

In addition to the foregoing, 189 miles of toll and telegraph-pole line were reconstructed during the year. This work involved the replacement of 479 miles of wire.

Other improvements to the plant and equipment used in connection with the toll and telegraph services include the following:—

- (a) Special switchboards in the Auckland and Wellington toll-rooms to assist toll-users to obtain more readily before booking toll calls the telephone numbers of subscribers at distant exchanges.
- (b) Increased facilities for the direct dialling of toll communications between Hamilton and Auckland, Te Awamutu and Auckland, Te Awamutu and Hamilton, Waitotara and Wanganui, Feilding and Marton, Feilding and Palmerston North, Rakaia and Christchurch, Dunsandel and Christchurch, Timaru and Oamaru, Dunedin and Oamaru, and Palmerston and Oamaru.
- (c) Additional facilities for the handling of toll calls at Auckland, Rotorua, Stratford, Napier, Waipukurau, and Nelson.

POLES AND WIRES.

During the year 108 miles of pole-line and 1,321 miles of wire (including wire in submarine cable) were erected for telegraph and telephone (toll) purposes, while 85 miles of pole-line and 190 miles of wire were dismantled or, in localities where no longer required by the Department, sold to settlers for use as private telephone-lines.

The lengths of pole-line and wire (including wire in submarine cable) in use for telegraph and telephone toll purposes on the 31st March, 1937 and 1938, respectively, were as follows:—

Pole-line and Wire.				Year ended 31st March, 1937.	Year ended 31st March, 1938.
Miles of pole-line ..	..	..	..	.. 12,085*	12,063
Miles of wire ..	..	..	..	.. 65,775*	66,906

NEW ZEALAND SUBMARINE CABLES.

NEW INTER-ISLAND SUBMARINE TELEPHONE CABLE.

An important event in the history of the Department was the laying of a second telephone cable across Cook Strait from Lyall Bay (North Island) to Blind River (South Island) in June. The new cable which is 40.3 nautical miles long, is of the single-core coaxial type designed for high-frequency carrier-current operation. Although provided with only one insulated conductor, the cable will permit the simultaneous operation of twenty-three telephone channels and as many as thirty-six two-way teleprinter channels.

The cable was manufactured by Submarine Cables, Ltd., of Greenwich, England. It was shipped from London in two consignments by the "Westmoreland" and "Port Chalmers" respectively in April, delivered into the Department's shore tanks at Wellington in May, and laid by the cable steamer "Recorder" in June.

Some months prior to the laying of the cable an extensive survey was made of the proposed route between Lyall Bay and Blind River to ensure that the cable would be laid on the most favourable bed throughout. For this purpose the Department was fortunate in securing the services of H.M.S. "Wakakura" and the Island steamer "Matua." The major portion of the work was undertaken by the H.M.S. "Wakakura," and valuable supplementary data was obtained by the aid of the echo-sounding apparatus with which the "Matua" is fitted.

After the completion of the necessary tests and the delivery of the high-frequency terminal equipment, four telephone channels were established over the new cable in October. These four channels will enable the Department to meet the increasing traffic demands pending the installation of the first instalment of the permanent associated equipment which provides for a total of seven telephone channels. It is expected that the full equipment necessary for the additional circuits will be installed and ready for service in June or July next. The design of the high-frequency terminal equipment is such that it will be practicable to increase progressively the number of channels over this cable to meet traffic developments, but it is expected that it will be many years before it is required to operate at full capacity.

COOK STRAIT TELEGRAPH CABLES.

No. 3 Oterangi Bay - White's Bay single-core telegraph cable was put out of commission on the 22nd June, a fault having developed in the cable approximately midway across the Strait.

No. 4 Lyall Bay - White's Bay single-core telegraph cable developed an earth-fault in February about 2.5 miles out from Lyall Bay. The fault has caused partial interruption to the services over this route, and it is expected that the cable will become totally interrupted within a short time.

In view of the additional facilities that are to be established over the new coaxial cable, no action is being taken to repair either of the faulty cables.

FOVEAUX STRAIT CABLE.

The development of a fault in the submarine cable between Stewart Island and the mainland was reported early in December. The fault was subsequently localized at a point one mile and a half out from the Ocean Beach (Bluff) cable hut, and repairs were effected on the 17th December with the aid of a small oyster-boat.

* Revised figures.