

VICTORIA

VICTORIAN TRANSPORT STUDY

REPORT ON
METROPOLITAN PUBLIC TRANSPORT

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VICTORIAN TRANSPORT STUDY

The Honourable R.R.C. Maclellan, M.L.A.,
Minister of Transport,
570 Bourke Street,
MELBOURNE. Vic. 3000.

Dear Mr. Maclellan,

I have the pleasure to submit herewith a report on
Metropolitan Public Transport.

This is one of a series of reports being prepared
to make known the results of the Victorian Transport Study.

Yours sincerely,


W.M. Lonie.

METROPOLITAN PUBLIC TRANSPORT

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SUMMARY

For nearly 60 years transport of the public throughout the metropolitan area was dominated by the fixed rail systems of the Victorian Railways Board and the Melbourne & Metropolitan Tramways Board with their principal focus on the Melbourne city centre, the Central Business District.

With the post World War II doubling of the population and the shift of the centre of population some 13 kilometres east of the traditional city centre, transport of people in the metropolitan area has undergone a marked and radical change.

Since 1955 when public transport facilities handled 50% of the total passenger travel in Melbourne, daily people travel movements in the metropolitan area has trebled. However, the number of people travelling via the services offered by the public transport authorities has declined by 50% to slightly more than 250 million per year, a level which is lower than that pertaining some 70 years ago. Travel by the public transport tram and train services is now only of the order of 10% of total travel within the metropolitan area. Travel to the Central Business District now represent slightly less than 10% of the total number of trips carried out in the metropolitan area.

As the public transport authorities are still operating services of a similar nature to those offered in the heyday of the fixed rail services, decline in patronage has seen a coincidental, characteristic, and substantially increasing associated cost structure.

The result of providing public transport services at present levels and under current fare structures is that government has been faced with the payment of increasing subsidies, or revenue supplements, to cover the operating losses being incurred by all types of public transport services except taxis. In 1978-79, these subsidies amounted to approximately \$98.8 million.

This report briefly reviews the development of public transport in Melbourne and services provided by railways, trams, buses and taxis. The part now played by the private motorist and other private transport arrangements in the transport of people throughout the metropolitan area, is also reviewed.

The effects of changed levels of utilisation of the public transport system and possible future patronage of those systems are examined.

Whilst the 2.7 million people living in the metropolitan area appear to have evolved what is principally a widespread privately operated transport system, there is still a continuing demand for various forms of public transport to cater for differing requirements in transport in various regions comprising the metropolitan area.

There is seen to be a need for adaption of the public transport system and services to more appropriately and more economically meet the needs of the people with particular need for public transport. There is little doubt that the cost of providing such services can be reduced substantially by rationalisation of the public transport services to the level of patronage offering, and by continued efforts to reduce the peak travel characteristics in public transport. Consequent reductions in the current high level of poorly utilised public transport facilities and improved operational efficiency could be effective in reducing the level of financial support by the public at large through subsidy and capital investment in public transport facilities.

Written submissions received by the Study are outlined and relevant aspects of planning for transport in the metropolitan area are discussed.

The need to adapt the public transport system to more appropriately meet current patronage levels is discussed, as are means to increase efficiency. Reference is made to problems in providing public transport in outer suburban areas.

The desirability of the establishment of a new Authority to assume responsibility for all metropolitan public transport is discussed, but this is not recommended.

Measures to rationalise the public transport system and the future role of trams as an on-street public transport mode are considered.

1.

1. INTRODUCTION

1.1 By the late 1920's Melbourne's existing electric suburban tram and train networks had largely been brought into operation although final electrification of the tram service was not completed until early 1940.

1.2 The suburban railway network actually served Pt. Melbourne, St. Kilda, Essendon, Oakleigh, Hawthorn, Williamstown, Sunshine, Brighton and Dandenong by 1880, and by 1890 services were operating to Melton, Broadmeadows, Coburg, Whittlesea, Heidelberg, Lilydale, Ferntree Gully, Frankston and Sandringham. The population of the metropolitan area amounted to less than 500,000 people at that time.

1.3 The early provision of this extensive public transport system enabled suburban development to proceed largely by the construction of detached dwellings and resulted in population densities much lower than those cities which grew prior to the introduction of mechanised public transport.

1.4 With the revival of economic activity in the late 1930's, and the war-time generated shortage of petrol the utilization of public transport peaked in the late 1940's.

1.5 However the use of public transport subsequently declined with the increasing ownership and use of private cars. Population and jobs have become dispersed and people travel, in the main, by private motor car. As recently as 1955 public transport provided approximately 50% of annual passenger travel in Melbourne. Since then travel in Melbourne has approximately trebled and the public transport share has dropped to little more than 10%. Over this period public transport patronage has declined from approximately 500 million per annum to slightly more than 250 million. Figure 1 illustrates changes in patronage.

1.6 This rapid change in patronage has been associated with increasing costs of operation and reduced productivity- the relatively greater reduction in off peak usage being an important factor in this. In 1978-79 direct Government subsidies to metropolitan transport amounted to \$93 million.

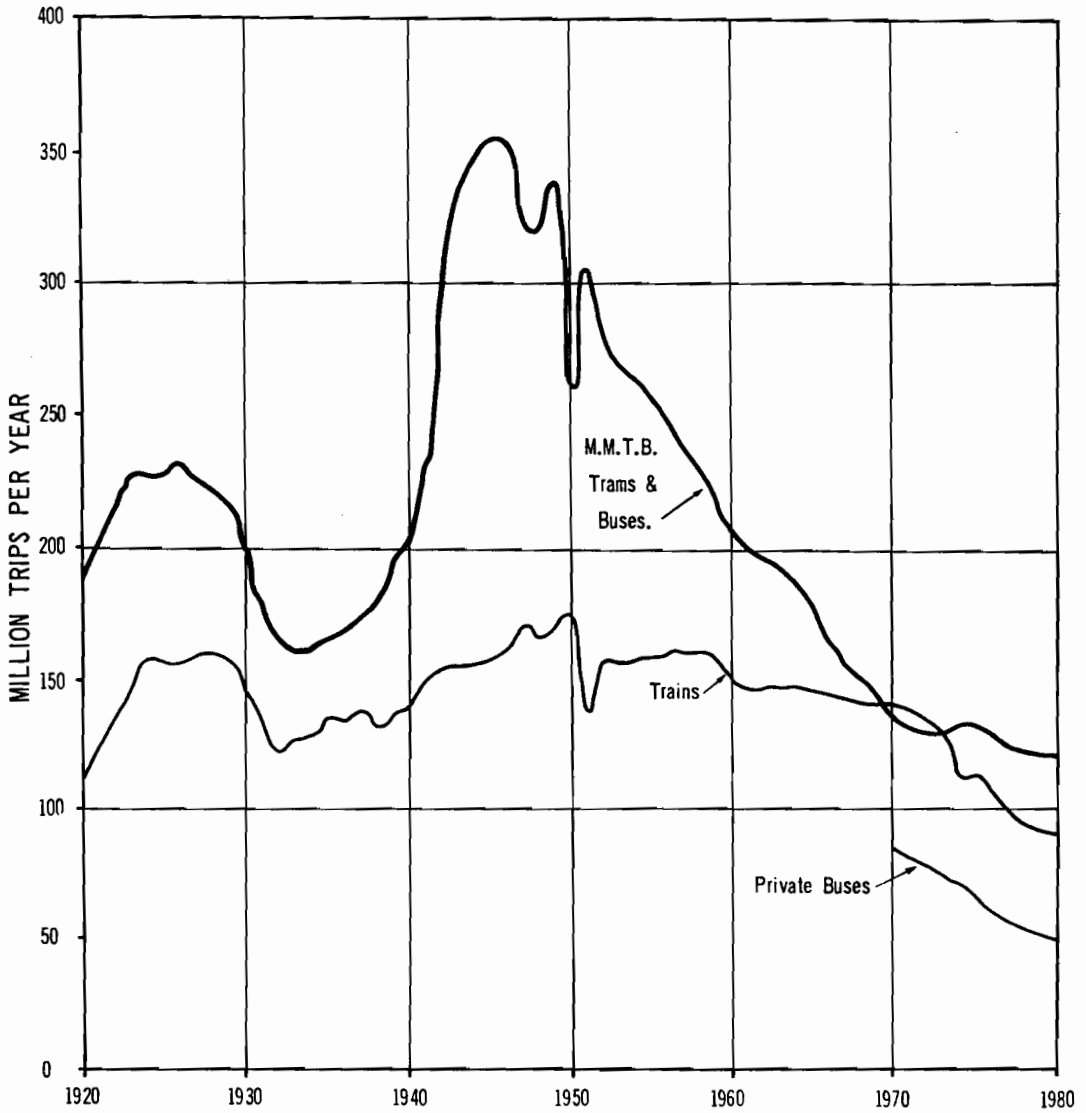


FIGURE 1 TRENDS IN PUBLIC TRANSPORT PATRONAGE

2. THE EXISTING SYSTEM

2.1 Melbourne's public transport is provided by the Victorian Railways Board suburban electrified system, trams operated by the Melbourne and Metropolitan Tramways Board, buses and taxis. Buses are operated by the M. & M.T.B., Vic Rail and by private operators. Bus and taxi services are regulated by the Transport Regulation Board.

Suburban Rail System

2.2 Suburban electric trains operate on 17 routes which radiate from the Central Business District and serve 198 stations. Routes vary in length from 5 km (Port Melbourne) up to 58km (Pakenham). Total route length is 306km. Figure 2 shows the extent of the system.

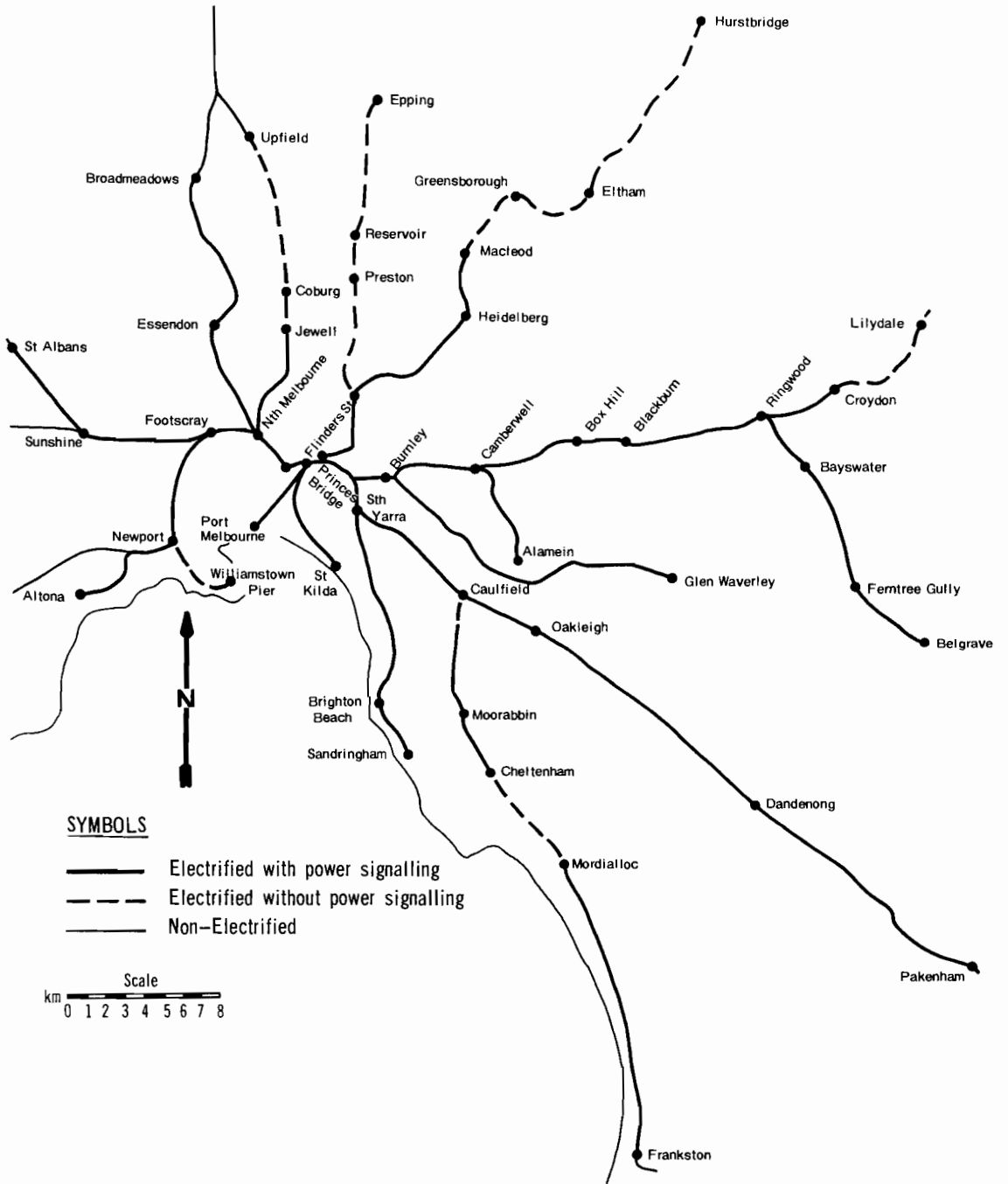
2.3 The system is mostly double tracked, although there are sections of single track in outer areas and sections of multiple track near the City and between the City and Footscray, Box Hill and Caulfield.

