

PUBLIC ROAD SYSTEM IN NEW ZEALAND

FINANCIAL AND PLANNING CONSTRAINTS

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1 ADMINISTRATIVE STRUCTURE

1.1 The National Roads Board

The main statutes covering the administration of Public Roads in New Zealand are the Public Works Act 1981, the Local Government Act 1974, and the National Roads Act 1953. Administration of the country's roading system is exercised by the National Roads Board in respect of State Highways and Motorways and by Local Authorities in respect to all other legal roads.

The National Roads Board was formed in 1954 following the passing of the National Roads Act. This same Act provided for the establishment of the National Roads Fund within the Public Account. The Board is charged with the responsibility of providing an adequate roading system balanced to meet the country's needs. It is an organisation of 10 members, representative of private motorists, commercial vehicle owners, counties, municipalities, the Ministry of Works and Development, Ministry of Transport, and is chaired by the Minister of Works and Development. The representative nature of the Board ensures that the widest possible background of knowledge and experience is brought to bear on roading matters. Essentially the Board is a politically orientated policy-making body, required to think nationally and to act nationally. The most important functions of the Board are:

- a to administer the National Roads Fund;
- b to provide a roading system adequate for New Zealand needs;

- c to advise Government on all matters concerning roading including the provision of finance;
- d to assist and advise local authorities on roading problems; and
- e to undertake at intervals of not more than five years a comprehensive survey of the roading position in New Zealand.

The National Roads Board can be likened to a Board of Directors with the Minister of Works and Development as Chairman and the Director of Roading as chief executive officer. The Board meets regularly once a month except during January and most of the business is conducted in open meeting with representatives of the press in attendance.

### 1.2 Servicing The Board

No staff are employed directly, but the Ministry of Works and Development provides an engineering and administrative service in accordance with an agreement it has with the Board. The Roading Directorate of the Ministry of Works and Development carries out the executive functions of the Board and in servicing the Board calls on the specialist services of other divisions and branches of the department as required, e.g., bridge design, land purchase, accounts, legal, etc.

The National Roads Board is the controlling authority for State Highways but as the Board's agent, the Ministry of Works and Development has responsibility for financial and technical management. In certain cases, the Board has delegated its powers of construction and/or maintenance on State Highways to local authorities.

In the case of County roads and Municipal streets, responsibility lies with the local authority concerned. Apart from the question of standards on major works, there are no strings and no over-riding control by central government.

### 1.3 District Roads Councils

For purposes of roading administration, New Zealand is divided geographically into 21 Roads Districts, as shown in Figure 1.

