

In the case of the filling at 11 m. 40 ch. the material forming this has to be transported some considerable distance from cuttings farther back, and the work has been somewhat hampered by a shortage of light locomotives suitable for the work. This shortage has now been overcome by the provision of a special type of light petrol-locomotive designed by the Department and manufactured locally. Trestles have been erected at both fillings, and it is anticipated that good progress will be made.

The portion from 14 m. to 15 m. has only recently been manned. Very complete investigation has been made regarding the foundations for the bridge at 9 m. 0 ch., Cascade Creek, and for bridges at 11 m. 34 ch. and 11 m. 78 ch.

At 11 m. 39 ch. to 11 m. 45 ch. seven out of twenty spans in a temporary bridge were completed, and the excavations for six culverts and stream-diverts have been taken out.

The permanent track has been laid from 9 m. 2 ch. to 9 m. 75 ch., and rails are in hand for the next 2 m. of track.

Orikaka Section (18 m. to 25 m. 39 ch.).—Survey work has been in hand in this section, but a great deal of it will have to be done again owing to the earth-movement which has taken place, due to the recent disastrous earthquake.

A very active policy has been maintained in connection with the accommodation of workmen. Four new camps were started—namely, Hawk's Crag, Tunnel Camp, Blackwater, and Berlin's. In all, 112 huts, forty-two cottages, three medical huts, and two bathhouses were erected, while twenty-four huts were shifted from Ohika farther up the gorge. A class-room was added to the school at Tiroroa, providing accommodation for another thirty pupils. An up-to-date Y.M.C.A. building, with hall, billiard-room, reading-room, canteen, &c., has been provided, and regular entertainments are provided by the Y.M.C.A. During the latter part of the period the number of men and equipment on the works has been considerably increased.

The construction of this railway offers several unique features, in that the centre-line is located on the opposite side of the Buller River from the main highway. This side, although the most suitable for the railway location, is too steep and precipitous to allow for the railway-formation and at the same time to provide room for camps or service roads; consequently all accommodation for the workmen has had to be built on the road side of the river, and even here room for buildings is very scant. The workmen have accordingly to be transported across the river night and morning, and this is done by the provision of ferry-boats working on overhead cables, each operated by a boatman and spaced about every quarter of a mile along the river.

SOUTH ISLAND MAIN TRUNK RAILWAY.

A start has been made with the formation at the northern end of the line from Wharanui southwards. The portion of line from 56 m. 5 ch. to 60 m. 22 ch., with the exception of a gap between 59 m. 25 ch. and 59 m. 67 ch., which had been constructed about thirteen years ago, has been cleaned up to full width, and marram-grass planted on the batters and adjacent sand-drifts where required.

Formation ahead is in hand to 60 m. 45 ch.

Two married men's huts and twenty single men's huts have been erected, the men having been accommodated in tents temporarily.

SURVEYS OF NEW LINES UNDER CONSTRUCTION, NEW RAILWAYS, ETC.

GISBORNE-WAIROA SURVEY.

Two parties have been engaged for practically the whole year on the completion of the survey of the coastal route for the Wairoa-Gisborne Railway, between Waikokopu and Gisborne. The permanent pegging is almost completed. In the earlier part of the year the trial-line survey of the inland route via Hangaroa Valley was completed, and comparative estimates of coastal and inland routes prepared.

SOUTH ISLAND MAIN TRUNK SURVEY.

The trial-line survey on the north end has been completed, and plans prepared from 62 m. to 66 m. and from 84 m. 30 ch. to 85 m. 50 ch. Permanent-line survey has been completed, and plans prepared from 59 m. 28 ch. to 61 m. 50 ch. and from 81 m. to 84 m. On the southern end a start has just been made, and about 3 m. of trial survey have been run from Parnassus northward.

NORTH AUCKLAND RAILWAY.

A survey of the suggested deviation via the flats fronting Waitemata Harbour, between Avondale and Kumeu, has been made.

CONSTRUCTION AND MAINTENANCE OF ROADS AND BRIDGES.

Huehue-Waimatenui (Bay of Islands County).—Formation on this road was widened from 10 ft. to 14 ft. for a distance of 3 m. 27 ch.

Knudsen's Road (Bay of Islands County).—This road was widened for a distance of 80 ch. from 9 ft. to 14 ft.; 6 ch. formed 20 ft. wide, 10 ch. formed 16 ft. wide, and 4 ch. formed 14 ft. wide.

Wharepunga Bridge (Bay of Islands County).—Bridge erected 74 ft. long, two 30 ft. rolled-steel-joint spans and one 14 ft. hardwood span, with 10 ch. approaches.