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ORIGINAL

Decision No. 91030 NOV 20 1979

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In the Matter of the Application of
SOUTHERN CALIFORNIA EDISON COMPANY
for an Order Amending General Order
No. 95, "Rules for Overhead Electric
Line Construction", to amend Certain
Rules with Respect to Increasing the
Maximum Voltage where Sectionalized
Guy Wires are Required.

Application No. 58730
(Filed March 8, 1979)

O P I N I O N

Southern California Edison Company (Edison) seeks an ex parte order of the Commission modifying General Order No. 95 to increase the voltage provision from 22,500 to 35,500 volts for sectionalizing guy wires, which are in proximity to supply conductors of less than 35,500 volts.

For the purpose of enhancing safety of workmen, there is a present need to revise General Order No. 95 with respect to sectionalizing guy wires. As overhead distribution voltages increase, it becomes necessary to likewise increase voltage provisions for isolating portions of guy wires in proximity to working positions, to prevent workmen from contacting grounded guy wires and increasing their exposure to lethal distribution voltages.

Discussion

General Order No. 95 has consistently been interpreted to exclude construction not provided for in the general order. General Order No. 95 and predecessor orders have required sectionalizing guy wires through distribution voltage levels then currently in use. As distribution voltages have increased, coordinating changes were made in these orders to increase the voltage range through which portions of guy wires must be isolated. This decision contains another coordinating order reflecting voltage progression through current distribution voltage levels.

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Through cooperative efforts of the major electric utilities in California, the Commission staff and other interested parties, proposed modifications to General Order No. 95 have been submitted, as Exhibit "A" to subject application, to establish appropriate standards for sectionalizing guy wires.

Exhibit "A" has been reviewed by Pacific Gas and Electric Company, Pacific Power & Light Company, and San Diego Gas & Electric Company, each of which has advised Edison that it concurs in and endorses such modifications to General Order No. 95. In addition, said modifications were reviewed by the Department of Water and Power of the City of Los Angeles, Sacramento Municipal Utility District, The Pacific Telephone and Telegraph Company, General Telephone Company of California and Continental Telephone Company of California, the Commission staff and representatives of the International Brotherhood of Electrical Workers and no objections to the revisions were received.

Findings of Fact

1. The revisions proposed herein as Exhibit "A" of this application were reviewed by the six largest public and private electric utilities in California, the three largest telephone utilities in California, representatives of the workers involved and the Commission staff. No objections to these revisions were received.

2. The proposed revisions set forth in Exhibit "A" will, when adopted, establish uniform requirements, the application of which will secure safety to persons engaged in the construction, maintenance and operation of facilities in proximity to energized high voltage conductors and are in the public interest.

Conclusions of Law

1. It is reasonable to modify existing rules of General Order No. 95 to increase the voltage provision from 22,500 to 35,500 volts for sectionalizing guy wires in proximity to supply conductors of less than 35,500 volts.

2. It is reasonable and in the public interest to incorporate into General Order No. 95 changes in the rules therein as are set forth in Appendix A, hereto, and as are discussed in this opinion.

The Commission concludes that the application should be granted as set forth in the following order, and that a public hearing is not necessary.

O R D E R

IT IS ORDERED that:

1. The Commission's General Order No. 95, "Rules for Overhead Electric Line Construction", is hereby amended to increase the voltage provision from 22,500 to 35,500 volts for sectionalizing guy wires in proximity to supply conductors of less than 35,500 volts as set forth in Appendix A attached to this order.

2. The Executive Director shall cause a copy of this order and its appendix to be served upon each electric and telephone utility operating within California and the State Division of Occupational Safety and Health.

The effective date of this order shall be thirty days after the date hereof.

Dated NOV 20 1979 at San Francisco, California.

John E. Bryson
President

Alan J. D'Amico
Edward W. Gennep
Commissioners

Commissioner Richard D. Gravello, being necessarily absent, did not participate in the disposition of this proceeding.

