

Four steam-shovels have been in use on excavations, and a drag-line has done very useful work, including 3 m. of heavy ditching through the Opiako Swamp.

The railway-formation has necessitated the relocation of the Dargaville-Whangarei Main Highway over a distance of approximately 2 m., and the construction of this new roading is well advanced.

A total length of 13 m. of fencing has been completed.

Culverting is well in hand, and a total of forty-five have been built during the year, ranging from 4 ft. arches to 12 in. pipes. Owing to lack of bearing-power in foundations, nine of these have required driven-pile foundations.

Bridging has proceeded as far as the supply of hardwood piles will allow, and a total length of 330 ft. has been completed.

Platelaying has kept pace with the completion of formation, and rails are now laid to 6 m. 70 ch. Ballasting has been carried as far as 4 m., the stone being obtained from the Department's quarry at Tauraroa.

Pukehuia is the main encampment and distributing centre for the works, but it has been necessary to build a considerable new encampment at Tangowahine and a lesser one at 14 m. At the former place twenty-eight four-roomed married men's quarters, and eighty single men's huts have been erected, with the usual cookhouse, bathhouses, drainage, and water-services. These buildings were transferred from Pukehuia, as were also the nine married men's quarters and twenty-four single men's huts erected at 14 m.

Three launches and six barges have been in constant use transporting men and materials. The telephone-line is in hand, poles being erected as far as 12 m., and the wires to Tangowahine at 10 m.

AUCKLAND—WESTFIELD DEVIATION.

This double-track deviation will connect the new Auckland Railway-station with the existing main south line at Westfield Railway-station, and the portion from the southern end of the new station-yard in Auckland to Westfield, a length of 8 m. 70 ch., is being constructed by the Public Works Department. Substantial progress has been made during the year, and the completion of the work is now in sight. The men are now being concentrated into the central camp at Purewa Tunnel, and the outer encampments dismantled and huts transferred to other jobs.

Earthworks are complete and trimmed, with the exception of a small earthwork job at Purewa station-yard due to an alteration in alignment. The long embankment across Hobson Bay has not shown any appreciable loss of height, but there has been a minor subsidence in the bank across Orakei basin, and this is being brought up to grade with stripping from the Railway Department's ballast-pit.

The portals of the Purewa Tunnel have been built, the floor has been cleaned out, and a clean stone-spall foundation laid with central pipe-drainage system. This central drain has been continued through the approach cuttings, with adequate cross-drains filled with coarse scoria. A large slip at the south portal gave trouble, but after cleaning out the toe with a steam-shovel a heavy stone wall was built and this has held the country.

The rock-cutting from 6 m. 60 ch. to 7 m. 14 ch. has been widened to the full width of the reserve and all the stone used. A crushing plant has been in operation and 8,000 cub. yd. of metal and chips produced for concrete-work for ballasting the tunnel and for metalling approach roads.

For the pitching of embankments on the railway and Waterfront Road 22,600 cub. yd. of heavy rock have been quarried, and transported by time-table service over temporary lines and newly laid permanent-way.

The heavy bridging programme on the line is now practically completed. Three overbridges 40 ft. wide have been completed, also two 22 ft. wide and one 30 ft. wide, and all are now in use.

The culverts over the mud-flats, 9 m. 40 ch. to 9 m. 65 ch., all on pile foundations, have been finished, completing the culvert programme.

Platelaying and ballasting have been in hand by the gangs from the Railway Department, and the left-hand track is now completed throughout and ballasted. Two miles of the right-hand track are laid, also the Marama and Panmure station-yards.

The six station buildings have been erected by contract, and there only remains a small amount of drainage work and the installation of permanent water-supply.

Platforms are being built of 6 ft. lengths of precast concrete, and all are now finished except the right-hand side of Orakei and Sylvia Park platforms.

EAST COAST MAIN TRUNK RAILWAY—WAIHI EASTWARDS.

During the year the length of this railway between Tauranga and Taneatua, a distance of 59 m., was completed and handed over to the Railway Department for operation. Regular passenger and goods traffic was maintained on the line until the handing-over.

Te Maunga, Te Puke, Paengaroa, Pongakawa, Otamarakau, and Matata Sections (41 m. 5 ch. to 79 m. 16 ch.).—The sidings into the Te Puke and Matata quarries were pulled up and rails sent to the Rotorua-Taupo Railway. All huts that were in reasonably good condition were also sent to Rotorua. During July and August the output from Te Puke quarry was 4,432 cub. yd. of metal, 1,223 cub. yd. of screenings, and 20 cub. yd. of spalls, and from Matata quarry 2,803 cub. yd. of metal. Extensions were made to the stockyards at Te Puke and Papamoa. General maintenance was carried out until the line was handed over to the Railway Department on the 2nd September.

Rangitaiki, Awakeri, and Taneatua Sections (79 m. 16 ch. to 100 m. 5 ch.).—The centre span of the Whakatane Bridge was widened to make a passing-place for motor traffic. The cattle-yards at Awakeri were extended for stock. All huts were pulled down and transferred to the Rotorua-Taupo Railway. General maintenance was attended to until the 2nd September, when the line was handed over.