

the Rotorua-Taupo circuit. This rearrangement, together with the erection of a new circuit between Rotorua and Atiamuri, resulted in a clear trunk circuit being obtained between Rotorua and Taupo.

Toll and telegraphic facilities between Gisborne and Wairoa were improved by the erection of a new metallic circuit between Gisborne and Morere. The new circuit, together with those previously existing between Morere and Wairoa, enabled a redistribution of lines to be made which greatly assists the handling of toll communications in the area Gisborne-Morere-Nuhaka-Wairoa. The rearrangement of circuits also provided an additional telegraph-channel between Gisborne and Wairoa.

The telegraph circuits extending northwards from Gisborne were improved by the substitution of intermittent for constant current working, and by transferring one of the circuits to the more accessible inland route between Ruatoria and Tokomaru Bay. Both the toll and telegraph circuits were made more secure from damage by flood at Tikitiki by the provision of a more substantial means of supporting the wires where they cross the Waiapu River.

A reconstruction of the main line between Eskdale and Rangitaiki was carried out, copper wires being erected throughout the section and the toll circuits re-erected on the twist system. As a result, speech-transmission between the Napier district and Taupo, Rotorua, and Hamilton was considerably improved.

A direct circuit was obtained between New Plymouth and Inglewood by the removal of the Tarurutangi, Lepperton, and Centre Hill toll stations to the Inglewood-Waitara circuit. A direct circuit was obtained also between New Plymouth and Eltham by a rearrangement of the existing wires.

A new metallic circuit was erected between Palmerston North and Wanganui, and a number of the existing wires rearranged. As a result, one additional toll circuit was obtained between Palmerston North and Wanganui, one additional circuit between Marton and Wanganui, and another between Bulls and Marton. The toll facilities between Marton and Palmerston North were also improved, and the delay on toll traffic from the Taihape and Hunterville districts to the Wanganui and Taranaki districts was considerably reduced.

The Wellington-Auckland metallic circuit was diverted into Palmerston North by running two pairs of wires between Sanson and Palmerston North. This work was carried out as a preliminary to the installation of the three-channel carrier system between Palmerston North and Hamilton, over which the Wellington-Auckland toll traffic is to be handled.

The toll switching facilities at the Palmerston North Exchange were improved by the installation of a new record position on the switchboard, the original record position being utilized to provide an additional toll position.

Improved telephone facilities were provided between Carterton and Greytown, and between Carterton and Featherston; in the former case by the erection of a new metallic circuit, and in the latter case by a rearrangement of the existing wires to form a phantom circuit.

An additional toll outlet was provided between Dannevirke and Woodville by joining together at Maharahara two circuits which were no longer required by that office for communication with Dannevirke and Woodville respectively.

The number of telephone circuits between Blenheim and Seddon was increased from four to five by the conversion of two existing telegraph circuits to a metallic circuit.

A new telephone-line was erected from Te Namu to Wangapeka Valley in order to provide out-lying settlers with telephone facilities.

The congestion on the toll lines between Darfield and Coalgate, Christchurch and Leeston, and Rangiora and Oxford was eliminated by the erection of new metallic circuits.

The facilities for toll communication between Tokarahi and Duntroon were greatly improved by the erection between those places of a new metallic circuit.

The efficiency of the Duntroon - Maerewhenua, Lawrence - Clydevale, Kurow - Omarama, and Kurow-Wharua toll circuits was improved and their traffic-carrying capacity increased by their conversion from earth to metallic-circuit working.

The toll-line system was extended to Motumote and Waitaki Hydro, and new toll stations were established at those places.

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

An extension of the toll switchboard at Auckland by the installation of two additional operator's positions.

The re-erection on the twist system of the Greatford - Marton, Levin - Foxton, and Wellington-Porirua sections of the Wellington-Auckland main-trunk telephone circuit.

The rearrangement of the telegraph and toll leading-in cables, &c., at a number of offices, and the rewiring of several telegraph operating-rooms.

The installation of lamp-signalling circuits between Wellington and Christchurch, and between Seddon and Christchurch, for the purpose of improving the facilities for handling inter-Island toll traffic.

The substitution of electric motors for petrol-engines at Blenheim and Seddon for driving the battery-charging plant.