APPENDIX A
Sheet 1 of 8

1. Requirements for Supply Lines, Rule 56.6 (Requirements for Sectionalizing with Insulators), subsections A, B, and E are amended to increase the voltage provision from 22,500 volts to 35,500 volts, and shall read as follows:

56.6 Requirements for Sectionalizing With Insulators

- "A. GUYS IN PROXIMITY TO SUPPLY CONDUCTORS OF LESS THAN 35,500 VOLTS (See Rule 21.3-D for definition of proximity and Fig. 45 of App. G)

"All portions of guys within both a vertical distance of 8 feet from the level of supply conductors of less than 35,500 volts and a radial distance of 6 feet from the surface of wood poles or structures shall not be grounded, through anchors or otherwise. Where necessary to avoid the grounding of such portions, guys shall be sectionalized by means of insulators installed at locations as specified in Rule 56.7.

- "B. GUYS TO ARMS SUPPORTING CONDUCTORS OF LESS THAN 35,500 VOLTS

"All portions of arm guys within 6 feet of points of attachment to wood crossarms, or metal crossarms on wood poles, shall not be grounded if the crossarms support supply conductors of less than 35,500 volts. Where necessary to avoid the grounding of such portions, arm guys shall be sectionalized by means of insulators at locations as specified in Rule 56.7.

- "E. GUYS ATTACHED TO GROUNDED POLES OR STRUCTURES

"Guys attached to securely grounded metal poles or structures are not required to be sectionalized except as required by Rule 56.6-A because of proximity to supply conductors of less than 35,500 volts supported on wood poles, or by Rule 56.6-B."

2. Requirements for Supply Lines, Rule 56.8 (Guy Insulators), introductory section and Table 13 are amended to increase nominal voltage provisions from 17,500 volts to 35,500 volts, and to recognize the use of multiple insulators in series, and shall read as follows:

56.8 Guy Insulators

"Insulators which sectionalize guys shall conform to the following specifications.

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"Table 13

Guy Insulator Flashover Voltages

Nominal voltage of Circuit to Which Guy is in Proximity	Dry flashover voltage of insulators
0 - 7,500 volts	15,000 volts
7,501 - 17,500 volts	Double the circuit voltage
17,501 - 22,500 volts	35,000 volts
22,501 - 35,500 volts	Double the circuit voltage

NOTE: To meet dry flashover requirements, use of multiple insulators in series is permissible."

3. Requirements for Communication Lines; Rule 86.4 (Clearances), subsection E; Rule 86.6 (Sectionalizing and Grounding Requirements), subsections A, B(2), C and D; Rule 86.7 (Location of Sectionalizing Insulators), subsection A(2); are amended to increase the voltage provision from 22,500 volts to 35,500 volts, and shall read as follows:

86.4 Clearances

"E. FROM POLES

"Where guys passing poles supporting supply conductors are less than 15 inches from surface of pole and less than 8 feet below supply conductors of less than 35,500 volts supported on such pole, the guys shall be sectionalized, in addition to the normal sectionalization required by Rule 86.6, by means of insulators in accordance with Rule 86.6-B2 as though attached to the pole or structure."

86.6 Sectionalizing and Grounding Requirements

"A. WHERE NOT EXPOSED TO SUPPLY CONDUCTORS

"Guys attached to or passing poles or structures supporting only communication conductors need not be sectionalized or grounded, provided such guys are not exposed to supply conductors of 250-22,500 volts and are not in proximity to supply conductors of 0-35,500 volts.

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"B. SECTIONALIZED BECAUSE OF EXPOSURE OR PROXIMITY TO
SUPPLY CONDUCTORS

"(2) - Guys in Proximity: Every overhead or anchor guy, any portion of which is in proximity to a wood pole and supply conductors of 0-35,500 volts

"C. EXPOSED TO SUPPLY CONDUCTORS OF MORE THAN 22,500 VOLTS

"Portions of guys exposed to supply conductors of more than 22,500 volts shall be securely grounded and such guys need not be sectionalized, unless sectionalization is required by Rule 86.6-B2 because of proximity to supply conductors of 0-35,500 volts (See App.G, Fig. 52c)

"D. GUYS ATTACHED TO GROUNDED POLES OR STRUCTURES

"Guys attached to securely grounded metal poles or structures are not required to be sectionalized except as required by Rule 86.6-B2 because of proximity to supply conductors of less than 35,500 volts supported on wood poles."