Figure 1a

REFERENCE

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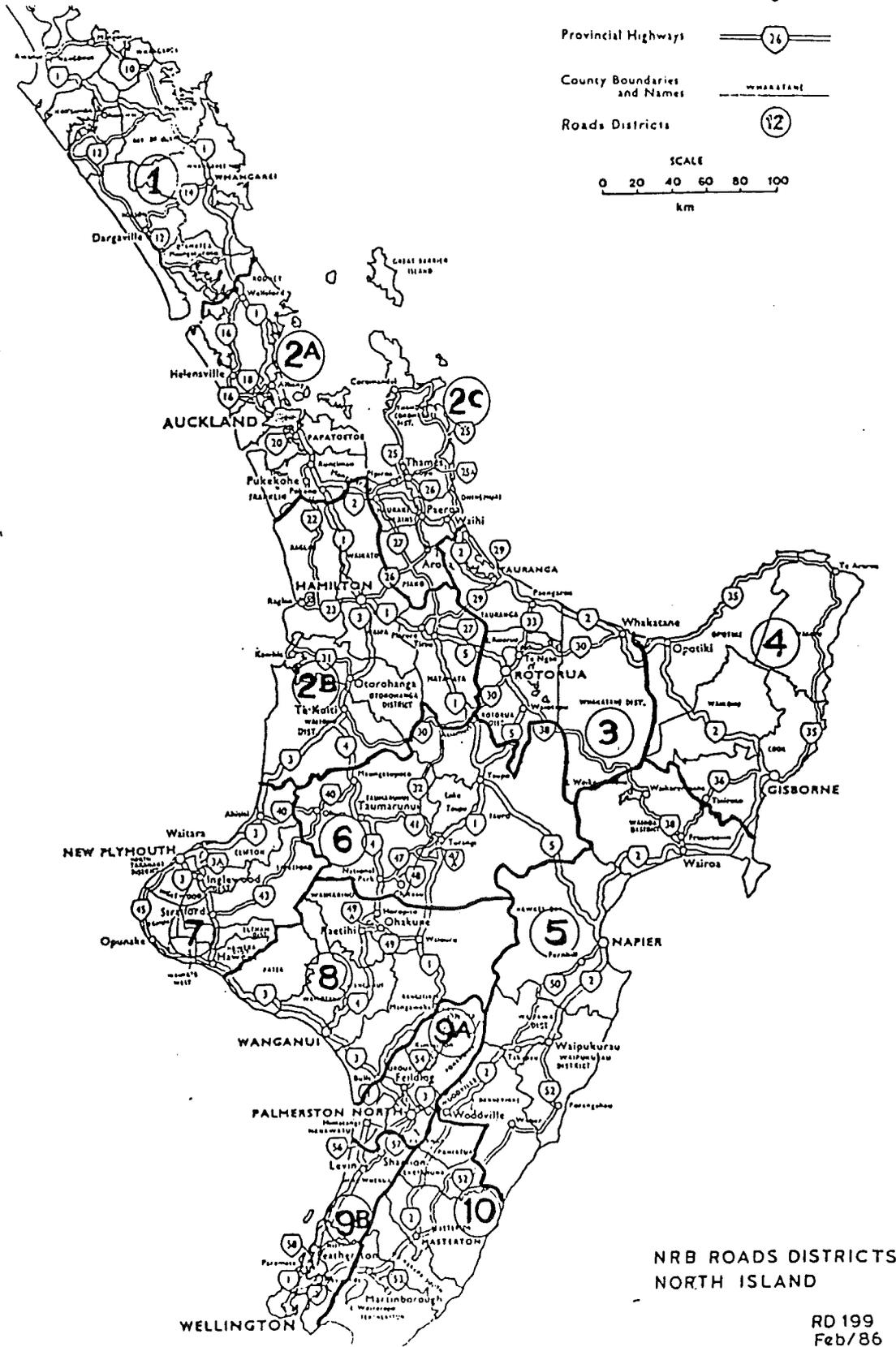
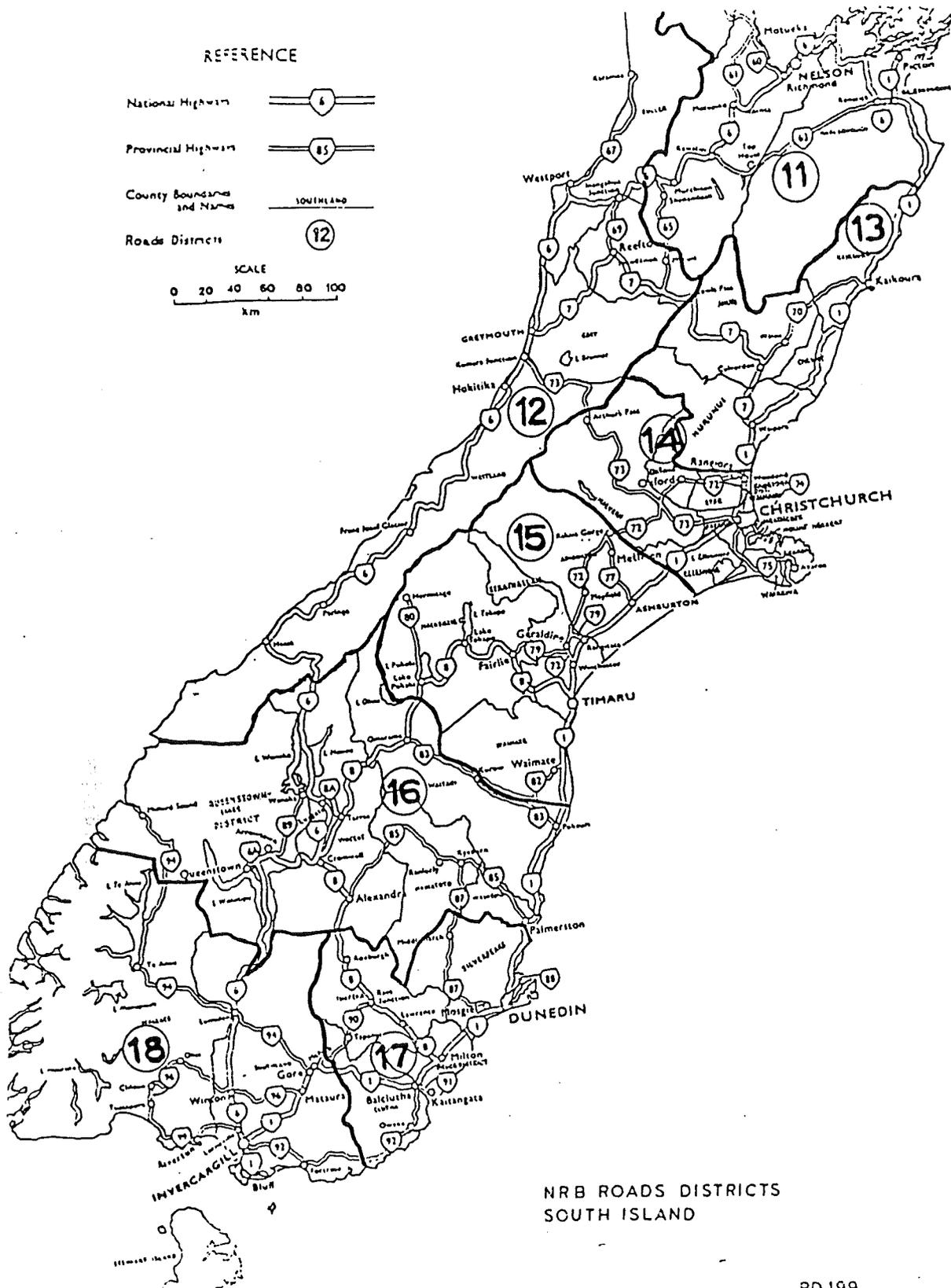