2.4 There are 140 train sets in the suburban fleet of which approximately 129 sets are required to meet weekday peak period timetables, the balance being required for emergency and to replace trains undergoing maintenance.

2.5 With the progressive opening of underground loop operations during 1980-82, a further three stations and four route kilometres will be added to the network while, at the same time, electrification to Werribee will add a further six stations and 18 route kilometres. According to Vic Rail, these additions will require a further 20 train sets to meet peak demands.

2.6 Despite very substantial changes in patronage the suburban electric rail system has remained largely intact since its original development. Two sections, between Royal Park and Clifton Hill and between Hawthorn and Kew have been withdrawn in the post-war period.

2.7 Trains operate each weekday from about 5a.m. until midnight. Peak period train frequencies range from 14 trains per hour on the Box Hill line to 3 trains per hour on the Altona line. Off peak frequencies are typically three or four trains per hour during the day and two or three trains per hour during evenings and on Saturdays. On Sundays 40 minute service is provided on most lines.



Source : V.R.B.

FIGURE 2 SUBURBAN ELECTRIFIED RAILWAY SYSTEM

2.8 During 1978-79 suburban trains covered 13.4 million kilometres and carried over 89 million passengers.

2.9 Although the suburban network has seen some expansion in overall physical capacity (an increase of 28 route kilometres, 76 track kilometres and more than 60 carriages over the past 20 years) much of this capacity has been absorbed in catering for an increase in the average length of journey from 13.9 to 16.2 kilometres during the same period.

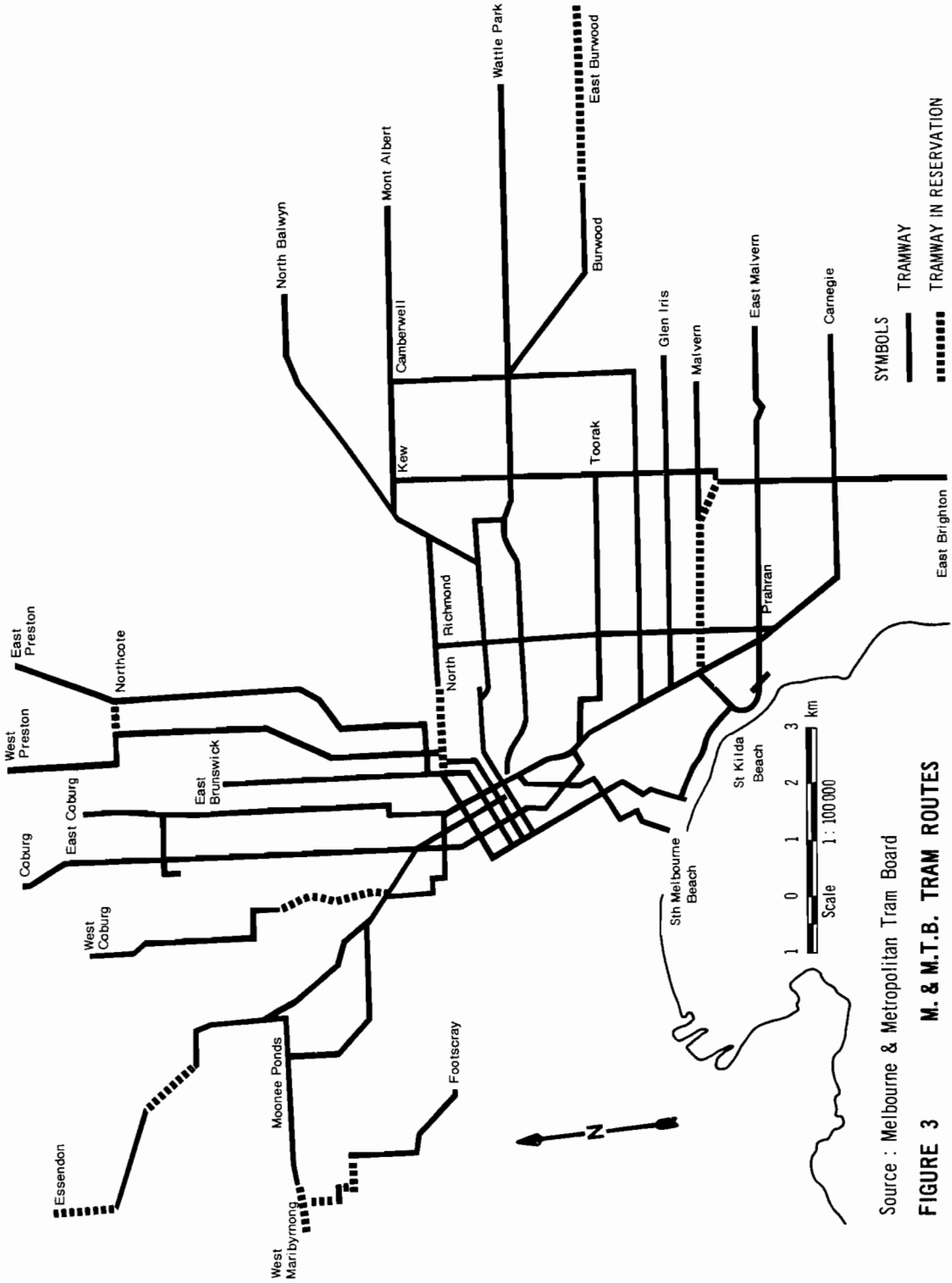
Metropolitan Tramway System

2.10 The tram network consists of 27 radial and four cross town routes, all within 19 km of the City area. Individual routes range in length from 2.3 km (City to Brunswick Street) up to 18.2 km (City to East Burwood). Total route length is 220km. Tram routes are shown in figure 3.

2.11 The current operational fleet comprises approximately 680 trams. Peak service requirements are for 510 vehicles.

2.12 Trams operate each day on all routes from about 6a.m. through until midnight. Service frequencies in peak periods are determined by patronage levels and range up to 8 minutes. During the day between the peaks, a ten or twelve minutes service is provided. After the evening peak a twenty minute service is provided.

2.13 During 1978-79 trams travelled 24.2 million kilometres and carried 101 million passengers.



Source : Melbourne & Metropolitan Tram Board

FIGURE 3 M. & M.T.B. TRAM ROUTES

Bus Services

2.14 Melbourne is served by buses operating along 266 routes. These routes are served by 64 private operators (225 routes), M.M.T.B. (38 routes) and Vic Rail (two routes).

2.15 Eighteen of the routes serve the CBD. The other routes serve local suburban centres, act as feeder services to railway stations and provide inter-suburban cross town services. The private operators provide the predominance of on-street public transport in the middle and outer suburbs.

2.16 The M.M.T.B. bus fleet comprises 270 vehicles of which 230 are required to meet peak period services. Private operators have approximately 1,100 buses and require about 700 to meet peak period route requirements.

2.17 With a few exceptions the private bus services generally close down about 6.30p.m. and do not operate on Saturday afternoons, Sundays and public holidays. While most M.M.T.B. services continue after the evening peak frequency is reduced: the City - Doncaster route, for example, operates one bus per hour.

2.18 During 1978-79, private operator buses carried 54.5 million passengers, M.M.T.B. buses 19.3 million and Vic Rail buses 0.7 million.

2.19 In 1977 a research project to provide data on the operation of demand responsive bus systems under Victorian conditions was initiated. Two experimental services were commenced, at Lilydale and at St. Albans. Private operators were commissioned to provide the services which were identified as Fone-A-Bus (St. Albans) and Telebus (Lilydale). The demand responsive aspects of the St. Albans service were terminated in October 1979. Service at Lilydale is still operating.

2.20 The Study Group has been advised that a comprehensive study of both services was undertaken. This would greatly assist in estimating the utilisation and costs of any future demand responsive bus system, however information available to the Study Group suggests that the extensive introduction of systems of this type would not be financially attractive.

Taxis

2.21 There are currently 2,876 taxis licensed for operation in the metropolitan area. Licence holders are required to join a co-operative or company operating a taxi depot. There are eleven such depots.

2.22 The Melbourne taxi service is acknowledged to be one of the best in the world as a result of the investment in radio communications equipment, the use of well maintained modern vehicles and the prevailing standards for people employed in the industry.

2.23 The approved fare structure provides for two tariffs:

Tariff 1 applies from 6.00a.m. to 9.00p.m.
Monday to Friday and from 6.00a.m. to 1.00p.m. Saturday.

Tariff 2, with a 20% loading applies to all other times.

2.24 From survey information it is estimated that approximately 30 million passengers are carried annually by taxi in the metropolitan area.

Characteristics of modes of Public Transport

2.25 The characteristics of the main public transport modes are:

- Trains - high capacity, one way single track capacity greater than 20,000 passengers/hour,
- higher speeds, suitable for longer routes,
 - minimum land use for high demand,
 - lower cost per passenger kilometre for high levels of utilisation.

However, trains are inefficient as passenger collectors and distributors with routes generally having a much larger capacity than the traffic generation of the rail mode alone. Train systems therefore need to be integrated with feeder services if their potential is to be exploited.

Trams and Buses

- operate principally on public roads and may be adversely affected by congestion,
- are more effective collectors and distributors of passengers,
- have a lower journey speed than trains but have a greater frequency for a given level of demand.

The advantages of buses over trams include greater flexibility and a lower cost per vehicle kilometre.