86.7 Location of Sectionalizing Insulators

"A. OVERHEAD GUYS

"All insulators in overhead guys shall be not less than 8 feet above the ground.

"(2) In Proximity: Overhead guys which are required to be sectionalized by Rules 86.6-B2 shall have an insulator not less than 6 feet and not more than 9 feet (measured along the guy) from each point of attachment to poles, crossarms or structures (see App. G, Figs. 47 and 48).

"Excepted from this requirement are guys to poles which support no conductors provided such guys are not in proximity to supply conductors of 0-35,500 volts on any poles other than the poles to which they are attached.

4. Requirements for Communication Lines, Rule 86.8 (Guy Insulators), introductory section and Table 16 are amended to increase nominal voltage provisions from 17,500 volts to 35,500 volts and to recognize the use of multiple insulators in series, and shall read as follows:

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86.8 Guy Insulators

"Insulators which sectionalize guys shall conform to the following specifications.

"Table 16

Guy Insulator Flashover Voltages

Nominal voltage of Circuit to Which Guy is in Proximity	Dry flashover voltage of insulators
0 - 7,500 volts	15,000 volts
7,501 - 17,500 volts	Double the circuit voltage
17,501 - 22,500	35,000 volts
22,501 - 35,500	Double the circuit voltage

NOTE: To meet dry flashover requirements, use of multiple insulators in series is permissible."

GUYS IN PROXIMITY TO WOOD POLES AND SUPPLY CONDUCTORS OF 35,500 VOLTS OR LESS.