Figure 1b



In each Roads District there is an advisory body known as a District Roads Council. These councils are representative of the same interests as the Board itself. Although they have no executive powers, their recommendations concerning relative priorities have considerable influence on Board decisions. In addition to its regular meetings the National Roads Board visits each Roads District every five years. These visits afford an opportunity for Board members to get a better appreciation of local problems, needs, and conditions through observation and discussion, and to maintain personal contact with District Roads Councils. The Board is thus able to keep in close touch with the roading problems of New Zealand, and is better able to discharge its responsibility of providing an adequate roading system balanced to meet the country's needs.

## 2 COLLECTION OF REVENUE

### 2.1 National Roads Fund

The money in the National Roads Fund is derived from road taxation paid by the users, i.e. the private motorist and the commercial vehicle operator. Through the fund the money is returned to the road user in the form of safer, smoother, more economical travel. Under the legislation by which it was brought into operation on 1 April 1954, all taxation paid into the fund must be immediately available and be used for roading purposes. In effect the National Roads Act provided for an independent fund at the disposal of an independent board; nevertheless, opportunity is provided for Parliament to debate the Board's activities.

With effect from the 1987/88 financial year, Government has approved the investment of National Roads Fund balances with the income being available for expenditure by the Board.

### 2.2 Funding Mechanism

Fuel tax equal to 9.9 c per litre from all lightweight petrol, LPG and CNG powered vehicles using public roads is paid into the National Roads Fund. All heavy motor vehicles, including trailers, and all remaining lightweight vehicles [mainly diesel powered], are required to purchase distance licences at a cost that varies according to their nominated maximum gross weight, their axle configuration, and the distance they travel. The income from these road user charges is all credited to the National Roads Fund.

In establishing the road funding mechanism, the Government adopted the policy that all road users should pay a charge that equitably accounted for their share of the total annual roading costs. A byproduct but important aspect of this policy was that road transport would be paying its full infrastructure costs as compared to its competing mode, railways. A further aspect of the policy was that total road funding necessary should relate to annual roading needs [maintenance and construction] and, as such taxation levels should follow [not lead] the determination of the roading budget. In this regard the budget level is determined four months ahead of the beginning of the financial year. The necessary legislative tax changes required to fund the budget are then calculated and put in place to operate from the beginning of the financial year.

