E.—3. 50

Rangiriri, No. 1 and No. 2: A few new planks in each, and hand-rail repaired in latter. Table Hill No. 2, and Henry's: Each a few planks repaired, and one abutment propped.

Taupiri (Karakas): A few new planks, and one pile fished.

Mangawara: A few new planks and joists.

No. 1, South Taupiri: A few new planks and stringer propped.

Hopuhopu: Planking repaired.

The length of this section of road is 36 miles, and three maintenance men have been kept on it constantly during the year. A large amount of work is necessary in repairs, and improvement of both road and bridges, to make it really serviceable.

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Newcastle to Hamilton.—The following bridges have been replaced by new structures, or repaired so as to be temporarily serviceable, namely:—Waitawhiriwhiri, replaced; Mangaharakeke, replaced: culvert 10 feet span, replaced by one 18 feet at Beere's Creek; two bridges over Hall's Creek repaired.

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Hamilton to Cambridge.—Bridge over Martyn's Creek lifted, secured, and handrailing erected.

Stone has been provided to replace this by a culvert when the weather is more favourable for carting the stone.

Patrol Road, Cambridge to Alexandra.—Mangapiko Creek Bridge has been erected, and the creek diverted, and an embanked road, 7 chains long, including crossing of the old bed of creek, formed.

Paikuku Swamp Road, 7 chains long, has been covered with fascines 5,333 in number, laid by the Armed Constabulary, and these have been covered with clay, an average of 12 feet wide, and 18 inches thick.

A party of Armed Constabulary has been employed on this road in maintaining it from Rotorangi to Paikuku. A survey of the road from Pukekura to Orakau has been made for the purpose of enabling the Engineer to report upon its existing state. The report, with sections of gullies and plans showing proposed deviations between Orakau and Alexandra, has been received, but no further action has been taken.

The road from Pukekura to Rotorangi is in bad repair; it passes through the Moanatuatua Swamp close to the foot of the hills, and has been fascined, clayed, and drained. The drains do not act satisfactorily, and the fascines are being cut by the traffic for want of a proper covering. A few deviations from the present line would greatly improve it; but, besides this, all the gullies between Orakau and Alexandra require bridging. The crossing of the Mangahoi swamp and creek at Orakau was almost impossible last winter.

Cambridge to Rangiawhia.—A bridge has been erected across the Mangapiko Creek, with approaches, embanked and fascined for  $3\frac{1}{2}$  chains. This road crosses two bad portions of the Moanatuatua swamp, respectively two miles and one mile long. Both these have been side-drained and fascined, and on the former the fascines have been covered with clay, except for about half a mile in the centre; on the latter the fascines remain uncovered. On both they are being cut up with traffic, and manuka for fascines is becoming scarce, and the work of carting and laying them expensive.

Cambridge to Ohaupo.—The bridge over Walker's Gully has been repaired and secured, and a design and estimate for a culvert at Rich's Creek has been prepared; but no work has been done yet towards its erection. The bridge at this place has been down for some months. This road, and those across the Moanatuatua swamp, viâ Rotorangi, are important as being the means of access to Alexandra from Cambridge across the Delta.

Hamilton and Alexandra.—Plans, &c., have been prepared for repairs to Mystery Creek bridge, as well as plans of road diversions, to avoid the crossing of this deep gully. Road diversions have been laid out at Havelock's Leap, Paturangi Redoubt, and two near McKibbon's farm, all between Ohaupo and Alexandra. That at Paturangi has been finished by the Armed Constabulary, and that at Havelock's Leap is nearly finished. The length of road formed is 13:10 chains, with earthwork representing 1,176 cubic yards.

Te Awamutu to Alexandra.—Two bridges on this road, near Alexandra, require repairs. Report and estimate for replacing these with culverts have been prepared, also plan of road diversions to avoid necessity for these bridges. No work has yet been done.

necessity for these bridges. No work has yet been done.

Waipa Road—Newcastle to Alexandra.—With a view of utilizing the roads as laid off on the survey plans of the district, a survey has been made to fix their positions on the ground. The result shows that many deviations will be necessary, for which further surveys will be required.

Te Rore Bridge, to Harapipi.—Plans and sections were prepared of the site for a proposed bridge at Te Rore, but the work, which will apparently be a costly one, has not yet been authorized.

Whatawhata to Raglan.—From the foot of the hills on the eastern side to the Waitatuna Creek bridge, all the small culverts and bridges are out of repair, and in some instances broken down. From observations taken by Mr. Clarke during a rough compass traverse of the watershed, it is apparent that a much better line of road over the range than the present can be obtained, which would improve the grades from 1 in 8 or 9 to 1 in 13. The range to be crossed is about 600 feet high. Before any further expenditure is incurred on this road, it would be well to have a proper exploration and survey made of the best line obtainable.

Raglan and Aotea Road.—Plans and estimates of the cost of this road have been prepared.

Waihou and Piako Road to Confiscation Boundary.—Instructions were given to Mr. Clarke to proceed with the survey of this road, which progressed accordingly until the Natives interfered and stopped further progress. It appears that terms have since been arranged with them, and on receipt of official intimation of this fact from the Native Officer the survey will again be proceeded with. Apparently, the best and shortest line will be secured by crossing just below the junction of the Piako with the Waitakururu, thus rendering only one bridge necessary. This line of road, though swampy, can be made thoroughly good, as a hard bottom of clay exists at a depth of 2 or 3 feet.

Road Deviations are much required in many places, particularly at the Tamahere Gully, main Hamilton and Cambridge Road. The other hill roads will never be good, but appear to be too firmly established to be altered, unless under a comprehensive system of road management, backed by ample

funds.