RULES 21.3-D, 36.6-A AND 86.6. 35,500

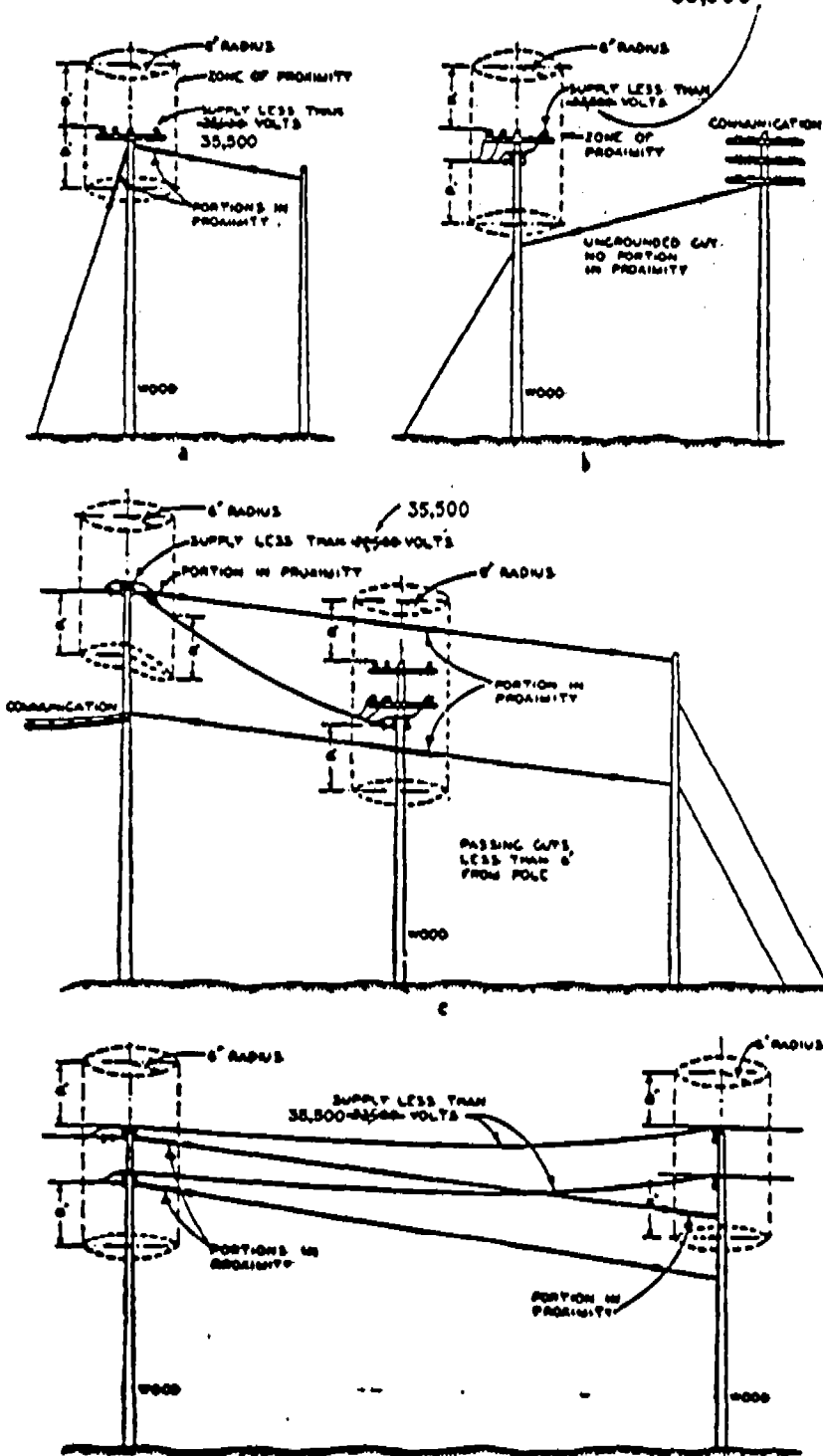


FIG. 45

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Revise Fig 46 as Indicated

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Illustrative Diagrams