### 2.3 Income for 1987/88

Assessed income for the 1987/88 year in \$M units is as follows:

Balance in NRF at 1.4.87	7.0
Net fuel tax at 9.9 c/litre	249.0
Net RUC with 9.7% increase	214.0
Miscellaneous Income	2.0
Investments	10.0
Transfer from Property Account	5.0
<b>Total</b>	<b>\$M 487.0</b>

## 3 ALLOCATION OF FUNDS

### 3.1 Distribution of Funds

Under the National Roads Act, the Board is required in December each year to estimate its income for the following year and make its primary allocations of funds. The Board then prepares a final programme of road works for the coming year. At the present time there are three sectors and funds are allocated on the following basis:

- a for local authorities - not less than 39% of revenue;
- b for State Highways - not less than 47%; and
- c for the 'miscellaneous' sector - at the discretion of the Board.

The funds are allocated by the Board to each sector in each Roads District as fairly and equitably as possible having regard to particular needs.

The Board is required to provide for the full cost of State Highway works and to subsidise the local authority roading works that can be accommodated within its approved programmes. Due to limitations on Board funds, not all roading works are subsidised and many local authorities carry out works which are unsubsidised.

### 3.2 Subsidy Rates To Local Authorities

The Board's policy on subsidy rates is based on the consideration that the ability of a local authority to finance its roading programme stems directly from its rating base. Hence a base rate for each authority is determined from a formula which reflects the size of its approved Basic Programme in relation to the net equalised land value of the authority.

Base rates vary from a statutory minimum of 43% to a maximum of 75% as shown in Figure 2. Higher rates are available for roading improvement works depending on their economic merit. On average local authorities receive 50% of their costs.

### 3.3 Allocation for 1987/88

The Board's approved allocation for 1987/88 is as follows:

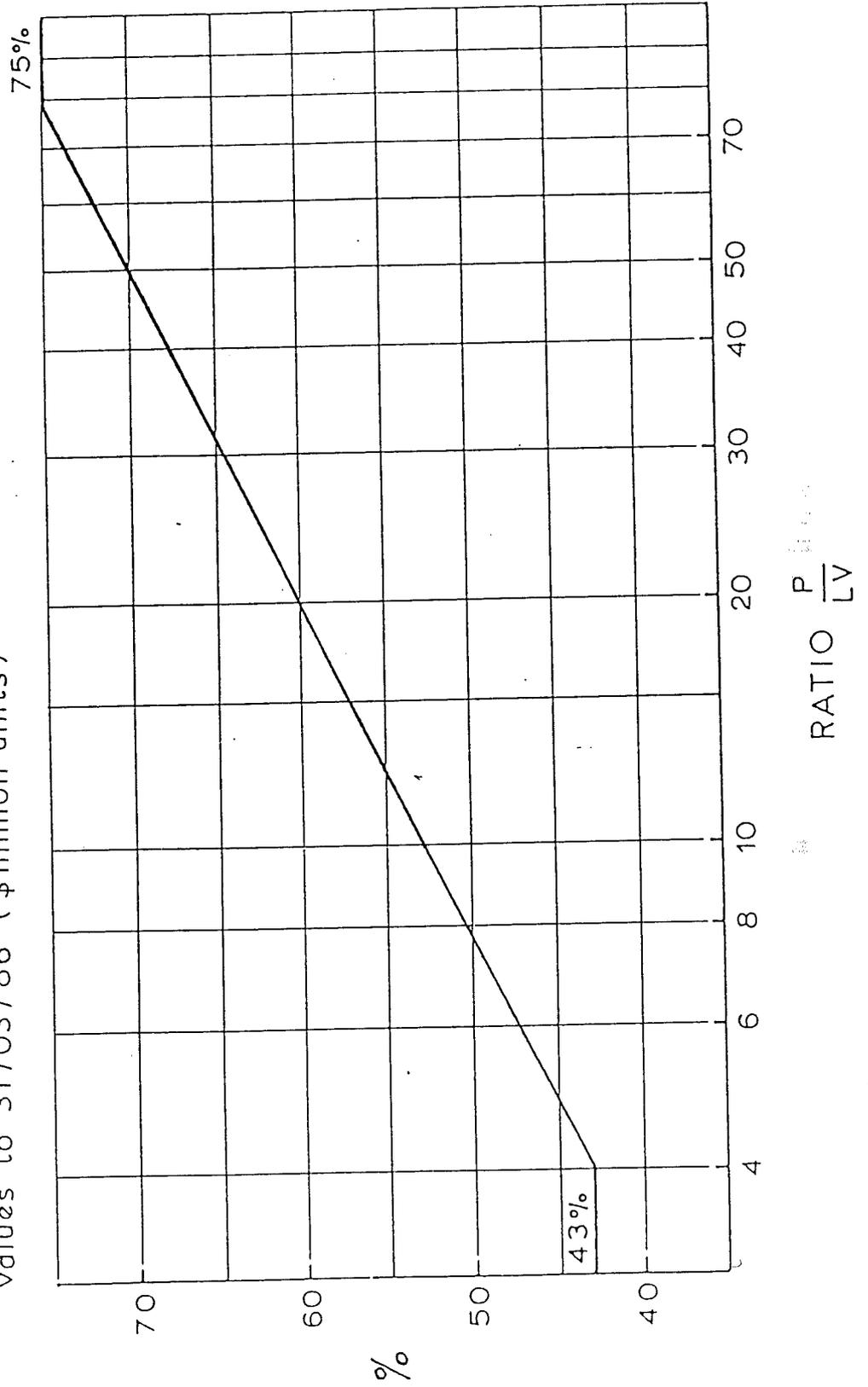
	<u>\$M</u>
State Highways	227.5
Local Authorities	190.0
Miscellaneous Sector	
Engineering & Administration	43.8
Flood Damage	16.0
Special Purpose Roads	1.4
Miscellaneous	8.3
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	69.5
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	\$M 487.0
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FIGURE 2