3. PATRONAGE TRENDS IN PUBLIC TRANSPORT

3.1 In its report on Metropolitan Roads, the Study Group described the situation regarding the use of transport in the Melbourne Metropolitan area in the following terms:-

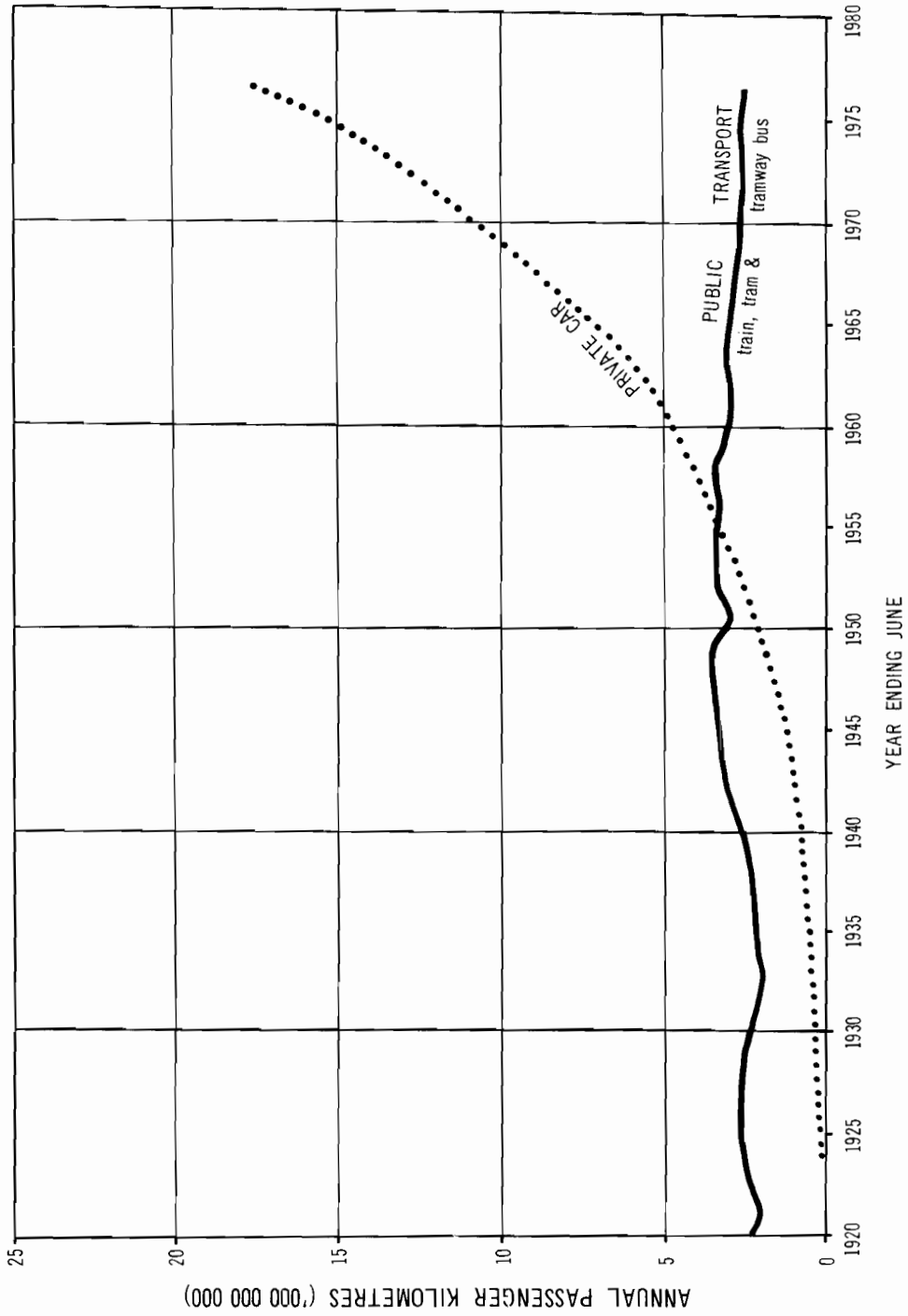
"Since World War II, as a result of a doubling in the population, and continued outward growth of the urban area, predominately to the east and south-east, the statistical centre of the metropolitan area has shifted to approximately 13 km to the east of the original city development, commonly called the Central Business District. As a result, the centre of population is now well to the east of the central focus of the radial train system which was largely developed by the turn of the century when the metropolitan population was of the order of half a million."

"In the Melbourne metropolitan area, the motor vehicle is now the dominant form of travel, (Figure 4 of this report) a domination which reflects the high standard of living and the nature of the urban development, in the post World War II period, and a highly mobile and flexible lifestyle."

"In the inner city area, the road system predated the evolution of the railway system. The tram system evolved in the context of the development pattern of the inner suburbs, and in the absence of any alternative other than horse drawn vehicles. The metropolitan city of the post World War II period developed in the context of freely available motor transport and motor fuels, a high standard of living, completely different economic conditions to those pertaining in the earlier pioneer period, a changing social environment, and completely different demands and expectations from the road system."

"The large number of motor vehicles used within the metropolitan complex of roads can be considered to be a reliable indicator of the State's prosperity and progress, and demonstrates peoples preference for a flexible transport system. At the same time there is a degree of criticism of the motor vehicle, and some advocate that people should be forced to use public transport. An interesting facet of the objection to the use of the motor car is the continuing use of motor transport, on account of its flexibility and convenience and reliability factors, by some of the objectors."

"The Ministry of Transport estimated that in 1977, 17% of households in Melbourne had no cars, 47.1% had one car, 29.5% had two cars and 6.4% had three or more cars. The percentage of households with no cars has fallen from 36.6% in 1964, and the percentage of households with two or more cars has risen from 14.0% in 1964 to 35.9% in 1977."



Source : Melbourne & Metropolitan Board of Works

FIGURE 4 ANNUAL PASSENGER TRAVEL IN MELBOURNE

"In 1964, there were 1.08 trips per person per day by motor vehicle in the metropolitan area, being 64% of the total trips per person per day. By 1972 these figures had risen to 1.83 trips per person per day, and 80% of the total trips. Based on preliminary results from the 1978-79 Home Interview Survey, conducted by the Ministry of Transport, it is estimated that in 1978 there were approximately 2.0 trips (or close to 88% of the total trips) per person per day by motor vehicle."

"The distribution of person trips per day by various modes in the Melbourne Statistical Division in 1978, obtained from the preliminary results of the above survey, is shown in Figure 5 of this report. It might be noted that, while Figure 5 indicates 270,000 person trips per day by tram, actual ticket counts indicate that this figure could be as high as 350,000. The difference could be due to a significant under-reporting of tram trips in the Home Interview Survey."

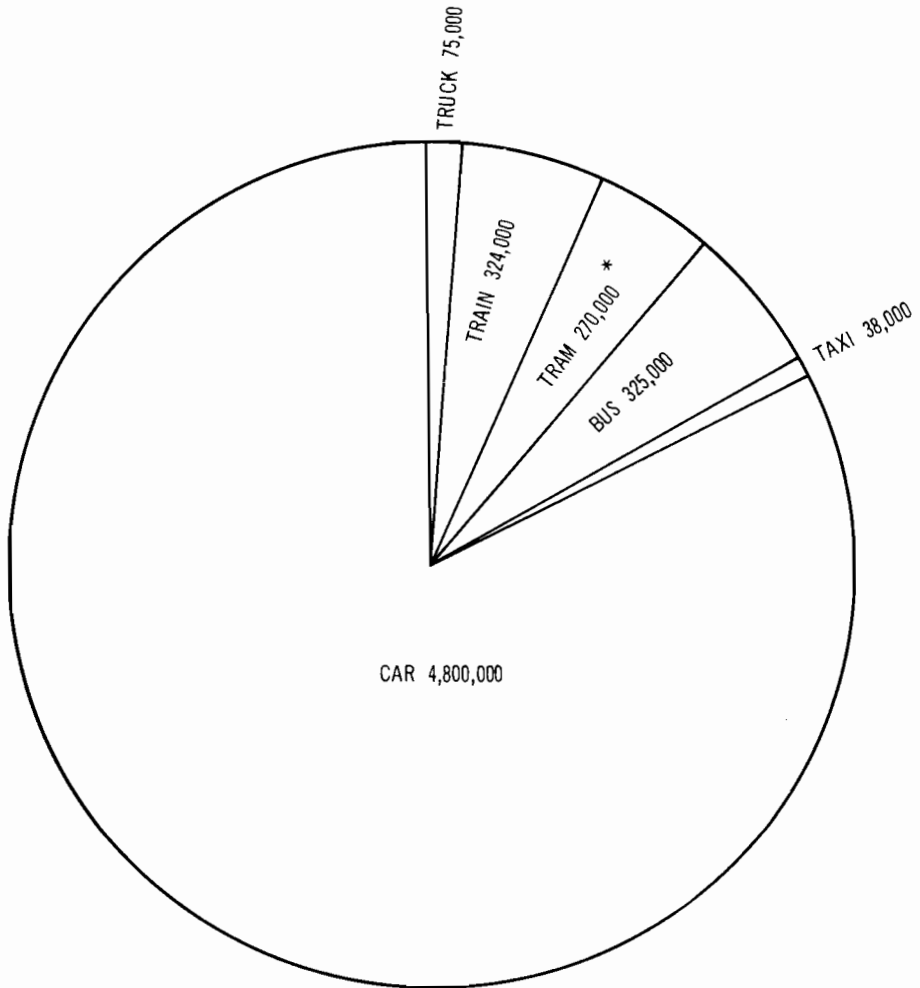
3.2 Of principal significance to this report are the levels of patronage and the nature of the changes in patronage of the fixed rail public transport systems operated under the direction of the Victorian Railways Board, the Melbourne and Metropolitan Tramways Board and the bus services provided by the M.M.T.B. and private operators.

3.3 The fixed rail suburban systems evolved in the absence of motor transport, but from the end of World War I faced increasing competition as motor transport evolved. During World War II patronage of the public systems reached a peak in the general absence of competition as a result of petrol rationing.

3.4 Since that time however, major changes have taken place to the extent illustrated by the foregoing. Coupled with these changes in patronage, other changes have taken place to the extent that the fixed rail transport systems are commercially bankrupt, requiring very substantial payments in the form of subsidy to balance the deficit between costs and revenue and in the form of grants to cover the purchase or construction of new assets.

3.5 The principal changes accompanying reduced patronage have been the substantial increases in costs of providing the transport services for the traveller in the fixed rail system. Whilst this is generally attributed to inflation and increases in labour cost, costs per passenger automatically increase if the level of service remains unaltered while patronage is falling.

3.6 For example, changes in demand and service levels which have occurred since the 1939-45 war, have approximately halved the productivity of the public transport systems, as indicated by the ratio passenger/kilometre run. This is shown in Table 1.



* See para. 3.1

Source : Ministry of Transport

**FIGURE 5 PERSON TRIPS PER DAY BY VARIOUS MODES
IN THE MELBOURNE STATISTICAL DIVISION 1978**

TABLE 1

PUBLIC TRANSPORT PASSENGERS CARRIED AND KILOMETRES RUN - POST WAR PERIOD

MODE	YEAR			
	1948/49	1958/59	1968/69	1978/79
Rail				
Passengers (millions)	165.0	158.6	140.8	89.8
Kilometres run(millions)	12.7	13.4	13.0	13.4
Ratio	13.0	11.8	10.8	6.7
Tram				
Passengers (millions)	266.4	183.8	119.0	101.1
Kilometres run(millions)	37.2	32.7	25.9	24.2
Ratio	7.2	5.6	4.6	4.2
M.M.T.B. Bus				
Passengers (millions)	72.3	32.2	24.3	19.9
Kilometres run(millions)	13.0	9.5	11.4	12.9
Ratio	5.6	3.4	2.1	1.5
Private Operators				
Passengers (millions)			80.0	54.5
Kilometres run(millions)			35.1	35.2
Ratio			2.3	1.5

3.7 Table 1 shows that the productivity of the rail system has declined by 48.5% over the 30 year period 1948-49 - 1978-79 as a result of a decline of 45.6% in patronage, whilst the distance travelled by suburban trains system has actually increased by 5%. This has been associated with an increase in average passenger journey length of 25%, from 12.2 km to 16.3 km, since 1950. Similarly, by the same measure of performance, productivity of the tram system has declined by 41.7% and the M.M.T.B. bus system by 73.2% over the same period. One reason for the extent of the latter change was the replacement of buses by trams on the East Preston/East Brunswick routes in 1955 and 1956.

3.8 The ratios passenger/kilometre run and passenger kilometres/kilometres run are both used to express the productivity of public transport systems. If the latter ratio had been used a lesser rate of decline would result - particularly for rail. The changes in the former productivity index in respect of each of the public transport modes is shown in figure 6.

