

General.—Alterations and additions to existing signalling and interlocking have been carried out at Whangarei, Kioreroa Bridge, Auckland, Aramoho, Thorndon, Lambton, Sawyer's Bay, and Ravensbourne. Mount Albert and Westfield have been converted to "switch-out" stations.

Extensive maintenance renewals were found necessary and have been carried out to the Christchurch Tramway crossing interlockings at Colombo Street, Antigua Street, Lincoln Road, Riccarton Road, and Fendalton Road.

The total number of signalling installations is as follows :—

Miles of single-line automatic signalling	..	..	..	190 m. 41 ch.
Miles of double-line automatic signalling	..	..	..	63 m. 14 ch.
Automatic crossing-loops	..	..	..	33
Automatic switch-locked sidings	..	..	..	34
Power interlockings	..	..	..	27
Mechanical interlockings	..	..	..	100
Interlocked tramway crossings	..	..	..	7
Mechanical fixed signal and Wood's locked stations	..	..	..	308
Tablet-locked sidings	..	..	..	270

Block-working.—During the year Mount Albert and Hangatiki have been converted from ordinary to switch-out tablet stations. Sergeant's Hill, Burkes, and Ravensbourne tablet stations have been closed during the year owing to their being superseded by automatic signalling and other causes.

A bank engine key has been installed at Westport.

The present position in regard to block-working is as follows :—

Total mileage equipped with tablet instruments	..	..	..	1,597
Number of tablet instruments in use	..	..	..	855
Number of tablet stations	..	..	..	360
Number of tablet exchangers	..	..	..	318
Mileage of double line worked by lock and block	..	..	..	15
Number of stations	..	..	..	13
Number of instruments	..	..	..	26

TELEGRAPH AND TELEPHONE FACILITIES.

The outstanding result of the year's activities on the communication circuits has been the greatly increased range of both telegraph and telephone services in both Islands, together with the efficiency that is now obtainable on the new circuits.

The rebuilding programme of 1928-29 has been continued, and now, as a result of this work, it will be possible to instal modern types of apparatus over long-distance communication lines. This work will be continued during the forthcoming year, together with a replacement of obsolete instruments.

In the North Island approximately 220 miles of pole-line were rebuilt and in the South Island 230 miles were rebuilt and sixty miles strengthened to meet the needs of new circuits. In addition to renewing over 2,000 miles of old iron wire with copper conductors, 2,044 miles of copper wire for new circuits have been erected.

Train-control services have been extended between Ohakune and Marton Junctions and from Oamaru to Balclutha, with an intercall selective system between Balclutha and Invercargill. The main line in the South Island is now being worked under train-control from Culverden to Invercargill, with control stations at Christchurch and Dunedin.

In the North Island it is anticipated that the final train-control section, Frankton Junction to Ohakune Junction, will be completed in September, 1932, and train-control will then be in operation between Auckland and Wellington.

Additional long-distance telephone circuits have been made from existing lines or provided when rebuilding, and these, coupled with the small telephone exchangers or switching facilities at terminal stations, are providing for efficient long-distance conversations over all parts of the railway system.

During the year a telephone exchange was installed at Frankton Junction and a larger exchange installed at Ohakune Junction; also switching facilities were made at Marton, Palmerston North, Morrinsville, Oamaru, and Balclutha.

The Otago Central Branch telephone service was converted from earth to metallic circuit, and telegraph communication was superimposed over the circuit.

The Morse services in both Islands were reorganized and co-ordinated to give more central distribution of work, elimination of retransmission at intermediate offices, and direct circuits over longer distances.

In the North Island Auckland and Wellington were directly linked with a through circuit, and from these terminals further channels were provided to subsidiary circuits.

In the South Island this Department in the past has rented numerous lines from the Post and Telegraph Department, but by means of a rearrangement of lines a number of the rented services have now been relinquished and the circuits co-ordinated to give distribution from Christchurch and Dunedin only.

Full preparations have been made for the commencement of permanent work from Wellington to Paekakariki when the electrification work commences. In the meantime the section of line from Paekakariki to Palmerston North has been rebuilt, with extra circuits.

From Napier to Takapau the line has been rebuilt and preparations made for the installation of a selective telephone system which will ultimately link with the Wellington-Wanganui train-control system at Palmerston North.