BASIC SUBSIDY RATE

$$1987/88 \text{ subsidy \%} = 28.16 + 24.52 \log_{10} \frac{P}{LV}$$

Where P = Total basic programme excluding loans for 1987/88 (\$000 units) and LV = Average of the three latest net equalised land values to 31/03/86 (\$ million units)



## 4 PROGRAMMING

### 4.1 Work Categories

For each of the State Highway and Local Authority sectors, the programme is broken down into three work categories, namely Basics, Bridge Renewals and Construction. Basic needs [i.e. general maintenance, resealing, shape correction and bridge repairs] usually have first call on Board funds followed by bridge renewals. Construction works then compete for remaining funds on a national priority basis according to their economic merit.

### 4.2 Programming Cycle

As mentioned in Section 3.1, the Board meets in December each year to consider its income and allocation level for the following financial year. The programme approved at that time is then 'reviewed' during the financial year in July and December mainly for the purpose of adjustment rather than in expectation of additional funds becoming available.

District Roads Councils usually meet during October to consider the supporting information submitted with Local Authority and State Highway programmes and make recommendations on funding priorities to the Board.

A second meeting is held towards the end of May prior to the Board's July review meeting. This means that if Board funds are being sought for forestry access projects in a particular financial year, discussions should take place with the road controlling authority preferably two years in advance such that detailed proposals can be submitted for consideration by the District Roads Council.

The programming cycle for a typical financial year is shown in Figure 3.

## 5 SETTING PRIORITIES

### 5.1 Economic Merit

The Board has adopted the 'economic merit' criteria as its basis for determining priorities for roading improvements. The economic merit of a project is determined by its "benefit/cost ratio" whereby the benefits derived from carrying out the work are compared to its capital cost. The main benefits to the road user which can be quantified in dollar terms are:-

