

## CONSTRUCTION, MAINTENANCE, AND SUPERVISION OF ROADS AND BRIDGES.

The activity in work on roads and bridges which prevailed during the previous year was maintained and even increased during the present year. The works upon which the largest expenditure has already been incurred, or is still likely to be incurred owing to work in hand, are as under:—

## WHANGAREI DISTRICT.

*Mangamuku to Victoria Valley*.—This road has been widened by relief labour to 16 ft. for a length of 8 miles 35 chains.

*Awakino Valley to Dargaville*.—5 $\frac{3}{4}$  miles have been widened to 18 ft., together with the construction of bridges and culverts.

*Donnelly's Crossing to Tutamoe*.—3 miles 10 chains of dray-road formed through heavy country.

*Wairoa River Bridge, Dargaville*.—The contract for the construction of this large bridge was let in December, 1920. The bridge consists of thirty 40 ft., six 20 ft., and one 60 ft. spans, total length being 1,380 ft., with a width of 12 ft., except at passing-places, when the width is 18 ft. The piers are of concrete, and the superstructure of steel and hardwood. All the concrete piles are now made, and all steel joists delivered. The largest span is a draw span to permit the passage of shipping.

*Mangakahia River Bridge (Kaikohe to Mangakahia Church Road)*.—This bridge consists of one 110 ft. Howe truss in hardwood. Most of the materials required for the construction have been delivered at the site.

*Awarua River Bridge (Kaikohe to Mangakahia Church Road)*.—It consists of one 110 ft. Howe truss in hardwood. Most of the materials have been delivered at site, and the construction of the concrete piers is in hand.

## AUCKLAND DISTRICT.

*Waikumete to West Coast Road*.—125 chains of road metalled.

*Mangatangi Stream Bridge*.—This bridge consists of one 64 ft. Howe truss with two 20 ft. end spans, all in hardwood, on concrete piers and abutments, and has been completed.

*Rangiriri Hills Deviation*.—Formation of a deviation 5 miles in length is in hand, there being ten parties on co-operative relief work.

*Kaueranga Bridge and Approaches (Thames—Te Aroha Road)*.—This bridge consists of eight 25 ft. and one 5 ft. spans, all in hardwood. Materials being procured.

*Stanley Road*.—The Piako County Council has laid down 1 mile 27 chains of concrete road 10 ft. wide and 8 in. deep.

*Pokeno to Waitakaruru, via Maramarua*.—96 chains have been metalled 10 ft. wide and 6 in. deep, thus making 293 chains now completed.

*Tahuna to Ohinewai (Te Hoe to McKenzie's)*.—49 chains formed 16 ft. wide, and 118 chains metalled 9 ft. wide and 9 in. deep.

*Waipa River Bridge, Ngaruawahia*.—The trusses on the three 110 ft. spans have been erected. Other timber-work and the approaches are well in hand.

*Moakururua Stream Bridge*.—This structure, consisting of one 41 ft. truss and two 25 ft. end spans, all in hardwood, has been completed.

*Maungaroa Block*.—229 chains of 14 ft. road constructed.

*Pamotumotu Block*.—649 chains of 14 ft. road constructed.

*Wharepukunga Block*.—806 chains of 14 ft. road constructed.

*Pukemapou Block*.—177 chains of 14 ft. road constructed.

*Oparau Block*.—182 chains of 14 ft. road constructed.

*Te Maari Block*.—141 chains of 14 ft. road constructed.

*Rangitoto 18b*.—257 chains of 14 ft. road constructed.

*Tapu-Gumtown*.—2 $\frac{1}{2}$  miles of 14 ft. dray-road through heavy country have been formed by relief work.

## TAURANGA DISTRICT.

*Hairini Bridge and Approaches*.—This bridge consists of twenty 20 ft. and one 41 ft. spans, all in concrete, and is being constructed practically on the same site as the present unsafe structure.

*Te Puke—Otamarakau (Pukehina to Otamarakau)*.—71 chains of 17 ft. formation completed.

*Whirinaki Stream Bridge*, consisting of six 20 ft. spans, completed, together with 20 chains of approaches.

*Rotoma Block*.—11 miles 44 chains of 12 ft. formation completed, together with 764 lineal feet of culverts and 55 lineal feet of bridges.

*Tirohanga Block*.—14 miles of 12 ft. formation completed, together with 360 lineal feet of culverts.

*Urewera Block*.—Work was commenced on the location of the Waimana Valley Road. There are now 20 miles located, 6 miles of 12 ft. formation completed, and a further 4 miles in hand.

## GISBORNE DISTRICT.

*Opotiki to Matawai*.—169 chains of 16 ft. formation and 38 chains of metalling completed, together with 150 lineal feet of culverts.

*Waiaua Stream Bridge (Willow-tree Crossing)*.—This bridge, consisting of three 61 ft., two 25 ft., and one 16 ft. spans and 15 chains approaches, has been completed.

*Waioeka River Bridge and Approaches (Tauranga)*.—Material for this bridge, consisting of one 190 ft. suspension span, 7 ft. 8 in. wide, is to hand. The approaches, 18 chains long, have been completed.