

From inquiries made by the Department it is found that this type of vehicle provides generally a somewhat more economic means of transport than the ordinary two-axled machine and should be particularly well fitted for service on the well-aligned roads of Canterbury.

Although it is claimed by various local authorities that owing to strong foundations, cheap gravel, and light maintenance-costs, there is no great advantage to be gained by limitation of loading, the time is rapidly approaching when all rural roads carrying a reasonable volume of traffic will be provided with some form of light-sealed surface. In order that these surfaces may be protected it is at present essential that unnecessarily heavy wheel-loads should be eliminated. As this end may only be accomplished by a comparatively slow process, there is a very definite need for effecting the classification now in order that all future replacements may comply with the desired load limits.

In certain areas various local authorities have classified a number of their roads in Class V, and in certain counties north of Auckland practically the whole roading system is classified in this class.

In some districts, in order to give all-weather access to certain areas, the local body has provided a very light road-surface which it is necessary to protect from heavy loads by the adoption of a Class V classification.

Instances of this kind are, however, rare, and as a gross load-limit of only 3 tons restricts payloads to approximately 25 cwt., in general Class V should be applied only where absolutely essential.

Otherwise the transport facilities will prove quite inadequate and it is inevitable that numerous permits will have to be issued by the road-controlling authorities to enable the load limit of 3 tons to be exceeded. This tends to defeat the object of the classification and creates irritating difficulties for road operators.

For these reasons the Department discourages the adoption of Class V except under very special circumstances, and it is proposed to review all such classifications now extant.

8. TRAFFIC CENSUS.

(a) INTRODUCTORY.

A comprehensive census of all traffic using the rural main-highway system was taken for the first time in New Zealand in 1934-35. Some 370 stations were selected at which all traffic was recorded. Although it would have been desirable to have increased the number of stations in order adequately to cover the whole of the highway system, the finances available rendered this impossible. Consequently it has been necessary to estimate the traffic on a number of sections of highway where no actual records were available.

Traffic was recorded for two periods of seven consecutive days at each station. With the view of obtaining a reasonable measure of the winter and the summer traffic, the tallies were taken during seven days in August, 1934, and in January, 1935. The mean of the two records is taken to represent the average traffic passing each traffic station, and this figure is applied to the appropriate length of highway. In this manner the traffic over a great part of the highway system has been computed.

In view of the estimates it has been necessary to make, the results presented in this report, while giving a reasonably close indication of traffic conditions, cannot be regarded as wholly accurate. In so far as comparisons are concerned, the figures would be fairly accurate, but from checks made upon the total use of the highway system by motor-vehicles it appears that the figures arrived at are somewhat higher than is actually the case.

It is hoped that this traffic survey will be the first of a series to be taken at regular intervals, and the full value of this census will thus not be secured until further records are obtained.

While detailed analyses of the use by motor-vehicles of the rural main-highway system are given by this and future traffic surveys, it must be remembered that this system represents only 21 per cent. of the total mileage of formed roads and streets throughout the Dominion. No comprehensive data is available regarding the traffic using urban streets or rural roads other than main highways. For a number of reasons it is most desirable that some such data should be available whereby reliable comparisons may be made between the use of each of these divisions of the roading system.

(b) TRAFFIC-DENSITY MAPS.

A map of each Island showing the relative traffic densities throughout the rural highways system appears in the Appendix. The main traffic routes are readily identifiable, and it is noticeable that in general these parallel the Main Trunk Railway systems. The maps also show that the proportion of "through," or long-distance, traffic is small in comparison with the local traffic within a few miles of the boroughs and cities. Taranaki affords an apt example in this respect. Between Hawera and New Plymouth, where a succession of medium-sized boroughs occur at fairly close intervals, the traffic averages 663 vehicles daily. On the other hand, where the road is almost wholly arterial, as between Waitara and Te Kuiti, the volume decreases to a comparatively sparse figure. The actual traffic recorded at the Mokau Bridge, for example, averaged 141 vehicles per day.

(c) VOLUME OF MOTOR TRAFFIC.

Table A gives for each Island the total number of vehicle-miles per annum on the main-highway system and the average number of vehicles carried daily by each mile of main highway. From this table it will be seen that the average number of vehicles per mile of highway per day for the North Island is 167, as against 119 for the South Island. Also the North Island main highways constitute 56 per cent. of the total highway mileage, but carry 64 per cent. of the total traffic of the main-highway system of the whole Dominion. These comparisons between the two Islands are further illustrated by Figure 1.