FIGURE 3

# NATIONAL ROADS BOARD PROGRAMMING CYCLE

Discuss project with road controlling authority

Submit proposals for funding

DRC meeting to recommend programmes and priorities

NRB meeting to decide national programmes and priorities

Carry out approved programmes

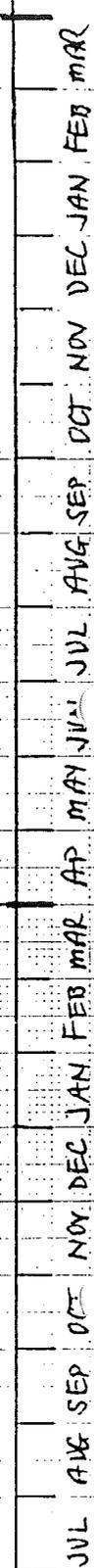
Submit proposals for programme reviews

DRC meeting to recommend review priorities

NRB review of programmes

Lead time

Financial year programme is effective



- reduction in accidents [making roads safer]
- savings in travel time [reducing delays route shortening]
- savings in vehicle operating costs [making roads smoother and easing adverse gradients]
- savings in annual maintenance costs.

The Board also takes account of intangible or non-quantifiable benefits which cannot be measured in dollar terms such as reductions in:-

- detrimental effects of road dust on crops and pastures
- noise levels
- damage to commodity being carried
- pollution.

## 5.2 Priority List

Improvement works recommended by District Roads Councils are arranged in a national priority list in descending order of benefit/cost ratio. Works are then funded from the top down until the Boards funds are exhausted.

## 6 UPGRADING OF PUBLIC ROADS FOR FORESTRY ACCESS

### 6.1 Boards Stance

The Board derives its revenue from the road user and hence accords greatest priority to those projects which provide most benefit to that revenue source. Revenue from road user charges is designed to provide maintenance and improvement of the existing road system arising from normal growth and development; it is not designed to cope with the substantial growth associated with large scale forestry or other such developments. Counties likewise cannot be expected to meet the cost of roading improvements associated with large scale developments including forestry operations. In particular the rating of forestry land is normally low in comparison to pastoral land because a growing crop cannot be rated. The Board considers that both corporate and private developers should contribute equitably to the cost of roading improvements made necessary by their actions.

This view is also shared by Government as evidenced by an extract from the statement made by the Minister of Works and Development regarding phasing out of the Developmental Roads Vote which reads:-

'The Government considers that it is appropriate that the roading costs formerly met by the Developmental Roothing Programme should be provided for by the promoter in question - the private land owner, project organisation, or the relevant Government agency.'

A copy of the National Roads Board submission No. 7985 which outlines the Boards stance is attached as Appendix A.

## 6.2 Road Classifications

In August last year the Board requested all roading authorities to reclassify their roads from Class II to Class I to the greatest extent possible without delay. Many authorities have been reluctant to respond due to their perception of widespread damage being caused to some roads. Many of their fears could be allayed by forest owners maintaining a combined dialogue with roading authorities to identify pending harvesting activity and destination points such that designated logging routes can be identified.

## 6.3 Cost Sharing Agreements

Some local authorities have already been involved in setting up cost sharing agreements with forest owners.

One authority has introduced a 'bond payment system' whereby the forest owner pays a bond prior to using a haulage route previously designated by the authority. A joint inspection of the route is undertaken before and after log cartage and agreement reached between the parties as to the extent of damage directly attributable to log cartage. The road is then reinstated back to its original condition using bond monies already paid and the remaining bond money is refunded. It would be expected that if the road was to be used for a continuous period inspections would be arranged at regular intervals to enable more effective maintenance management.

In another instance, where substantial upgrading was required, the level of contributions from the forest owner was based on total vehicle numbers for road formation costs and total axle loads for pavement costs.

#### 6.4 LIRA Workshop : July 1985

Upgrading of forestry access roads was one of the topics covered at the above workshop and it was considered that a standard method or formula for determining a cost sharing arrangement between forest owners and road controlling authorities should be established. It was felt that initial research could be carried out by canvassing all local authorities who have negotiated cost sharing agreements in the past, and reporting on their derivation and administration. The researcher would then be in a position to recommend a cost sharing arrangement suitable for adoption on a national basis. Progress to date is not known by the author.

#### 6.5 Transportation Studies

In recent years the Board has provided financial assistance for transportation studies to be undertaken in various regions. These studies have identified areas of potential traffic generation and made recommendations on the extent and timing of improvements to be made to the roading network. No doubt forestry interests have provided input into these studies.

