

MORRINSVILLE REARRANGEMENT.

Morrinsville is a junction station on a curve, and requires rearrangement. It is proposed to shift the site farther west to enable a more satisfactory layout to be made. Land has been taken for the purpose. Cost of work, apart from land, will be £10,000. Work is not urgent.

OTOROHANGA STATION.

An amount of £10,000 has been included for improvements to this yard. Work is not required at the present time, but it is anticipated that it may be within a few years. The probability is that this will be one of the last of the works to be undertaken.

RAKAIA STATION.

An amount of £10,000 is included for the rearrangement of this station to bring it up to requirements. There is not likely to be any considerable increase of business in the immediate future. The work is placed well down on the schedule.

OHINEWAI—HUNTLY DUPLICATION.

This work is proposed as part of the general scheme of duplication between Frankton Junction and Auckland, and is necessary to relieve congestion which now exists on the single track.

MERCER—FRANKTON GRADING.

This is included in order to complete regrading of line to give grade of 1-in-100 between Auckland and Frankton.

ELIMINATION OF LEVEL CROSSINGS.

With the increasing business of the railways and the rapidly increasing number of motor-vehicles using the railway-crossings, the provision of overbridges is becoming more necessary. An amount of £200,000 has been included in the schedule to allow of an expenditure of, say, £40,000 per annum for this purpose. Diagrams attached show that accidents at level crossings are on the increase, chiefly due to motor-vehicles.

BRIDGE-STRENGTHENING.

An amount of £50,000 is included in the schedule to allow of bridge-strengthening in various localities to enable heavier engines to run. Much of this class of work done is charged to maintenance.

RIMUTAKA DEVIATION.

[*Extract from Report of Engineer-in-Chief of Public Works Department appearing in Public Works Statement for 1923.*]

In view of the very expensive character of what appeared to be the best route, the matter was again investigated, as it appeared that if an expenditure in the order of a million pounds was to be incurred the tunnel route previously thrown out as too expensive might bear re-examination. It was found that a tunnel could be constructed from the permanently usable portion of the main line (at Mungaroa, previously referred to) to Cross Creek, and that the length of this tunnel would not exceed $5\frac{1}{4}$ miles—it would probably be slightly less than this. Such a tunnel would be on a very easy grade, so that no electrification would be required, as is necessary on account of the very steep grades, with the slightly longer tunnel at Arthur's Pass. Such a tunnel could be constructed for a sum not exceeding £900,000, and might even be done for £800,000. This tunnel would not, of course, eliminate all the heavy grades between Upper Hutt and Featherston, but it would cut out the worst portion of the line both as regards grades and curves. It would not result in the loss of any appreciable traffic, the only station cut off being Kaitoke, the business at which is of no consequence.

The tunnel has a further advantage in that immediately it was constructed the whole of the expensive staff, material, and attendant working-expenses at Cross Creek could be eliminated. The steep grade between Upper Hutt and Mungaroa, being only $2\frac{1}{2}$ miles in length, could be easily coped with, even with a great deal more traffic on the line than at present exists, by means of an assistant engine, while the steep grade from Cross Creek to Featherston could be worked as at present until such time as increasing traffic justified the flattening of the grades, which can be done at very moderate expense. In fact, such portion of the spoil from the tunnel as is not required for lining could be utilized in constructing a considerable portion of the formation of a deviation on favourable grades. The total length of what I may call the tunnel deviation would be 5 miles 48 chains, of which 5 miles 18 chains would be in tunnel. The length of the existing line which would be cut out by this deviation is approximately 14 miles, so that there would be a shortening of nearly 8 miles. The grade would be 1 in 132—in other words, so flat that it would have no influence in limiting the loads which could be carried between Wellington and the Wairarapa, or *vice versa*. There would only be two curves on it, which would be at least twice as favourable as the numerous sharp curves on the present line. The summit-level would be lower than that of any line which has yet been suggested, and would only be 500 ft. above sea-level. Such a line would enable the journey from Wellington to Masterton to be reduced by forty minutes, and the reverse journey from Masterton to Wellington by at least an hour. All the expense involved by the establishment of the Cross Creek Station would be avoided, and that station might be entirely closed. No deprivation of facilities would be suffered by Featherston or by the land to the south, now served either by the stations at Featherston or Pigeon Bush. No alterations would be required to the Woodside Station.