3.9 In financial terms the effect is one of approximately doubling the cost per passenger carried in real terms, and as increases in fare revenues have not kept pace with this lower productivity, the result has been to increase substantially the current loss situation.

3.10 In reflecting on the reasons for the decline in patronage over that period, the obvious answer is of course the convenience and flexibility of the motor car. Other factors have contributed in substantial measure to the decline, including:

- The nature of post war urban development of the metropolitan area beyond the limits of the tram system and between the radial arms of the rail system.
- The consequential shift of work opportunities, shopping, community services and recreational opportunities into the "new" Melbourne area, and the creation of new business districts.
- The decline in population in the previous core of the Metropolitan area - the City of Melbourne and the inner suburbs, the previous catchment areas for the fixed rail systems.
- The decline in work opportunities in the Central Business District.

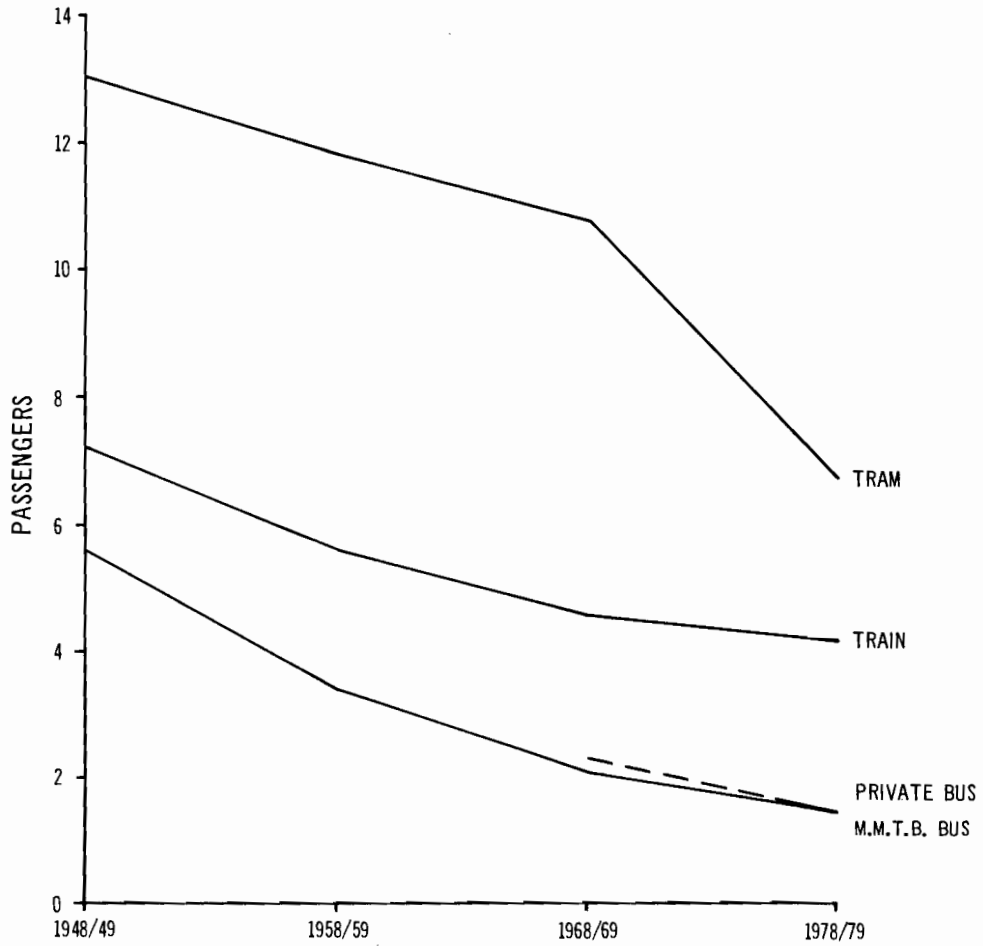


FIGURE 6 PASSENGERS CARRIED /VEHICLE KILOMETRE

3.11 On the basis of preliminary results of the 1978 Home Interview Survey conducted by the Ministry of Transport, travel characteristics in the metropolitan area have changed substantially as a result of the post war developments. The role of the public transport system in travel is shown in Table 2.

3.12 The importance of this particular survey is the perspective it gives of the relative importance of travel by public transport facilities, and the relative importance of travel to the Central Business District of Melbourne.

3.13 For example, on the basis of these survey results:

- Travel by train in the Melbourne suburban area accounts for only 5.5% of the total number of trips carried out by all forms of transport.
- Travel by tram in the Melbourne suburban area represents only 4.7% of travel by all forms of transport.
- Bus trips in the Melbourne suburban area represent 5.6% of the total number of trips.

An analysis of travel on the basis of passenger kilometres, rather than trip numbers, would increase the share of travel by rail.

TABLE 2

PERSON TRIPS PER DAY BY VARIOUS MODES IN 1978 MELBOURNE
STATISTICAL DIVISION AND TO OR FROM THE C.B.D.
 (Source; Preliminary results of 1978 Home Interview Survey)

MODE OF TRAVEL	Throughout Melbourne Statistical Division		To or from CBD	
	Trips (Thousands)	Percent	Trips (Thousands)	Percent
Car driver	3,393	58.0	168	29.6
Car Passenger	1,385	23.7	58	10.2
Other	145	2.5	10	1.7
Train	324	5.6	158	28.0
Tram	274 (I)	4.7	152	27.1
Bus	325	5.6	20	3.5
Total Public Transport	923	15.9	330	58.6
TOTAL	5,846	100.0	566	100.0

(I) Actual ticket counts indicate that this figure could be as high as 350,000.

3.14 Of even more importance in any consideration of the radial public transport system are the revelations that:

- Total trips to the Central Business District now represents only 9.7% of the total number of trips carried out in the metropolitan area.
- Rail trips to the Central Business District involve only 2.7% of the total number of trips carried out in the metropolitan area.
- Tram travel to the Central Business District accounts for only 2.6% of the total trips in the metropolitan area.
- Trips by public transport to the Central Business District involve 5.6% of the total trips carried out in the Melbourne metropolitan area.

3.15 On the other hand the same basic statistics could be interpreted as follows:

- 15.9% of the total trips carried out in the Melbourne metropolitan area are carried out by public transport.
- 58.6% of the total trips to the Central Business District are carried out in public transport, and
- Trips to the Central Business District represent 35.8% of the total trips by public transport.

3.16 The synergistic relationship between the fixed rail public transport system and the Central Business District is nevertheless historical, and whilst the proportion of travel activities carried out on public transport is low, the numbers of people still using the traditional method of transport to the Central Business District, for work, study, shopping and recreation are still significant. It is necessary to ensure that the task being carried out by the public transport Authorities is kept in perspective and that the special nature of these transport tasks is recognised.

3.17 A factor which is not generally recognised in the context of the public transport network is the important role being played by buses in transporting people throughout the

Melbourne metropolitan area, and particularly in those parts of the Metropolitan area which developed in the post World War II period, and which are described in M.M.B.W. reports as the "new" Melbourne.

3.18 In Clause 3.1 a comment was made that the doubling of Melbourne's population had resulted in the centre of population being located 13 km to the east of the Central Business District. Of relevance to comments on the use of buses in the metropolitan area is that the whole of the "new" Melbourne is beyond the normal catchment area of the tram system, which evolved in the context of early 20th Century development from a city and inner suburban cable system to a 10km radial electrified system.

3.19 As a result the bus system, based on operation of private buses in most of the outer metropolitan area and M.M.T.B. buses in some areas, is one which evolved in response to public demand, in parallel with increasing use of the motor car.

3.20 The task is difficult, because the travel requirements of many people living in the outer metropolitan areas and using buses are not related to the Central Business District. As will be seen by reference to table 2, only 6% of the total bus trips are direct trips to or from the Central Business District. However it has been estimated that, after allowance for feeder trips to other modes, approximately 20% of bus travel relates to Central Business District travel.

3.21 Nevertheless to the people involved, travel by the publicly supported bus systems is of equal significance, wherever performed, to travel in the long established rail systems, and as a result government has seen fit to support private enterprise bus operators in the outer areas, in the face of declining patronage of similar proportions to the decline which has taken place on the fixed rail systems.

3.22 In recent years, notwithstanding continuing demands for improved services and improved frequency of services in the outer areas, the private operators have been forced into a situation of seeking and obtaining government subsidy to maintain the current network of services at a level of patronage which in normal commercial terms would not support such services.

3.23 Comprehension of the nature of the task being carried out by the Authorities is distorted by pressures to maintain services, irrespective of cost, by those dedicated to the use of the existing system, and by those employed to provide these services. Pressures are also applied to maintain fares at levels considered reasonable by the patrons to also contribute to the continuance of services.

3.24 Having successfully established a situation where the gap between costs of providing services and the collected revenue is the subject of subsidy by the people at large, through government subsidies, the users of and providers of the service are then in a situation where the service may continue irrespective of cost, unless the provider of the subsidy is called to account for its magnitude.

3.25 In the case of the Melbourne metropolitan public transport services, the subsidies are reaching significant proportions and the replies received to questions concerning the need for subsidy are not based on the financial justification for the costs being incurred, or the lack of revenue to offset costs, but rather on the basis that:

"all public transport systems throughout the world are subsidised."

Whilst this might be so, the questions which must be asked are:

- Is there a need to subsidise the metropolitan public transport services?
- Why is there a need to subsidise these services?

3.26 In 1975 a survey of private operator bus passengers was carried out. The results of the survey can be summarised as follows:-

- People who could not use a car for the trip accounted for 95% of passengers.
- 37% of passengers were from households with no car.
- Trips with an essential regular purpose (work, school, shopping) represented 82% of all journeys.
- 75% of passengers of eligible age did not hold a current driving licence.
- Two-thirds of passengers were female.

- Off peak trips were primarily shopping trips.
- The peak hours were dominated by young captive passengers making work or school trips.

3.27 In 1978 M.M.T.B. passengers were surveyed. Among the results were:

- The proportion of 18-24 year old passengers is well above their census representation.
- Travel by workers (55%) and students (24%) constitutes almost 80% of the trips made.
- 55% of passengers stated that they did not have a car for their journey.
- Passengers come from households with a higher car ownership rate than the Melbourne average (1.28 as opposed to 1.21 per household).
- Compared to the general Melbourne income distribution passengers with jobs are more likely to be either on low incomes or high incomes than medium incomes. This reflects two distinct travel markets - people with low incomes dependent on public transport, and white collar workers.

3.28 The report prepared by Alan M. Vorhees & Partners Pty.Ltd., for the Australian Institute of Urban Studies on travel habits of people employed in the Central Business District and adjacent business areas, in connection with a study on "Staggered Work Hours and Peak Hour Congestion in Melbourne" revealed travel characteristics shown in Table 3.

Whilst the reason for the difference between the two surveys is not clear to the Study Group, the items of relevance to this particular report is the apparent level of patronage of the public transport systems.

TABLE 3MAJOR MODE FOR SURVEYED TRIPS

<u>MODE</u>	<u>EMPLOYEE SURVEY %</u>	<u>EMPLOYER SURVEY %</u>
Walk	1.74	1.17
Car	39.33	28.00
Train	42.79	48.75
Bus	2.83	5.20
Tram	11.83	16.22
Other	1.32	0.66
No response	0.16	
	100.00	100.00

3.29 Information from the preliminary analyses of the 1978 Household Interview Survey shows that more than 80% of passengers on all public transport services have a lower income than average weekly earnings. To some extent the influence of the high proportion of student travellers during peak periods and a high proportion of concession travellers in off peak periods would tend to weight the average income of public transport passengers towards the lower levels.

3.30 The Study Group cannot avoid commenting on the significance of student travel on the level of peak period public transport services being provided. Surveys have shown that 22% of morning peak period travel on M.M.T.B. services, and 27.5% of morning peak period travel by private buses is by students.

