

cases in which existing facilities could not be sufficiently augmented or improved by such methods new circuits were erected. The following is a list of places between which the efficiency of existing circuits was increased or where new circuits were provided :—

Whangarei-Towai.	Otorohanga-Honikiwi.
Whangarei-Waiwera (main East Coast line).	Whatawhata-Te Pahu.
Whangarei-Maungakaramea-Waiotira.	Awakino-Urenui.
Auckland-Waiuku.	Awakino-Mahoenui.
Auckland-Patumahoe.	Wanganui-Pipiriki.
Auckland-Pukekohe.	Patea-Wanganui.
Auckland-Hamilton.	Patea-Hawera.
Pukekohe-Tuakau.	Wairoa-Nuhaka.
Pukekohe-Patumahoe-Waiuku.	Napier-Hastings.
Paeroa-Morrinsville.	Levin-Palmerston North.
Katikati-Waihi.	Levin-Wellington.
Ngatea-Waitakaruru.	Marlborough Sounds toll line rearrangements.
Rotorua-Ngongotaha.	Rangiora-Amberley.
Tauranga-Matamata (new toll link between the	Christchurch-Greymouth-Westport.
Waikato and Bay of Plenty districts).	Christchurch-Culverden-Hammer Springs.
Whakatane-Te Teko via Edgecumbe.	Christchurch-Rakaia-Methven.
Taupiri-Orini.	Dunedin-Brighton.
Te Kuiti-Te Anga.	Dunedin-Cromwell.
Te Kuiti-Mahoenui.	Invercargill-Winton.
Waimiha-Mapiu-Mokauiti.	Invercargill-Riverton.

In addition to the foregoing, 279 miles of toll and telegraph pole-line were reconstructed during the year. This work also involved the replacement of 1,800 miles of wire.

The maintenance of the telegraph and toll systems throughout the Dominion was carried out satisfactorily during the year. With the exception of the disruption of lines in the Hawke's Bay area as a result of the earthquake, no interruption to service of any magnitude or over an extended period was experienced. From the Department's point of view this fully justifies the practice of carrying out regular and systematic overhauls, and the usage of only those classes of pole structures which have been proved equal to service conditions.

In connection with the construction and maintenance of lines of communication, the Department has always to keep in mind the important fact that telegraph and telephone facilities are most needed in times of emergency, when it not infrequently happens that its communication system is called upon to stand the most severe demands.

POLES AND WIRE.

During the year 154 miles of pole-line and 959 miles of wire were erected for telegraph and telephone (toll) purposes, while 204 miles of pole-line and 477 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 in use for telegraph and telephone toll purposes on the 31st March, 1930 and 1931, respectively, were as follows :—

Pole-line and Wire.							Year ended 31st March, 1930.	Year ended 31st March, 1931.
Miles of pole-line	..	..	..	..	..	..	12,638*	12,588
Miles of wire	..	..	..	..	..	..	63,175*	63,657

* Revised figures.

The telegraph and telephone wire in use on the 31st March, 1931—viz., 63,657 miles—is classified as under :—

	Miles.
Used exclusively for telephone toll traffic	4,733
Used exclusively for telegraph traffic	9,271
Used simultaneously and (or) conjointly for telegraph and telephone toll traffic	49,653

The total length of wire that may be used for telephone toll traffic is 54,385 miles; the total length that may be used for the transmission of telegrams, 58,923 miles; and the length of telephone toll-lines over which telegrams may be transmitted by telephone, 23,494 miles. The total length of Morse circuit derived from the superimposing of telephone circuits is 14,107 miles, and the total length of additional telephone toll circuit improvised from the existing wire circuits by the use of subsidiary apparatus associated therewith (so-called phantom working) is 7,326 miles. In addition, 3,715 channel miles of telephone toll circuit have been obtained from the application of the carrier-current telephone system to telephone trunk lines.