

Reviewing the relevant factors which enter into estimates of the traffic likely to use the bridge, we mention the following, all of which have some restricting influence :—

(i) Toll charges must have some deterring effect.

(ii) Passenger ferry services to Devonport and Stanley Bay will provide a quicker, possibly cheaper, and more convenient service than buses, especially for residents close to the waterfront in those areas. A single bridge or, for that matter, a tunnel, wherever located, cannot serve all centres of population without disadvantages to some, however complete may be the system of feeder roads and approaches.

(iii) The tendency to be socially independent of the city, engendered by isolation, may continue, and even increase, as the North Shore communities become more self-contained, both severally and as a composite unit.

Estimates of future traffic submitted to us were based on the annual records of ferry traffic up to the present time, and are subject to the objection that those records include traffic originating from or destined for areas north of Albany, the volume of which is not precisely determinable, but was stated to constitute from 10 per cent. to 15 per cent. of the total. In our estimates which follow we have disregarded the traffic from and to areas beyond Albany, and have adopted what we think to be the more accurate method of assessing the volume of future traffic by reference to the analogy afforded by examples which, in our opinion, more closely represent the conditions that will obtain when the bridge is in service. The most useful statistics for our purpose are based on pre-war tallies of traffic on the Hutt Road, which in 1939 gave a traffic volume of some 8,000 vehicles per day with a then population of 40,000 resident in the Hutt Valley, similarly situated with respect to Wellington as the North Shore will be to Auckland, but with the difference that there is a competitive rail service instead of a ferry service. The figures above quoted show a ratio of vehicular movements to population of 1 to 5. The southern suburbs of Auckland, with full facilities for communication with the centres of activity in the city, show a ratio of vehicular movements to population of about 1 to 2½. Having regard to all factors, we assess population and traffic as follows :—

Population

Year.	Population of Four Boroughs.	Part Waitemata County.	Total Population.	Net Population likely to use Bridge.
1956	38,000	6,000	44,000	30,000
1965	42,000	8,000	50,000	35,000
Ultimate	96,000	22,000	118,000	100,000

Traffic

Year.	Net Population likely to use Bridge.	Ratio of Toll-paying Vehicles to Population.	Vehicles per Day.		Total Vehicles per Day using the Bridge.
			Toll-paying.	Non-toll-paying.	
1956	30,000	1 : 6	5,000	500	5,500
1965	35,000	1 : 4½	7,500	750	8,250
Ultimate	100,000	1 : 4	25,000	1,800	26,800

We now proceed to correlate the above estimates of daily vehicular traffic with the traffic-carrying capacity of the bridge, which we have recommended should have a four-lane carriageway. American authorities state that the "practical or working