App. G

SECTIONALIZATION OF OVERHEAD GUYS
ON SUPPLY LINES
RULE 56.7-A

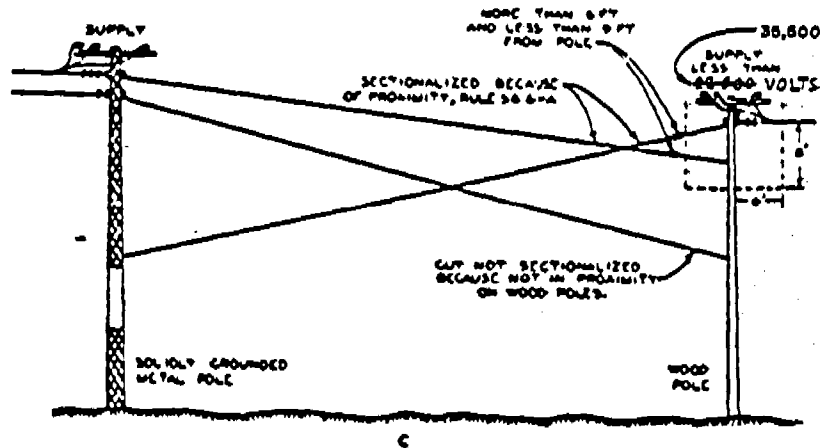
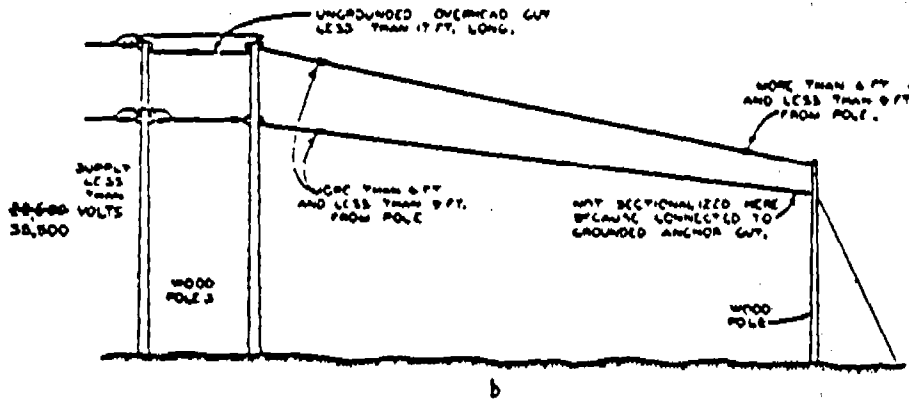
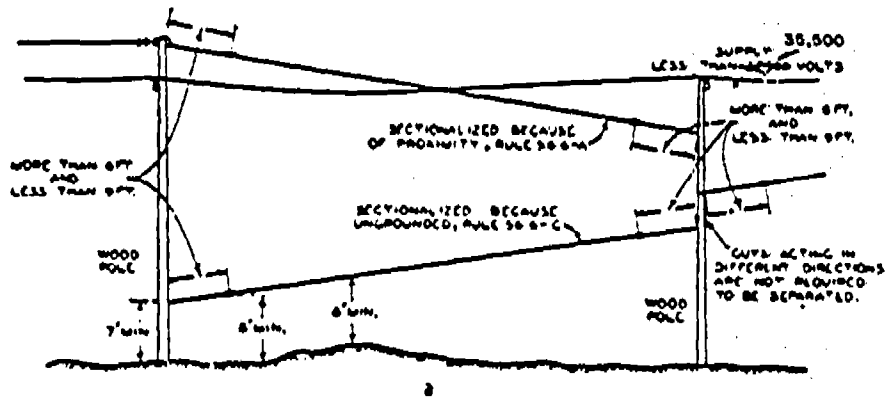