3.31 Not only is the direct cost of this travel a charge against the operation of the public transport facilities (only some of which is recovered through reimbursements) but the equivalent of one in every four trams and buses operating in peak periods are being provided to carry students.

3.32 Not all students travel by public transport facilities however, as in recent years private arrangements have been made by a number of school authorities for buses to be made available either through purchase or contracts, to carry students to particular educational facilities by specific routes. All such bus operations are the subject of Transport Regulation Board Regulation and licencing.

3.33 The Study Group was advised that not all proposed arrangements such as this are authorised by the Transport Regulation Board, because the Board is required to have regard for the existing public transport services. As a result the regulation and licencing policies of the Board, acting under the Transport Regulation Act can apparently compound the peak period travel problems of the public transport Authorities. Furthermore as the need is to provide additional vehicles for utilisation for no more than 25 hours per week of peak hour travel, the regulatory process as currently carried out can contribute to the massive capital expenditure required for the provision of peak hour services, however well intentioned. However, capital costs would also be involved if charter buses were to have an increased role in the transport of students.

3.34 Perhaps the most significant feature arising from this brief review of the nature of patronage of the public transport system is that urban transport is not the homogeneous task of carrying people that many would imagine. It is obviously a task of providing transport for a varying number of groups of people, requiring to travel for different purposes, under different circumstances and at different times throughout the day.

3.35 As a result, the inflexible nature of the fixed rail systems and the relatively inflexible time-table control over both fixed rail and bus systems cannot provide the flexibility offered by the privately owned and operated motor car, or the conditions pertaining to travel by motor car that most patrons of public transport (when asked) wish to see.

3.36 In endeavouring to provide the type of transport services requested by patrons and/or interest groups, those involved in the provision of public transport are facing the dilemma as to what can they offer the patrons within the constraints of equipment and finance availability.

4. FUTURE PATRONAGE

4.1 The Melbourne and Metropolitan Tramways Board prepared for the Study Group a technical report titled "Projections of Street Public Transport Patronage: 1980-1990." The report discusses factors which affect public transport use, how these may change between 1980 and 1990, and their likely affects on public transport patronage.

4.2 The factors considered in the report include

- population
- age structure
- participation in the work force
- car availability
- residential and employment location
- pricing (fare levels and motoring costs)

Particular reference was made to

- population growth in outer areas beyond the reach of public transport
- reducing household size, and consequently population in areas well served by public transport
- declining employment in inner areas

4.3 The report conclusions may be summarised as follows:-

- Given present real fare levels, total tram and bus patronage in 1990 is estimated to be between 170 and 240 million, with the most likely value being about 200 million, an average increase of 1.6% per annum over the 1980 patronage levels.
- Given the "most likely" scenario of the report the current operating subsidy could be eliminated by increasing fares by about 70% in real terms. Tram and bus patronage in 1990 would, in this case, be likely to be about 160 million, a decrease of 0.9% per annum from the 1980 patronage level. This projection makes assumptions concerning productivity improvements which would require substantial capital investment.

4.4 The section of the report concerning the elimination of subsidies acknowledges that data on the effects of fare rises is difficult to obtain (recent fare adjustments in Melbourne have been very small or in some cases negative in real terms).

4.5 The assumptions made in the M.&M.T.B. report concerning increases in car availability are similar to those made in the Study Group Report on Urban Roads.

4.6 The major reason this increased car availability is not projected to have the substantial effect on public transport patronage which might be expected is that many of the cars will be acquired as additional vehicles by families who already have low public transport utilisation.

4.7 The Study Group does not have a similar study of future rail patronage but examination of the M.&M.T.B. report shows that almost all of the factors considered would affect urban rail patronage to a similar extent.

4.8 The principal conclusions which the Study Group has drawn are:

- . There is no need to retain fixed rail modes where they are now uneconomical to provide for a patronage increase which some people might have expected to arise because of increased petrol prices.
- . An assumption that the present patronage level of the public transport system will continue, provides an appropriate basis on which to rationalise and restructure for increased efficiency.

4.9 While it is acknowledged that public transport service, and costs, may be varied in response to changed demand, it is also important that where investment in fixed assets, such as trackwork, are proposed that the planning and evaluation be based on the best possible patronage estimate. Thus it is recommended that adequate resources are allocated to the necessary research to establish and update knowledge of the basic relationships between population, car availability, fares, etc. and public transport patronage.

4.10 It is important to recognise the effect that changes in policy regarding the provision of the public transport system may have on patronage level. For example, if changes are made to the concepts relating to student travel, and arrangements for bus travel by specific routes, for specific schools, become widespread, the need for 22-24% of peak hour travel on the public transport facilities could well disappear.

4.11 Similarly, travel by concession holders is likely to become a very significant factor insofar as statistics of travel are concerned, at times of declining patronage, without any considerable offset in revenue being visible.

4.12 The Victorian Division of the Australian Institute of Urban Studies conducted its review of staggered hours and flexible work schemes during 1977 and 1978. The study was confined to the Central Business District and its fringe area for two reasons, one being limitations on resources, and the other on the basis that this was the principal area in the metropolitan region where substantial changes could most likely be made (successfully).

4.13 The study was made in the context of State Government encouragement of the use of public transport, the likely financial limitations on expenditure for new capital works, and unlikely major changes to inner areas road configurations.

4.14 The Institute's object was to find low cost solutions to the problems of reduction of peak hour congestion. The more effective use of existing rail, tram and road systems by the spreading of work start and finish times to avoid sharp peaks in travel demands is the most obvious and least costly solution to the problems of rationalisation of transport activities.

4.15 The study is important because the logical extension of such activities is to effectively increase the utilisation of the public transport systems and reduce the capital and operating expenditures involved in the provision of public transport services.

4.16 Studies which should logically follow could relate to higher utilisation of the motor car in peak periods as an offset to the need for high levels of availability of public transport at these times. Levels of availability of public transport at peak periods is the determinant of the amount of capital required for public transport and the magnitude of operating expenses involved.

4.17 Levels of patronage of public and private transport services in "off peak" periods are almost irrelevant to the costs of providing public transport facilities when compared with peak hour requirements.

4.18 The lowest cost in providing transport service will be achieved when all modes of transport: rail, tram, bus, private car and roads are being utilised to the maximum extent.

4.19 The capacities of the various facilities can be expressed as mathematical formulae in the context of modern transport engineering, e.g. capacity of a set of rails or

the capacity of a lane of road traffic, under given conditions, and as a result comparative efficiencies related to overall costs can be calculated.

4.20 Such formulae do not take into account social factors, but notwithstanding this, the most efficient balance, resulting in minimum congestion in all modes, is likely to be the most acceptable solution from the social point of view, because the maximum utilisation of the individual vehicles within the transport system is likely to result in the minimum number of vehicles being employed in the total transport task.

4.21 There are basic problems relating to acceptance of such concepts including the fact that a dominant role by the private motor car for travel in the metropolitan area renders the city vulnerable to restrictions in petrol supplies. On the other hand, there is a cost involved in ensuring a high level of public transport availability as a back up system in crisis situations, which might as well be spent in ensuring petrol availability as in ensuring public transport availability. For example, the question that might be asked is whether a subsidy of \$100 million per annum and capital expenditure of the order of \$40 million per annum over the next 10 years i.e. a total of \$1,400 million is too high a price to pay for maintaining alternative forms of transport that "might be used one day."

4.22 In the absence of proper statistics, and in the light of declining patronage of the bus systems being operated in the outer suburban areas, it is very difficult to assess the true nature of the transport demands of the future generations. However, the Study Group believes that the very rapid development of major shopping complexes, with associated business and recreational facilities in a relatively few but significant parts of the metropolitan area are likely to lead to the focusing of many transport activities on such areas.

4.23 In discussions with groups and with local government in those areas, the possible needs and likely patronage for public transport covered a wide range of options. Of major significance to the findings of the Study is the almost universal concept of government responsibility to provide such services on a subsidised basis similar to those relating to travel to the Central Business District. Major extensions to train and tram services, irrespective of cost were proposed.

4.24 On the other hand encouraging signs are that local government is in fact becoming involved in providing services for disadvantaged people groups, such as elderly citizens, as a local government responsibility through the provision of special vehicles. In a number of areas local government is proposing extension of such services to other groups. The impact of the provision of such services on the patronage and financial circumstances of existing formal route services cannot go unremarked.

5. FINANCIAL ASPECTS

5.1 The estimated costs of providing public transport services in the Metropolitan area in 1978-79, the fare revenues achieved and the amount of subsidy paid by government on behalf of the people of Victoria in order to ensure those services are operated and maintained are shown in Table 4.

TABLE 4

PUBLIC TRANSPORT FINANCIAL RESULT 1978-79

	Expenditure \$m	Revenue \$m	Deficit \$m
Vic Rail	105.9	52.4	53.5
M.M.T.B. Tram	57.3	29.8	27.5
M.M.T.B. Bus	16.5	6.2	10.3
Private bus operators	24.6	17.1	7.5
TOTAL	204.3	105.5	98.8

5.2 From these results and the patronage levels, calculations can be made that the apparent cost per passenger kilometre travelled by the on street modes of public transport, i.e. tram and bus are of the same general order, whilst the apparent cost of carrying passengers by rail, exhibiting a measure of economy of scale and involving a generally greater distance of travel by that mode, are lower.

5.3 In this regard it is pertinent to the comments which follow to record that average length of trip by individual passengers in the public transport facilities are as follows:

- Vic Rail - 16.3 km
- Tram - 4.4 km
- M.M.T.B. Bus - 6.5 km
- Private bus - 3.6 km.

5.4 The rationale for the comments regarding the cost per kilometre is shown in Table 5.

TABLE 5

COST OF PUBLIC TRANSPORT MODES 1978-79

	Vic Rail	M.M.T.B.		Private
		Tram	Bus	Operators
	\$	\$	\$	\$
Expenditure	105.9m	57.3m	16.5m	24.6m
- per passenger	1.18	0.57	0.83	0.45
- per passenger kilometre	0.07	0.13	0.13	0.13
- per vehicle kilometre	7.90(1)	2.37	1.28	0.70

(1) per train kilometres

5.5 This tabulation illustrates the characteristic differences between the cost of operating or providing the various forms of public transport, taking into account:

- Total distance travelled by the various modes.
- Patronage of the various modes.
- Capacity of the various units of equipment used to transport passengers.
- Methods of operating the various modes, and
- Capitalisation.

5.6 For example the tabulation shows that the apparent cost per vehicle kilometre of private bus operations is substantially less than that for the M.M.T.B. modes. Whilst part of the reason for the difference can be attributed to different service levels, information available to the Study Group indicates that private operators are able to achieve higher labour productivity than the M.M.T.B.

5.7 However, the tabulation does not show full costs involved in transport of passengers by the publicly owned transport facilities operated by the Victorian Railways Board

and the Melbourne & Metropolitan Tramways Board, because the total expenditure figures quoted for providing the public transport charges do not include or reflect the value of the facilities used in providing the services or of the capital expenditure, involved in maintaining and operating the services, which are made available to the Authorities through various forms of government funding. In the case of the Melbourne & Metropolitan Tramways Board figures, financial costs relating to depreciation and interest are included in the recorded expenditure involved in providing the services but, in the case of the Victorian Railways Board figures, there is little evidence of the expenditure currently been made on such items as the provision of new suburban trains, extensions to tracks, modernisation of signalling and in the development of the underground rail loop.

5.8 As a result, the cost per passenger kilometre shown in the above tabulation is only an indication of the order of magnitude of the costs of operating public transport services, without taking into account the normal overheads which would pertain if fully commercial criteria were applied to the public transport business.

5.9 These costs reflect the fact that patronage of the public transport system, particularly the traditional fixed rail public transport system, has declined to levels which pertained before the advent of the motor car, i.e. about the levels of patronage of 1910-1913, whilst the vehicle distance being travelled and the peak services offered by the public transport system reflect the distances and service offered in the peak post World War II years.

