

(2) No joint shall be made in any aerial conductor in a crossing span or in either of the approach spans.

(3) Double crossarms each fitted with insulators shall be erected on each pole or other support of the crossing span.

(4) The licensee shall, if required by the Signal and Electrical Engineer at the time when the application is granted, erect one pole or other support of the crossing in the run of the railway wires, and such pole or other support shall then be side-armed to carry the railway wires. The licensee shall pay all charges incidental to attaching the railway wires to the side-arms.

46-14. Where an aerial conductor crosses the railway, earthing-guards of a type approved by the Signal and Electrical Engineer shall be provided in the following positions:—

(a) Where all angles of intersection of the railway wires and the electric line are 45 degrees or over:—

(i) With railway wires One earthing-guard on attached to the electric line pole each side of such pole.

(ii) With railway wires One earthing-guard on the railway side of the electric line pole on each side of the crossing span.

(b) Where any angle of intersection of the railway wires and the electric line is less than 45°:—

In all cases, whether One earthing-guard on railway wires are attached to electric line pole or not each side of the electric line pole nearest the railway wires, and one on the railway side of each pole on either side of the aforesaid pole.

The term "pole" includes any other support.

The foregoing regulation shall be read in conjunction with the drawing shown on Folder No. 4 in Appendix III hereto.

46-15. (1) All aerial conductors in the crossing span and in the approach spans shall be bare, except:—

(a) In borough, town district, or township limits, in which case Regulation 42-31 hereof shall apply; or

(b) Within such other limits as may be specified in the license, in which case Regulation 42-31 hereof shall apply; or

(c) Where the electric lines cross the Post and Telegraph Department's lines, in which case Regulation 45-05 hereof shall apply.

(2) Where covered wire is used, the covering shall be removed for a distance of 3 ft. over the earthing-guard so that in the event of a line falling it will make metallic contact with such guard.

46-16. If guard-wires are required to meet special conditions, they shall be erected by the Railway Department over the railway wire at the expense of the licensee wherever they may be deemed to be necessary by the Signal and Electrical Engineer.

46-17. Where electric traction is in use on a railway all electric lines crossing the railway shall be taken underground except when the pressure of the electric line is 33,000 volts or over, in which case the crossing shall be subject to special arrangements with the Signal and Electrical Engineer.

#### UNDERGROUND CONDUCTORS.

46-21. Where any underground electric line is required to cross a railway, it shall be laid as near to a right angle to the railway track as is practicable. It shall be laid at a minimum depth of 2 ft. 6 in. below the base of the rails, and within the confines of the railway reserve shall be not less than 2 ft. below normal ground-level.

46-22. A protective covering as required by the Signal and Electrical Engineer shall be laid above all underground electric lines on railway property.

46-23. To indicate clearly the position of every underground electric line on railway property, a marker board shall be erected on each side of the railway and shall bear the following words in clear print:—

"Danger [state pressure] volt cable crosses here."

46-24. In all cases a detailed scale plan of the licensee's proposals shall be forwarded to the Signal and Electrical Engineer for his approval.

#### GENERAL.

46-31. Wherever the words "Minister" or "Minister of Telegraphs" appear in any of Regulations 45-01 to 46-31 (both inclusive) hereof the same shall in addition be read as "Railways Board" in all cases where the interests of the Railways Board are affected.

## PART 47.—ELECTRIC SERVICES.

### ELECTRIC SERVICE-LINES.

47-01. All overhead electric service-lines connected to aerial lines shall be taken direct from insulators on poles or other supports.

47-02. All aerial electric service-lines shall be led as directly as possible to insulators firmly attached to a position on the building on the consumer's premises which is not accessible to any person without the use of a ladder or other special appliance.

47-03. No aerial electric service-line shall be run on a bobbin or similar insulator attached to the exterior of a building. It may be carried on brackets attached to a building, provided that it is inaccessible from any portion of the building without the use of a ladder or other special appliance, and further provided that it is secured in such a manner that it cannot fall away from the insulator-support or make contact with the building.

47-04. (1) The distance between the last point of attachment of the aerial electric service-lines on the building and the point of entry into the building shall not exceed 30 in.

(2) Service-mains shall enter the building as near as practicable to the point at which the aerial electric service lines are first attached to the building.

### SERVICE CONNECTIONS.

47-11. Before giving supply to any premises, the licensee shall satisfy himself that all electric lines, wires, fittings, and apparatus belonging to him or under his control which may be upon a consumer's premises on the licensee's side of the main switch of the consumer's installation are in a safe condition and in all respects fit for supplying electrical energy; but nothing in this regulation shall relieve the consumer of responsibility for the condition of his installation and of every appliance and electric service-line which may be on such consumer's premises other than any apparatus or service-line belonging to the licensee.

47-12. The position of the entrance point for service-mains and the position of meters and main switchboard on the consumer's premises shall be to the approval of the electrical supply authority.

47-13. For the protection of tradesmen the licensee shall, on request by any consumer, and on receipt of an undertaking to pay the cost, cut off the supply to any building on such consumer's premises or otherwise render the electric service-lines safe where any work has to be carried out in close proximity to such lines.

47-14. Where the supply has been disconnected at the request of the consumer or by reason of his default, the licensee may, before reconnecting the supply, charge a reconnection fee (not exceeding 10s.), together with a mileage charge (not exceeding 6d. a mile) each way between the address for business purposes of the servant of the licensee who is to make such reconnection and the premises to be reconnected.

47-15. All service cut-outs shall comply with the following requirements:—

(a) A suitable cut-out or automatic circuit-breaker shall be inserted in each electric service-line other than an earthed conductor.

(b) Outdoor cut-outs shall be used wherever practicable in order to protect the service-mains. They should, wherever possible, be fitted on the pole outside the building, so that the electric service-lines may be easily disconnected when work is being carried on outside the building, and to prevent unauthorized persons from replacing blown fuse-links or overfusing the service.

(c) All outdoor cut-outs shall be weatherproof, and if enclosed in a metal case such case shall not be earthed.

(d) All indoor cut-outs shall be contained within a suitably locked or sealed receptacle of fireproof construction.

(e) Where the pressure between conductors exceeds 250 volts the phase conductor, or outer conductor, fuse-links shall be separated by an insulating partition, and shall be so arranged that any two conductors cannot be accidentally touched simultaneously.

47-16. Where any tree is in contact with, or reasonably likely to cause injury to, any overhead electric service-line the licensee shall discontinue to supply electrical energy through such service-line until either such tree has been removed or so trimmed as to be no longer in contact with such service-line and be unlikely to cause injury thereto or the service-line has been adequately protected.