IN
2. FROM SUPPLY GUYS OR TROLLEY SPAN WIRES.	18 IN	1 FT	3 IN	1 FT	(SEE 15.10)
3. FROM COMMUNICATION GUYS.	18 IN	1 FT	3 IN	1 FT	(SEE 15.10)

15.01 A guy need not clear the surface of a wood pole to which it is not attached by any specified distance provided the guy is 8 feet or more below any supply conductors supported on such pole. Where the guy is located less than 8 feet below supply conductors of less than 22,500 volts it shall clear the pole surface by at least 15 inches, or the guy shall be sectionalized as though it were attached to the pole.

15.02 Where the 12-foot clearance cannot be obtained, the clearance may be reduced to not less than the following values with specific approval of the railroad concerned:

- For straight tracks — 6 feet 6 inches
- For curved tracks — 7 feet 6 inches

Note: Crossarms or other pole attachments located less than 23 feet above rails shall have a minimum horizontal distance from the rail of not less than that specified for the guy.

15.03 The lower end of overhead guys along highways, roads, streets, or alleys, above ground accessible to pedestrians only, may have reduced clearances of not less than 8 feet above the ground.

15.04 Where a guy is adjacent to or within a few feet of a residential garage, the guy need only clear the garage doors and vehicles entering or leaving the garage.

15.05 Telephone guys shall have a clearance above trolley contact conductors of not less than 4 feet for 0-750 volt systems and 6 feet for systems operating at over 750 volts provided guys that are not protected by trolley guards have a clearance above the rails or street surface of not less than the trolley throw.

15.06 Where guys cross under conductors carrying to excess of 75,000 volts which are attached to separate poles, a vertical separation of not less than 6 feet plus 1/2 inch for each 1,000 volts in excess of 75,000 volts shall be maintained.

15.07 Overhead guys shall not be carried through the level of conductors of other ownership except between the pole pin positions or outside of all pin positions.

15.08 Anchor guys should not be carried through the level of conductors of other ownership except between the pole pin positions or outside of all pin positions. If it is not practicable to carry the anchor guy through the level of conductors in either of these positions, radial separations that are not less than those given in Item D-1 of the table in Part 15 shall be maintained between the guy and the conductors involved, and in addition, the guy shall be sectionalized as follows:

(a) ***Communication Guy:*** A strain insulator shall be placed between 8 feet and 10 feet above the ground and a second strain insulator placed not less than 2 feet above the supply conductor level through which it passes.

(b) ***Supply Guy:*** A strain insulator shall be placed between 8 feet and 10 feet above the ground and a second strain insulator placed not less than 6 inches or not more than 18 inches above the communication conductor level through which it passes.

15.09 No radial clearance need be maintained between a guy (anchor or pole-to-pole) and a telephone cable which it passes when the guy and cable are attached to the same pole or to separate poles in collinear lines, provided the cables are suitably guarded against abrasion in accordance with standard practices and further provided:

(a) That the guy is not an exposed guy; or,

(b) That no part of the guy has a vertical separation of less than 6 feet from 0–750 volt supply conductors not less than 8 feet from supply conductors of more than 750 volts; or,

(c) That where any part of the guy has a separation of less than 6 feet from 0–750 volt supply conductors or less than 8 feet from supply conductors of more than 750 volts, and the telephone cable is 6 feet or more below the nearest supply conductor, a strain insulator shall be placed in the guy, above the cable; with either,

(1) A horizontal separation of not less than 6 feet between the nearest part of the insulator and the surface of the pole to which the guy is attached; or,

(2) A vertical separation of not less than 3 inches nor more than 6 inches between the nearest part of the insulator and the cable suspension strand.

15.10 Two or more guys (overhead or anchor) which are approximately parallel and attached to the same poles shall have a radial separation of not less than 3 inches between any guy and the surface of the insulator in any other guy.