5.10 Although the Melbourne & Metropolitan Tramways Board have reduced the distance travelled in providing services by 26% over the past 30 years, the suburban rail system on the other hand has increased travel distances by 5%.

5.11 The public transport Authorities advise that these changes in travel provision are associated with the change in travel patterns and point to the change in average distance travelled by patrons of the various services. The claim is also made that the changes reflect the nature of urban development and perhaps the fare structures which have applied over the past 30 years, permitting users of the fixed rail systems more selection in home and work locations as a result of the relatively minor fare differences for longer journeys.

5.12 The Study Group believes that there is sufficient evidence available in various published papers and reports, (which also come out in discussion) that, to a large extent, the fare level has been almost irrelevant in determining the

utilization of the public transport system, and that the decline in patronage has generally paralleled experience elsewhere in the developed world. In other words the decline has been associated with the nature of the urban development, the housing pattern, the work pattern, the availability of motor cars, the standards of living, the decline in importance of the Central Business District, the evolution of suburban business and shopping areas and inadequate availability of capital funds to replace obsolescent equipment.

5.13 Under the conditions which have pertained over the past twenty years, and particularly in the last ten years Authorities have taken what appears to them to be the most reasonable approach to the provision of services in the light of the declining patronage and have endeavoured to market their product on the basis of attractive fare schedules, improved vehicles, maintaining high levels of service and using various methods recommended by marketing and public relations personnel to present an appropriate image, to attract passengers to use public transport.

5.14 These efforts have had little effect on the patronage level, and as predicted in the Seminar entitled "Marketing Public Transport in Urban Areas" in 1976 by R.A. Layton the Authorities have been struggling to maintain the level of service rather than improve on it, notwithstanding that the people of Victoria are paying dearly through the heavy subsidies now applying to all forms of public transport, and in the form of capital expenditure on equipment required for peak period travel.

5.15 Both government and transport Authorities have had to face the dilemma of declining patronage and increasing subsidy over the past 10 years. The tendency has been to maintain services through the payment of operating subsidy rather than to increase fares to an appropriate level.

5.16 In facing a similar future, including one of increasing subsidies as the costs of operating in the traditional manner increase, even if patronage remains at the same general level, the Study Group is constrained to point out that there is now a serious need to contain and reduce costs of operation, by all means possible, if the public transport authorities are to stay in business.

5.17 Evidence has been given of sincere efforts to reduce the costs of providing public transport services, by investment of capital expenditure in modern vehicles, to respond to the expressed wishes of the remaining patrons of the services for conditions akin to those provided in motor cars, such as air conditioning, carpets etc., the reduction of services in off peak hours and substitution of services in off peak days.

5.18 However, this approach has not been successful and the Study Group sees a need for a concentrated effort to reduce the cost of the services being provided, by the most effective means, in recognition that:

"Urban transport is not a mass market, it comprises a number of separate markets. Consequently urban transport operators must develop specific products for predetermined segments of the total population. To be able to offer such products operators must undertake adequate, fundamental market research." (Report on Marketing Urban Transport Seminar, conducted by Commonwealth Department of Transport, March 1976, Summary of Findings No. 1).

5.19 A review of patronage and revenue levels relating to specific fixed rail public transport routes, and typical bus routes by the Study Group has resulted in it recommending closure of various routes, rationalisation of services, elimination of competing modes of public transport and elimination of costs involved in tasks peripheral to passenger transport.

5.20 These recommendations are made in the context of an environment where at least \$100 million per annum by way of subsidy is now being provided by the people of Victoria, at a rate equivalent to approximately \$85 per annum per household to maintain services which are being utilised for approximately 16% of trips in the metropolitan area.

5.21 Substantial amounts are currently being spent on capital works to maintain the services, at interest rates which will double in cost of the loans over eight years or so and become a very substantial cost burden on the public Authorities and a consequential cost on the people of Victoria through increased fares and subsidies, the latter reflected in increased taxation levels.

Subsidies

5.22 In 1978-79 direct Government subsidy towards the provision of Metropolitan public transport was approximately \$93.4 million. Table 6 refers:

TABLE 6PUBLIC TRANSPORT SUBSIDIES 1978-79

	Vic Rail	MMTB	Private Operators	Total
	\$M	\$M	\$M	\$M
Revenue	52.4	38.6	17.1	108.1
Subsidy	53.5	32.7	7.2	93.4
Total	105.9	71.3	24.3	201.5
Subsidy % of Total	51	46	30	46

5.23 The subsidy has grown rapidly during the 1970's and during the past five years increased from \$58.9m to \$93.4m. However during this period, through sustained effort, it has been held almost constant in unescalated, or real terms. As a proportion of total Victorian Government expenditure, subsidy on transport has tended to decline or has at least remained constant, mainly as a result of changing priorities for public expenditure. Figure 7 illustrates this.

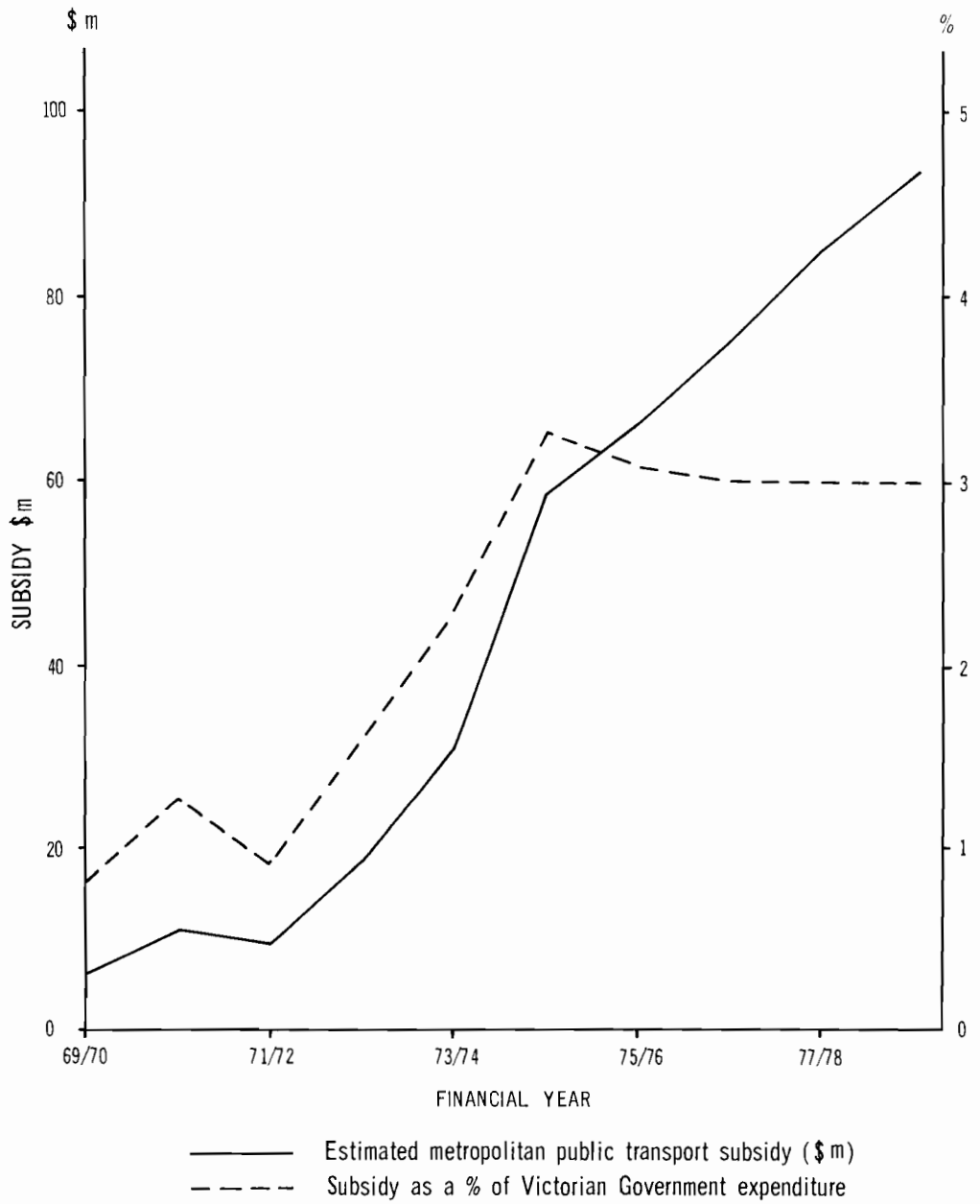


FIGURE 7 PUBLIC TRANSPORT SUBSIDY IN THE 1970s

5.24 The Authorities, and a number of submissions made to the Study, have endeavoured to justify the subsidy and the magnitude of the subsidy;

- because most other public transport authorities around the world are subsidised,
- as an environment protection measure in support of public transport v/s private motor car travel,
- to make "best" use of public transport infrastructure and services already provided,
- to maintain a "viable" public transport service for the benefit of disadvantaged people who do not have a motor car.

5.25 Somewhat surprisingly, no written submissions to the Study seriously questioned the rationale for such a subsidy. However, the matter was raised during a number of discussions and concern was expressed regarding the magnitude of the subsidy, possible future trends and distribution of benefits. This matter has been the subject of a study commissioned by the Ministry of Transport and results are expected shortly.

5.26 A feature article by Claude Forell of the Melbourne Age seemed to bring together many of these concerns. Mr. Forell wrote "The huge transport deficits mean that State taxation has to be higher than it need be or that funds have to be diverted from more worthy community services."

"Eighty-five per cent of Victorians who never, or hardly ever, use trains or trams have to pay up so that the other 15 per cent may ride regularly or frequently at well below the cost of travel."

"Leaving aside pensioners and students, for whom special arrangements are justifiably made, the main beneficiaries are city commuters."

"Why should their daily travel be subsidised by fellow wage-earners whose only convenient way of getting to and from work is to drive a car at their own expense?"

5.27 Mr. Forell went on to say "It seems too much to expect that our trains and trams could pay their way. But there is little justification for running them far below cost as a subsidised service for a privileged company of commuters - or a protected species of workers."

"Indeed as wages account for about 60 per cent of public transport costs, the most promising route towards rail and tramway solvency is by the introduction of labor-saving technology."

5.28 A recent U.K. report, by Bly, Webster and Pounds, which investigates trends in urban public transport subsidy in a number of countries includes the following summary of objectives which have been put forward regarding subsidisation:-

1. To create a better and safer environment in towns (less congestion, pollution and visual intrusion) by achieving a modal split which is more favourable to public transport.
2. To create a more efficient, less costly and energy-saving solution to urban transport.
3. To preserve the existing form of towns, either for aesthetic reasons or simply because people have grown used to them as they are.
4. To make the best use of existing public transport infrastructure and the services already provided.
5. To maintain a "viable" public transport service for the benefit of those who do not have a car available to them, as a standby for existing car users and as an insurance against the future.
6. To satisfy specific transport 'needs' (of the old, the young, the handicapped, people in remote areas, etc).
7. To avoid a sense of 'unfairness' felt by captive users as services become dearer and less convenient, through no fault of their own.

5.29 These objectives may be divided into two groups; objectives 1 to 4 relate to the form and environment of the urban area and objectives 5 to 7 concern the mobility of individuals.

5.30 The extent to which subsidies may be effective in relation to the first group of objectives depends upon the degree to which lower fares, produced by the subsidy, affect mode choice. Indeed for subsidies to be proven effective in achieving the first two objectives it is necessary to demonstrate that subsidies would cause peak period trips, which would otherwise be made as a car driver, to be made by public transport.

5.31 It seems reasonable to believe that public transport fare levels would not be a very important factor in choices of this type in Melbourne. For a great majority of trips cars are so much more convenient that the cross elasticity is negligible, or to put it another way, if a car is available it will be used.