FIG. 46

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 Revise Fig 47 as Indicated

App. G

Illustrative Diagrams

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SECTIONALIZATION OF OVERHEAD GUYS
 ON COMMUNICATION LINES
 RULE 86.7-A

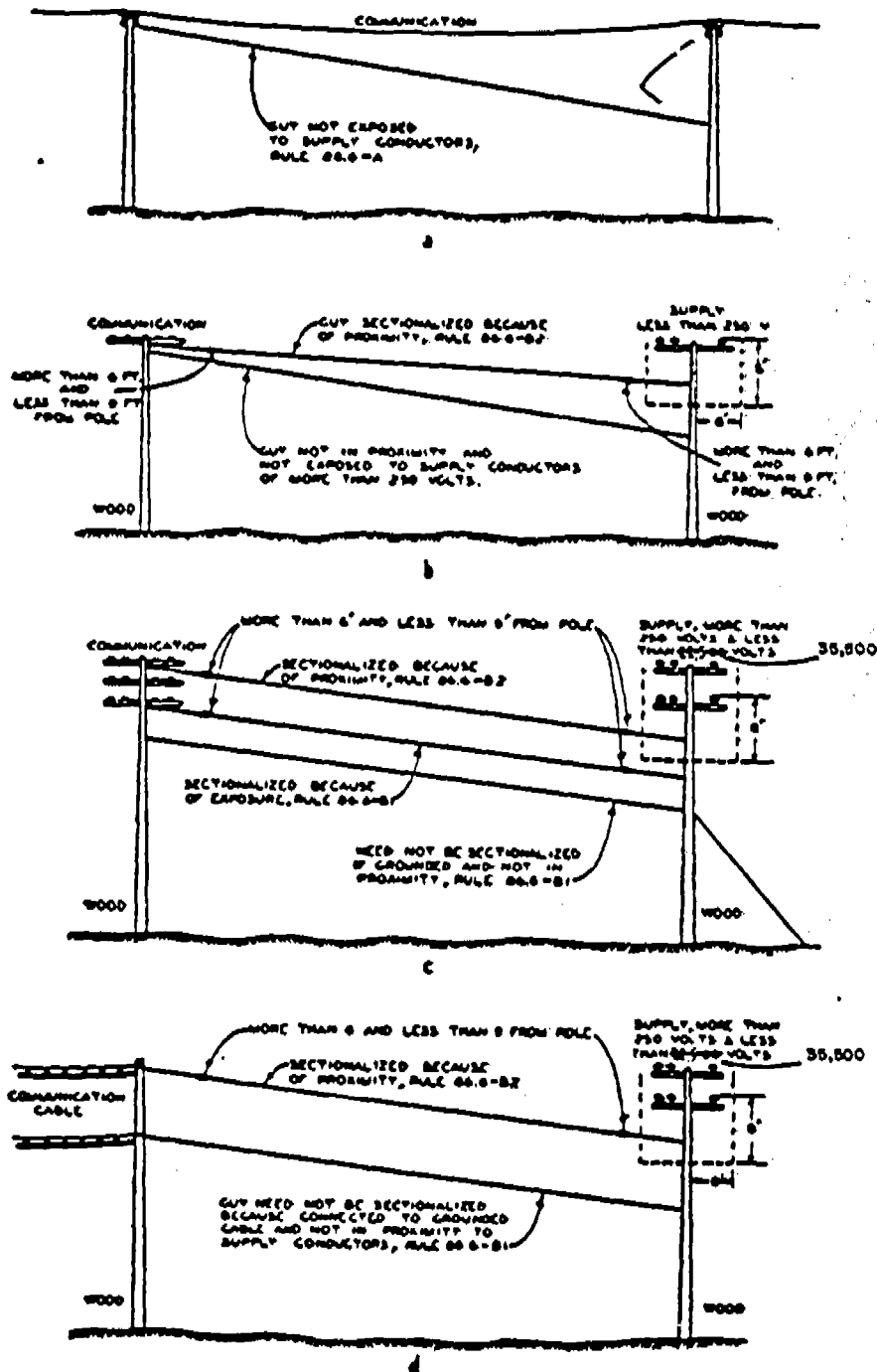


FIG. 47

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Revise Fig 52 as Indicated

Illustrative Diagrams

App. G

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OR IN PROXIMITY OF SUPPLY CONDUCTORS OF MORE THAN 35,500 VOLTS

GUYS EXPOSED TO SUPPLY CONDUCTORS OF MORE THAN 22,500 VOLTS
RULES 86.6-D & 86.6-C

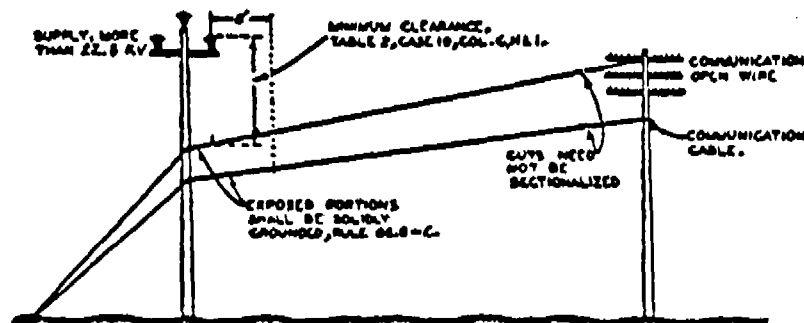
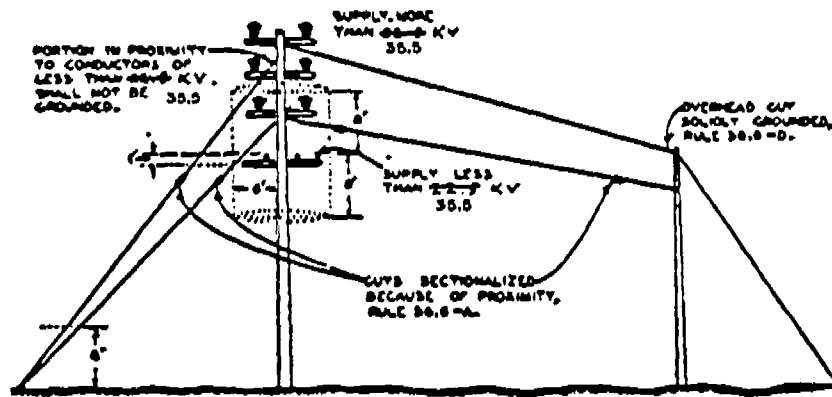
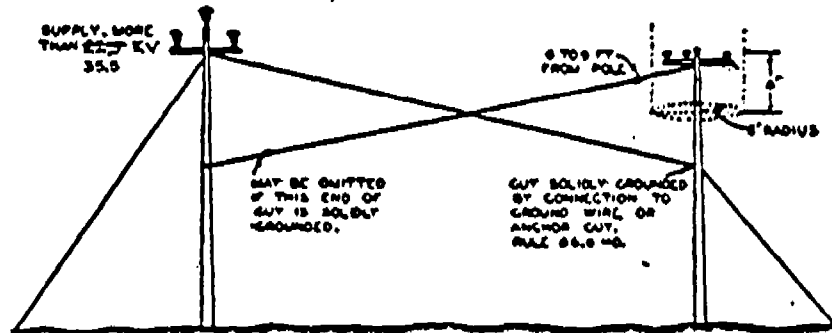


FIG. 52