### 7 SUMMARY

- 7.1 The National Roads Board's stance is that revenue from Road User Charges is not designed to cope with the substantial growth associated with large scale forestry or other such developments and that developers both State and Private, should contribute equitably to the cost of roading improvements made necessary by their actions.
- 7.2 Forest owners need to determine the volume and destination of logging traffic, together with the proposed haulage route at an early stage, such that the roading authority has sufficient time to plan any upgrading required.
- 7.3 Several local authorities are aware of the demands of forest generated traffic and have established their own agreements with forest owners for funding associated roading work.
- 7.4 The recent LIRA workshop saw the establishment of a standard method of funding to be of a high priority.
- 7.5 With timber production expected to double over the next 15 years, the demand for upgrading public access roads to forests will also increase.

APPENDIX A

NATIONAL ROADS BOARD

62/80/5

SUBMISSION NO. 7985

RJD:SHM      JUNE '84

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SUBJECT:    IMPACT OF FORESTRY ON ROADING

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At the November 1983 meeting the Board considered a press statement on the cost options associated with the movement of timber from Mohaka to Napier and requested that a review be carried out of the relevant decisions made by the Board on the impact of forestry on roading.

In attempting to review Board decisions all relevant submissions back to 1970 were examined and the following summarises the findings.

In 1973 the Board considered the implications of log cartage from the Tairua Forest using State Highway 25. Funds were provided at that time for upgrading of the route.

A policy statement on roading for developers was considered and adopted by the Board in August 1980 in Submission No. 6500. It stated that revenue from Road User Charges is designed to provide maintenance and improvement of the existing roading system arising from normal growth and development; it is not designed to cope with the substantial growth associated with large scale forestry or other such developments.

The submission also pointed out that Counties likewise could not be expected to meet improvements associated with large scale developments including forestry operations. In particular the rating of forestry land is normally low in comparison to pastoral land because a growing crop cannot be rated.

The resolution of the Board at that time stated:

- (a) That the Board reaffirms its view that developers, both State and private should contribute equitably to the cost of roading improvements made necessary by their actions.

SUBMISSION NO. 7985

- (b) That the Board acknowledge the intense competition from roading authorities throughout New Zealand for the limited funds available for construction purposes and in so doing
- (c) Advise the New Zealand Forest Service and Treasury that it is unable to meet the cost of reconstructing roads made necessary by forestry development from its normal revenues derived from Road User Charges.
- (d) That the Board acknowledge that provided roads are built to requisite standards to cater for their intended use, the income derived from Road User Charges will cover future maintenance.

In October 1980 the Board was advised of the allocation by Government of Developmental Roding funds for forestry and tourist routes. While funding from this source has continued over recent years the allocation is small in relation to needs (\$568,500, 1983/84).

Since 1980 a number of reports on the impact of forestry on roading in such areas as Waimea County and the Bay of Plenty have been presented to the Board, but policy decisions were not made as a result of these reports.

In September 1981 the New Zealand Forestry conference sparked further discussion on forestry roading which resulted in Submissions 6934 and 6971 to the Board in August and September of that year. The offshoot of the latter submission was an appointment of a sub-committee to discuss with the Forest Service the funding and other related issues of roading and forestry operations. This sub-committee met with the Forest Service on 17 November 1981, but no decisions came from this meeting.

In recent months the Forestry Council has expressed a desire to discuss the funding of forestry roading, but no firm meeting date has been suggested.

A number of local authorities have attempted, through their District Schemes, to impose conditions which lead the way to forestry development on suitable land yet provide a forum for discussion on such issues as the funding of roading improvements.

SUBMISSION NO. 7985

Because of the wide variation in conditions and in the way forestry development is permitted under present District Schemes it would appear appropriate that further discussions be initiated with the local authority associations and the Forestry Council. Over and above the forestry development issue there are other commercial and industrial developments which also have an impact on the roading network. The contribution of the developer towards roading improvements and/or maintenance for these developments need to be recognised.

Recommendation

That the Board:

- (a) notes the previous policy decisions;  
of planning procedures and
- (b) refers the matters of funding contribution towards improvements and/or maintenance by major developments including forestry in the first instance to the liaison committee with the purpose of reporting back their findings; and
- (c) notes the need to discuss the funding of forestry roading with the Forestry Council at a later date.



R J Dunlop  
for Director of Roading

RECOMMENDATION ADOPTED