5.32 However exceptions may occur where trips over relatively congested roads are involved or where parking at the destination is difficult. Trips where these circumstances may arise are almost exclusively radial travel to the central business district or the adjacent inner area. Some interested groups have suggested that it may not be inappropriate for a large portion of the subsidy to accrue to central business district commuters, irrespective of their ability to pay, provided that the benefits which the community derives, in terms of reduced road congestion etc., are greater. However, the Study Group believes it is also necessary to consider whether these benefits could not be produced at lower cost by improvements to the road system, by improved cost effectiveness in the public transport systems, or by increasing the average number of persons travelling in each car.

5.33 Objectives 3 and 4 tend to coalesce in the case of Melbourne where public transport subsidies are seen to be largely supportive of the central business district and/or the radial public transport system which serves it.

5.34 Bly, et al say that "If the (public transport) services are poor and/or expensive, or if the town has little to offer, then decentralisation of activities is likely to take place as drivers seek both work and shopping opportunities where they can use their most convenient mode of transport, i.e. their cars, and as employers and developers respond to the observed trends by developing office complexes, industrial estates and shopping centres in more spacious surroundings conducive to the use of the private car. Subsidy will, of course, have some effect in delaying this dispersal of activities but it might only be a marginal effect, particularly in the case of relatively unattractive town centres." The qualifications seem hardly necessary in the context of Melbourne - the changes have taken place.

5.35 In relation to objectives 5 to 7 the report points out that they "are of particular significance when public transport is, or would be if there were no subsidy, in decline. Those people who regularly have no car available find them selves in a worsening situation as public transport services deteriorate and become more expensive."

5.36 One of the arguments put by those organisations seeking to retain the status quo has been that provision of substantial operating subsidies for urban public transport is common to all developed western countries and, in most cases, substantial increases in subsidy, relative to total costs, occurred during the 1970's.

5.37 The MMTB submission says that 1976 cost recovery (revenue as a percentage of expenditure) in some other countries was :-

France	48% (weighted average 5 operators)
Germany	53% (weighted average 9 operators)
Netherlands	32% (weighted average 2 operators)
Switzerland	65% (weighted average 3 operators)
U.K.	70% (weighted average 9 operators)
U.S.A.	50% (weighted average all major centres)

5.38 In 1977-78 the cost recovery of Victorian services, and those of other Australian capital city operators were as follows:-

M.M.T.B.	53%
Vic Rail	49%
P.T.C. (Sydney)	31%
B.C.C. (Brisbane)	52%
M.T.T. (Adelaide)	46%
M.T.T. (Perth)	50%
M.T.T. (Hobart)	35%

5.39 While substantial variation occurs between the level of subsidy in different cities it is difficult to infer any real pattern.

5.40 Subsidies would seem to be largely determined by a political process in the various cities and countries.

5.41 However, the existence of subsidy, and its expression in percentage terms, must not be approached in isolation. The obvious question which must be asked is, are those who subsidise the system - the people of Victoria, and the customers, getting value for their money? Observation suggests that, in some important ways, they are not. Clearly part of the requirement for subsidisation is a result of the retention of obsolete work practices and manning levels in a number of areas, and the continued operation of public transport services far beyond

the stage when many of them should have been curtailed or abandoned in the light of uneconomic levels of patronage. Furthermore there is little doubt that subsidy supports inefficiency, and that subsidised services compete with one another.

Cost and fare movements during the 1970's.

5.42 Over the last ten years, public transport fare levels have increased at a lower rate than the consumer price index and at a much lower rate than average earnings. This is shown in Table 7.

Table 7
Fare Movements in the 1970's

	1970-71 \$	1978-79 \$	% Increase
<u>Vic Rail Fares</u>			
10 Km return	0.58	1.20	107
20 km return	0.80	1.40	75
10 km weekly	2.55	4.75	86
20 km weekly	3.10	5.60	81
<u>M.M.T.B. Fares</u>			
2 sections	0.15	0.30	100
3 sections	0.20	0.35	75
4 & 5 sections	0.25	0.45	80
C.P.I. (Melbourne)	(113.1)	(256.8)	127
Average weekly earnings	86.4	226.50	162

5.43 The most important factor in producing this result was the "freezing" of fare rises during the rapid wage increases in the period 1972-75. The effects of this are shown in Figure 8, which uses M.M.T.B. data. It can be seen that the change in the M.M.T.B. wages bill was almost identical with the change in average weekly earnings. However fare increases, which closely followed cost increases during the period 1967-1972 were then held until 1975 and have subsequently followed the consumer price index.

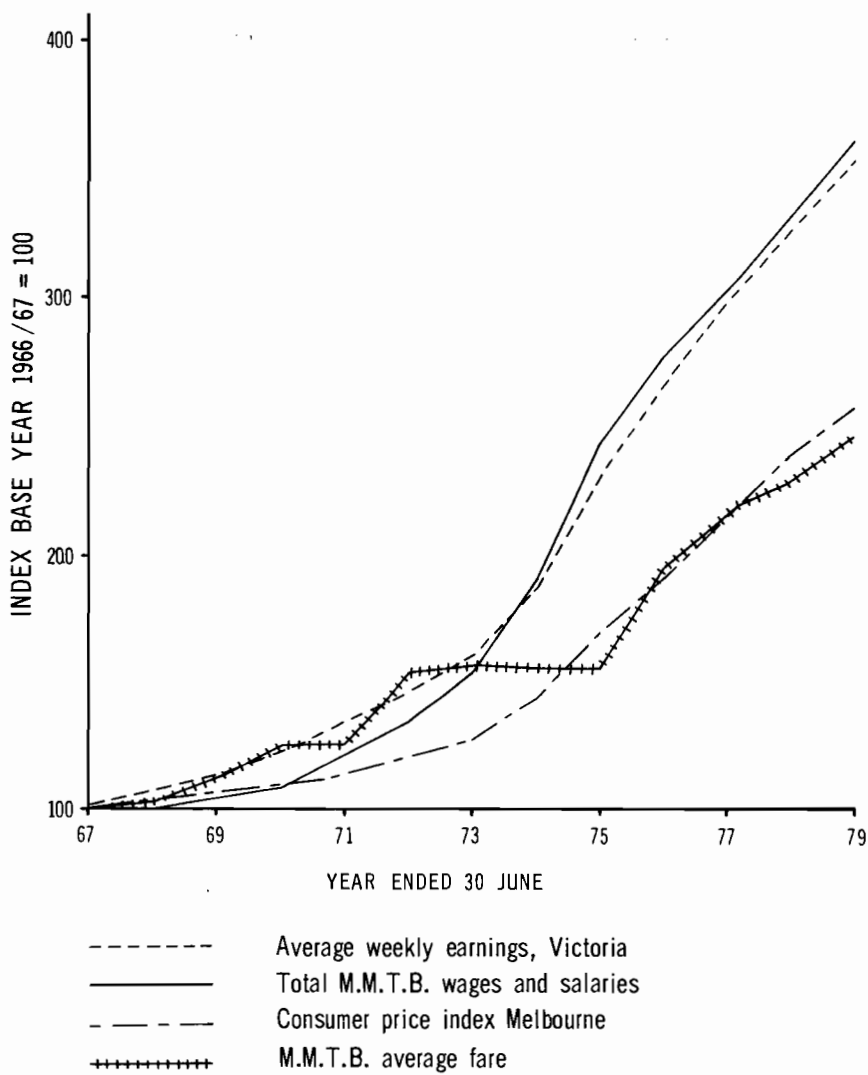


FIGURE 8 FARE AND COST MOVEMENTS IN THE 1970's

5.44 From Figure 8 it can be seen that the period when fares were held followed a period when fares were increasing more rapidly than the C.P.I.

5.45 The increased level of subsidy in all modes basically relates to changes in the cost of providing the services, with fare levels apparently being constrained during the period by influences outside the control of the Authorities.

Capital Investment

5.46 Despite improvements over the past ten years much of the equipment used by VicRail and the M.M.T.B. is obsolescent. Continued satisfactory operation is, in many areas, severely inhibited.

5.47 Among the areas where deficiencies are obvious are - railway signalling equipment, rail and tram rolling stock and communications equipment, servicing facilities and staff amenities in both organisations. A number of these deficiencies will be substantially reduced by work currently in hand.

5.48 Capital expenditure budgets currently proposed by the authorities for the five year period to 1984-85 would require a total expenditure of approximately \$270 million, or approximately \$54 million per annum, at current prices. This total is for expenditure on the existing systems and does not include allowance for new projects or for the effects of rationalisation recommended in this report.

5.49 This may be compared with current capital funding for suburban projects, from all sources including Commonwealth Grants and semi-Government borrowings, of approximately \$40 million per annum.

5.50 As has been indicated earlier, the Study Group believes that insufficient capital investment is currently being directed to cost reduction. However it is also desirable that sufficient funds are made available for asset replacement - or additional expenditure on maintenance and renewal will follow.

5.51 It is recommended that a common capital investment budget be prepared from projects currently being considered by the Authorities and that the projects be ranked essentially on the basis of rate of return calculated from financial analysis.

5.52 The following sections discuss capital investment in various areas.

5.53 Vic Rail has informed the Study Group that, as at 1st July 1979, the Melbourne suburban rolling stock comprised:-

329 "Tait" carriages built between 1910 and 1950 with an average age of 60 years.

429 "Harris" carriages built between 1956 and 1971 with an average age of 20 years.

305 "Silver" carriages built between 1972 and 1979.

A contract has recently been let for the construction of 50 six carriage trains. These trains will be air conditioned and embody improved passenger comfort and service reliability technical features.

5.54 Vic Rails planned service for operation of the suburban system on commissioning of the underground loop and electrification to Werribee in early 1982 comprises :-

273	"Tait" carriages	(39 train sets)
429	"Harris" carriages	(59 train sets)
352	"Silver" carriages	(59 train sets)
30	Air-conditioned carriages	(5 train sets)
<u>1,086</u>	<u>Total</u>	<u>(162 train sets)</u>

If 10 new trains per annum are delivered the last of the "Tait" carriages cannot be expected to be phased out of service until late 1985.

5.55 In the light of the planned requirements and the anticipated rate of funding, overhauls of Tait cars have been recommenced. Vic Rail acknowledges that, notwithstanding these "overhauls", the deterioration of the timber bodies is such that extensive body movements leads to jammed doors and windows, excessive draughts and the entry of water into passenger and drivers compartments.

5.56 Vic Rail advised the Study Group that the Harris carriages should have a service life to the end of this century. Unfortunately asbestos was used as an insulation between the internal and external lining and unions have embargoed major body repairs and overhauls. Additionally the materials used as internal lining lack resistance to vandalism and fire and

more than 30 carriages have been severely damaged by fire. To overcome the maintenance backlog resulting from the union bans, and also upgrade the cars to be suitable for operation into the 21st Century, Vic Rail proposes a major "half life" refurbishing at an estimated cost of approximately \$150,000 per carriage commencing mid 1980.

5.57 The M.M.T.B. advised the Study Group that their recent vehicle replacement programme began with the first delivery of the new Z Class trams in 1974 and by the end of the last financial year, approximately \$33 million had been spent. At that stage delivery of the 115 trams for the original contract and five tram bodies of the new contract had been supplied. To date the first 20 of the second generation of new trams, the Z3 Class have been delivered. The Board has a contract for 100 of these trams to be delivered at a rate of 28 per annum.

5.58 The Board's Forward Look Works Programme of November 1979 shows a total expenditure on new trams of \$72.6 million (at constant 1979 dollars) over the six year period 1980-81 - 1985-86. This programme is based on the current delivery rate. However no decisions have yet been taken regarding tram procurement beyond the present contract and a feasibility study of the use of larger articulated trams is about to be commenced.