16. CLEARANCES FROM SIGNS

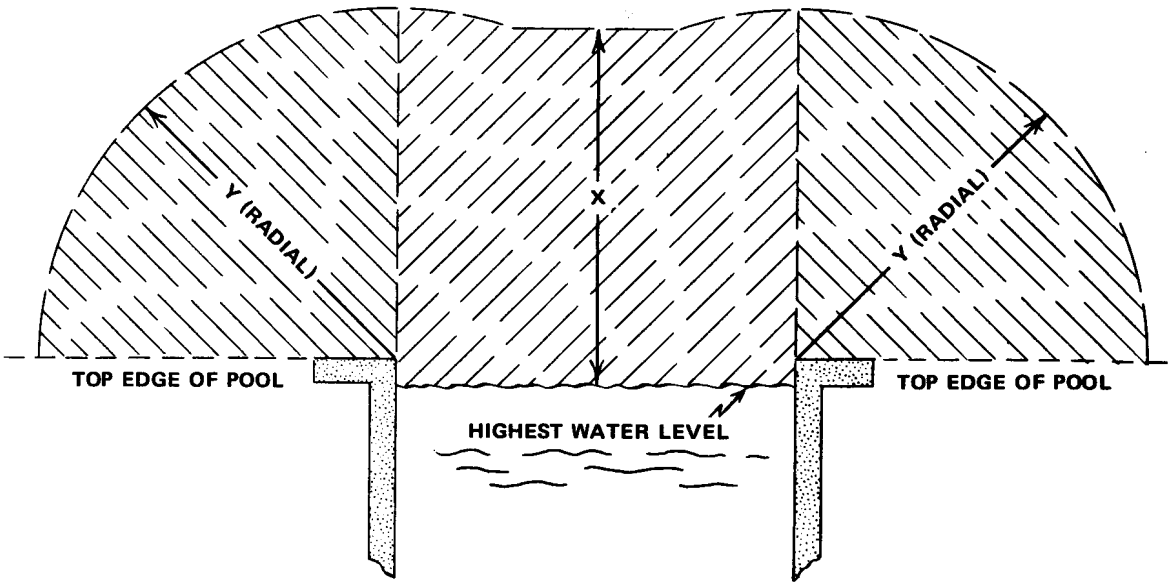
	TELEPHONE OPEN WIRE	TELEPHONE CABLES, DROP WIRE RUNS ALONG THE LEAD, SERVICE DROPS AND OVERHEAD GUYS
A. VERTICAL		
1. ABOVE SIGNS UPON WHICH WORKERS CAN WALK.	8 FT	8 FT
2. ABOVE SIGNS UPON WHICH WORKERS CANNOT WALK.	2 FT	2 FT
3. UNDER SIGNS WHICH ARE ILLUMINATED AND NOT GROUNDED.	2 FT	2 FT
4. UNDER SIGNS WHICH ARE ILLUMINATED AND GROUNDED.	1 FT	6 IN
5. UNDER SIGNS WHICH ARE NONILLUMINATED.	1 FT	6 IN*
B. HORIZONTAL		
1. FROM SIGNS WHICH ARE ILLUMINATED AND NOT GROUNDED.	3 FT	3 FT
2. FROM SIGNS WHICH ARE ILLUMINATED AND GROUNDED.	1 FT	6 IN
3. FROM SIGNS WHICH ARE NONILLUMINATED.	1 FT	6 IN*

* THIS CLEARANCE MAY BE REDUCED IF MECHANICAL SEPARATION IS PROVIDED WITH A NONCONDUCTING GUARD.

17. CLEARANCES FROM SWIMMING POOLS

17.01 Crossings of communication line conductors, service drops, and guys above swimming pools (permanent, portable, or temporary) ***shall be avoided*** where practicable. (See 2.01(u).)

17.02 In those cases where it is not possible to comply with 17.01 or where telephone facilities are in proximity of a swimming pool, clearances shown in Fig. 47 and in 17.03 shall be met.



