

A number of the main items of plant for construction of the tunnel have been ordered already in Great Britain and New Zealand; and steps are being taken to obtain the remainder of the plant and equipment required. A specification for construction of the tunnel is being prepared.

As the east portal of the tunnel has been fixed in Lucena Creek gully, it has been possible to carry out preliminary work at that end. A 2-acre site for a depot and yard is being levelled. Some of the present alignment has been pegged on the ground. A culvert has been built and others are in hand. Portion of the military camp at Featherston is being developed as a construction camp to serve the Wairarapa end of the railway.

A topographical survey of the west end has been made to assist in planning the layout of plant and service buildings.

Surveying and planning of the approaches at both ends of the tunnel is going ahead.

*Hutt Valley Railway Extension.*—Following on the decision that the extension of the railway beyond Taita will involve crossing to the west bank of the Hutt River and recrossing to the east bank above the existing railway bridge, survey work for this location is in hand. An 800 ft. bridge will carry the railway over the Hutt River at Taita, and this is being designed. Test piles are being cast for checking pile-driving conditions in the river-bed.

Close attention has been given to the question of eliminating the numerous level crossings; either overbridges or subways will be used. A subway has been completed at Epunu Station. Foundation tests and designs have been completed for overbridges at Waterloo Road, Park Avenue, and Wingate (near Cemetery Road), and for subways at Porutu Street, Breeze Street, Nae Nae Station, Wingate Station, Taita industrial area, and Taita Station. Unfortunately, the construction programme is being delayed by the current scarcity of materials.

In order to reduce the hazard to the public, roads have been built parallel to the railway connecting Waterloo Road and Park Avenue, and the two intervening level crossings at Porutu Street and Breeze Street have been closed. Warning signals have been erected at Waterloo Road and Park Avenue.

The design of an overbridge to eliminate the Petone level crossing is in course of preparation.

*South Island Main Trunk.*—The stop-banks on the north and south banks of the Hapuku River are finished, and 30 chains of willow planting have been completed on each bank.

The concrete sea wall at 64 m. 50 ch. is complete, including the coping. During the year 2,171 cubic yards of concrete were placed in the wall, 14,467 cubic yards of sand filling have been placed, and 7,290 cubic yards of rubble facing on the sand fill.

Grouting and pea-gravel filling under pressure behind the linings of the three tunnels, where this was considered necessary, is now complete, and the top cover has been removed to 20 ft. above the arch of one tunnel.

The girder bridge at Puketa Ballast Siding has been replaced by a pipe culvert. A flag station has been built at Puketa, where 1,000 trees have been planted for the Hundalee Scenic Board.

A dam for the permanent water-supply at Oaro has been completed, but the permanent water-supply for railway purposes at Kaikoura is held up through lack of materials.

Thirty-eight chains of the Claverley Access Road have been metalled.

One and one-quarter miles of permanent fencing have been erected, and 1 mile of fencing-materials dismantled and transferred for re-erection on the Claverley Access Road.

*Sockburn-Styx Railway.*—The survey for this railway has been completed and the permanent-line plans have been submitted for checking, together with an estimate of construction cost.