

clays, the cost of the removal of which would have been excessive by any other means. The successful work done in this connection is noteworthy, and entirely justifies the policy of employing labour-aiding machinery wherever possible.

The bridging programme is another interesting feature. At the Wairoa River Bridge the concrete cylinder piers and most of the other piers, of timber piles are built, and the erection of the steelwork is well advanced, so that the bridge should be complete by October of this year. The greater part of the rest of the bridging programme on the sections is complete.

*Auckland - Westfield Deviation.*—The works on this double-track section, approximately 10 miles long, are unusually heavy. The big embankment across the Auckland water-front is now almost complete, and service-rail connection exists between Campbell's Point and Purewa Tunnel. The successful use of steam-shovel and work-train equipment has been a material factor in progress made. This railway-embankment work is now associated with the construction of the Auckland-Orakei Waterfront Road, and the advantages from working these in conjunction are apparent. Very substantial progress has been made with the building of the double-track Purewa Tunnel. When my last report was written the bottom heading only had been started. During the year 1,012 ft. of tunnel was completed, leaving 900 ft. to complete.

*East Coast Main Trunk Railway: Waihi Eastwards.*—This important work, which will give railway access to the important Bay of Plenty district, is nearing completion, and it is anticipated that the whole of the 87 miles of railway now under construction will be handed over to the Railway Department within twelve months. The controlling factor is the time required by the contractors for the completion of the Waihi-Tauranga contract.

In May of this year the Railway Department took over a completed length of 14 miles between Waihi and Tahawai, over which the Public Works Department had maintained a service.

Beyond this length comes the length of 19 miles 11 chains which is being constructed by Messrs. Sir W. G. Armstrong, Whitworth, and Co. under contract. The contractors have almost completed the formation, though a good deal of trouble and extra work has been caused through embankments on soft foundations subsiding. During the year 600,000 cubic yards of earthwork were done. Bridging is practically complete, save the reconstruction of the Wainui Stream Bridge, not yet started. The greater part of the platelaying and station-building is complete, but the ballasting-work is far behind. At the end of June last only one-third of the total ballasting on the contract had been done, approximately 55,000 cubic yards of ballast still having to be supplied. The date for completion of contract was the 27th March, 1927.

On the 68 miles of railway stretching to Taneatua, over which the Department has maintained a regular passenger and goods service, substantial progress was made towards completion of all works, including widening of banks with work-trains, ballasting, station-buildings, and bridging; 534 lineal feet of bridging in plate-girder spans were completed, approximately 50,000 yards of ballast were spread, and 150,000 cubic yards of earthwork and rock excavated.

*Napier-Gisborne Railway.*—Construction of this important railway has been vigorously pushed on between Eskdale, the present terminus, and Wairoa. On the Putorino Section platelaying and the first lift of ballast are complete to the site of the Waikoau Viaduct, at 26 miles 60 chains, and formation beyond is practically complete to the site of the Matahaura Viaduct, at 33 miles 42 chains.

These two viaducts, which cross deep gorges, are 490 ft. and 450 ft. long respectively, with central spans of 250 ft., and are the first two of a series of large viaducts on this length of railway. A contract was let for the fabrication of the steel in England for the Waikoau Viaduct, and this steel is now arriving. The Department has completed the construction of the concrete piers of the Waikoau Viaduct, this work being in hand when my last Statement was prepared, and has now erected the timber trestle and the transporter cableway for the erection of the steelwork, on which a commencement has actually been made. Preparations are being made to push on the platelaying from the Waikoau to the Matahaura Viaduct site.

On the Wairoa Section (length, 33 miles 32 chains) construction is being pushed on, working from Wairoa southwards. The work on this section, as on the Putorino Section, is very heavy, and includes an aggregate of 120 chains of