ABOVE OR BELOW GROUND SWIMMING POOL
(24 INCHES OR MORE DEEP AND MORE THAN 100 SQUARE FEET IN AREA)

TYPE OF FACILITY	X	Y
1. OPEN WIRE	18 FT	18 FT
2. CABLE, MULTIPLE LINE WIRE, AND EXTENDED MESSENGER	16 FT	16 FT
3. DROP WIRE ALONG THE LEAD	14 FT	14 FT
4. SERVICE DROP	14 FT*	14 FT*
5. GUYS	16 FT	**

* FOR RESIDENTIAL POOLS THIS CLEARANCE MAY BE REDUCED TO 10 FEET FOR:

1. DROP WIRE.
2. CONDUCTORS WHICH ARE PROTECTED BY WEATHER-RESISTANT ABRASION-RESISTANT SUITABLY INSULATED TUBING THROUGHOUT THAT PORTION OF THEIR LENGTH WHICH IS OVER THE POOL AND WITHIN A 20-FOOT RADIUS OF THE TOP EDGE OF THE POOL WALL.

** REFER TO PART 15 "TELEPHONE GUY CLEARANCES".

Fig. 47

17.03 Clearances from Diving Board or Platform. (See Fig. 48.)

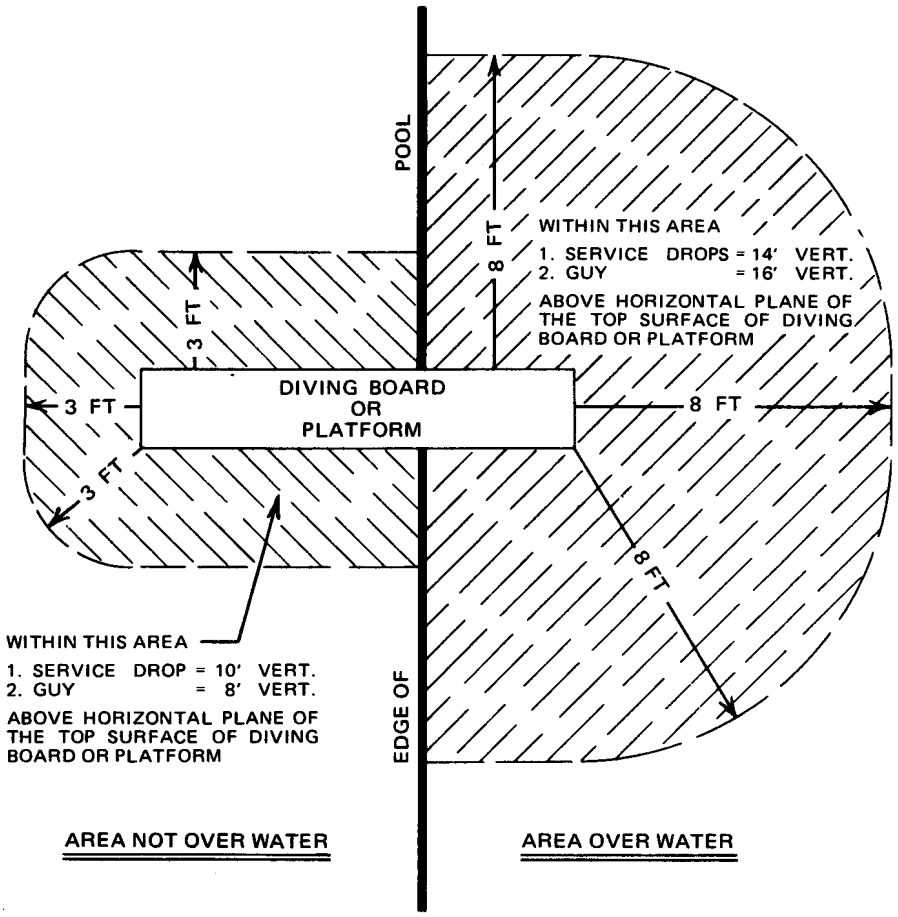


Fig. 48