5.59 The M.M.T.B.'s current fleet of 280 buses comprises:-

- 41 AEC Mk III and IV buses between 23 and 29 years old.
- 100 AEC Mk VI buses, approximately 15 years old.
- 30 Leyland National buses, approximately 5 years old.
- 100 Volvo B52 buses, up to 3 years old, and
- 63 MAN buses which have been delivered from a current contract for 130 buses. which the M.M.T.B. anticipate will be completed by February 1981. There is provision to extend the contract and the Board expects that the bus fleet will have effectively been modernized by the end of the 1980-81 year. Fifty Volvo and 130 MAN buses are being obtained by leveraged leasing.

5.60 The Study Group has been informed that upgrading of railway signalling equipment offers a number of benefits, notably, substantial improvements in manpower productivity through consolidation of signal boxes, reduced equipment maintenance costs, improvements of safety levels, increase of route capacity and reduction of travel time.

5.61 Vic Rails programme of desirable signalling improvements for the Melbourne suburban rail system for the next 10 years has been described as follows:-

- Replacement of obsolete mechanical signalling and safeworking systems with automatic power signalling:-

Keon Park	-	Epping
Greensborough	-	Eltham (as a possible alternative to duplication)
Eltham	-	Hurstbridge
Mooroolbark	-	Lilydale
North Williamstown	-	Williamstown
Jewell	-	Fawkner
Merri	-	Keon Park
Cheltenham	-	Mordialloc (prior to provision of third track)
Croydon	-	Mooroolbark
- Replacement of obsolete Double Line electrical signalling systems with modern electronically controlled power signalling:-

Kensington	-	Essendon
Jolimont	-	Clifton Hill
Richmond	-	Caulfield
Flinders Street	-	St. Kilda
- Replacement of obsolete mechanical and electrical signalling equipment at major stations and junctions with "modern relay interlocking" installations which can be linked to centralised Metrol control centre.
- Linking of existing modern installations to "Metrol" control centre.

5.62 Vic Rail has also advised the Study Group that the railways communication system has been an area of significant investment neglect and now fails to meet the expectations of passengers or staff and contributes significantly to the problem of restoring services and properly informing passengers of the situation when disruptions occur. Advice is that the primary communications deficiencies are:-

- Complete obsolescence of the central telephone exchange equipment at Spencer Street resulting in inadequate telephone system capacity, high incidence of faults and excessive maintenance costs and staff levels to operate the system.
- Lack of direct dialling facilities to many suburban stations.
- Aged and fault prone cables.
- Lack of direct communication facilities between control centres and trains.
- Inability of train crews to communicate with train passengers.
- Inadequate and antiquated audio and visual train information systems for passengers on stations.
- Lack of facilities for passengers to seek information or assistance at unmanned stations.
- Lack of facilities for surveillance of railway property.
- Lack of facilities for the automatic monitoring of equipment.
- Lack of facilities for automatic data collection for management of the suburban system.

5.63 Vic Rail plans provide, that as the underground loop is progressively commissioned the Metrol building in Batman Avenue will become the focal point for control and monitoring of the suburban system performing the following functions:-

- Control of all major mechanical and electrical equipment in the underground.
Remote surveillance of the loop stations.
- Automatic operation of all visual train information and public address announcements at all inner stations.
- Radio communications centre for all crews on radio equipped trains.
- General supervisory centre for all suburban train operations.

5.64 The M.M.T.B. also advised the Study Group of proposals to improve communications. They said :

"Automatic vehicle monitoring systems allow central controllers to monitor the progress of buses and trams in service and rapidly implement service adjustments by means of two-way radio, special vehicle detector units along the route and computer facilities with visual displays of information. They have been, or are being, introduced by many overseas bus or tram operators."

"During the last two years the Board has conducted an extensive research and development programme on automatic vehicle monitoring systems. A pilot system has been developed for buses on the West Heidelberg route and the area served by the Board's tram and bus services has been surveyed to determine optimum radio transmitter coverage. This programme has been assisted by Commonwealth and State Planning and Research allocations."

"Benefits from the introduction of such a system accrue mainly in the form of improved headway retention and a reduction in delays. This leads to substantial improvement in the level of passenger service or to reduced allocation of vehicles for an equivalent service. Other benefits include increased security for crews and passengers and improved co-ordination of services for interchanging passengers. A benefit-cost evaluation, based on the results of implementation overseas, gave a benefit/cost ratio of 2.8 (at a 10% discount rate)."

5.65 Vic Rail has informed the Study Group that:

Suburban trains are presently stabled overnight in sidings or at platforms at 33 locations most of which are adjacent to residential areas and virtually unprotected against vandalism. In the past 10 years more than 50 carriages have been subject to serious fire damage or destruction, the great majority of these incidents occurring at suburban sidings. In order to rectify these deficiencies it is proposed that security stabling areas be provided at fifteen locations. All of these depots will incorporate security fencing and lighting, fire protection equipment, provision of employees car parking and eventually surveillance from the Metrol centre.

5.66 Both Vic Rail and the M.M.T.B. informed the Study Group that, despite continuing programmes for the progressive improvement of staff facilities, available funding has been insufficient to match the current expectations for working conditions and, as a result, these deficiencies have often led to, or contributed to industrial disputes.

5.67 The Study Group has been informed by Vic Rail that, despite an overall reduction in traffic task for the suburban system, route capacity expansion has been necessary because:-

- The average train trip length has been increased to match the outward expansion of the city and express running has been introduced to reduce travel time.
- The need to mitigate overcrowding of peak period trains on several routes.

5.68 A number of capacity improvements have been achieved over the last 20 years, including :-

- Duplication of the single line section between Macleod and Greensborough.
- Provision of a third track between Burnley and Box Hill.
- Quadruplication between Richmond and Burnley and between South Kensington and Footscray.
- Installation of modern signalling.

5.69 Completion of the duplication projects between Ringwood and Bayswater and between Ringwood and Croydon will enable improvements to route capacity and travel times for these track sections, as will the third track between Caulfield and Cheltenham, work on which is currently suspended on account of funding constraints.

5.70 Technical advice to the Study Group is that many railway maintained bridges in the suburban area are at the end of their economic life. A considerable number of rail over road bridges have insufficient clearance to allow the passage of legal road loads and, as a consequence, there is a continuing risk of bridges being struck and subject to severe structural damage. There are also a number of road over rail bridges with piers of steel columns supporting crossheads which under overload conditions may collapse with extremely serious consequences, (such a failure occurred at Warragul under a special load vehicle). To guard against the serious possibilities of bridge collapse a continuing programme of upgrading of bridges is considered to be essential.

5.71 Vic Rail have also informed the Study Group that the majority of suburban stations were constructed well before electrification in the years 1918-1926. Whilst many of these stations were constructed of substantial brick or masonry, many others were built cheaply of timber. Following the availability of Commonwealth funds for urban public transport improvements a station reconstruction programme commenced in

in 1974 and, as a result 34 stations have been reconstructed. Vic Rail have stated that, notwithstanding this programme, substandard and maintenance intensive stations still require replacement at more than 40 locations. The provision of suitable modal change facilities for bus to rail, tram to rail and car to rail is another important feature. As at June 1979 a total of 16,674 parking spaces had been provided at suburban stations.

6. SUBMISSIONS

6.1 More than 30 submissions which referred at least in part, to the provision of metropolitan public transport service were received. The following comments are intended to bring out the main themes of this material and to present highlights of discussions with interested parties.

User groups

6.2 Comprehensive submissions were prepared by the Tram and Bus Travellers Association and the Train Travellers Association and these were discussed with representatives of those organisations.

6.3 The Tram and Bus Travellers Association proposed a series of measures to encourage a centralised urban form and greater use of public transport. They recommended:

- . Co-ordination of regional and local public transport systems and provision for inter-line public transport transfers.
- . Improvements to public transport service by giving priority to buses and trams where conflicts with car traffic occur.
- . Keeping fares "low enough to obtain consistently high patronage and encourage more off peak use".
- . The maintenance and extension of public transport routes from the CBD to all suburban corridors and to major centres of activity.
- . Increased frequency of public transport services.
- . Increased on-street parking fees with further increases whenever public transport fares are raised.
- . Greater control over off-street parking.
- . The use of planning controls to restrict non-CBD commercial development.

6.4 The Association made a number of proposals concerning future planning and administration of urban transport, principally that:

- . The 1978 Draft Transport Plan be abandoned and recommissioned and that an overseas consultant be sought to take charge of the preparation of a metropolitan Melbourne Transport Plan.

- . There be a review and rationalization of public transport routes to maximise efficiency and develop service and that, until rationalization is complete, the Transport Regulation Board renew the licences of bus operators on the basis that route rationalization may be effected and that no goodwill payment will be made.
- . A representative of road-based public transport be added to the Road Safety & Traffic Authority, which currently has representatives of other road user groups.
- . The CRB be directed to achieve improvements in tram/bus travel times in areas identified by the public transport authorities.
- . Passengers should have direct representation on the Board of both Victorian Railways and the M&MTB.

6.5 Means to improve the efficiency of tram and bus services were also raised, including:

- . One man operation of M&MTB buses and trams.
- . Overcoming shortages of funds for replacement of obsolete vehicles and other operations equipment.

6.6 The Train Travellers Association of Victoria made the following recommendations (relating to urban passenger transport):

- . Taxation policies which bring the perceived cost of private motor transport into line with the real social cost and abolishing all fixed taxes in favour of increased petrol tax.
- . Taxation policies which remove tax benefits for car travel.
- . Tax deductability for public transport fares paid for travel to and from work.
- . Implementation of the 1974 Melbourne Strategy Plan.
- . Zoning of high and medium density housing near transport modes.
- . Private developers of, for example, shopping centres be required to pay for and provide rail or tram extensions to increase use of public transport.

- . Curtailment of development of urban freeways.
- . Curtailment of further parking development.
- . Improved bus/tram/train transfer facilities
- . Unified ticketing, by means of an all modes monthly ticket.
- . Modernization of rolling stock.
- . Increased staff productivity, e.g. elimination of guards in favour of roving ticket collectors.
- . Institution of a transport tax on enterprises which establish factories and offices away from transport modes.
- . A Metropolitan Transport Authority be set up to co-ordinate the administration of the railways, tramways and bus managements and services.

Local Government

6.7 The City of Knox forwarded a detailed report on Public Transport Strategy prepared by Council officers. This report discusses and illustrates the problems of providing public transport in a developing low density outer metropolitan municipality.

The Council drew particular attention to two points:

- . It considers it essential that an immediate commitment be made to the provision of a rapid transit service (preferably fixed rail) between Huntingdale and Ferntree Gully rail stations,
and
- . that a high speed service, either a tram extension or an exclusive priority lane bus be provided along Burwood Highway from the existing tram terminus to the Ferntree Gully rail link.

6.8 The Study Group also visited the City of Knox, mainly to discuss public transport services. The Group met Councillors and officers and groups of housewives, commuters, teenagers and elderly citizens. The visit was arranged by Mr. S. Crabb, MLA, who introduced, and participated in, all discussions.

6.9 The City of Waverley submission says that the Government needs to take immediate financial steps to overcome problems facing public transport. The Council considers it "essential that philosophies of co-ordinated bus and train networks, car pooling and incentives to use public transport are translated into real action to overcome present shortcomings."

6.10 A submission was received from the Northern Municipalities Transport Group and discussed with their representatives. The Group comprises a Councillor and an officer from fourteen municipalities.

6.11 The Group says "it is believed that the emphasis in the (1978) Draft Transport Plan is too much towards improvements to existing radial public transport services, and that there ought to be a greater emphasis on the provision of new and more varied public transport services, such as circumferential bus services and innovative local modes of transport. In particular there ought to be a more extensive reorganization of existing services to meet the demands of new patterns of mobility....."

6.12 "Existing radial railway and tramway services ought to be extended to take account of new population patterns incentives (for use) should include better and more co-ordinated feeder services, additional car parking at outer and middle suburban railway stations and a fare system which does not penalise those who must use more than one public transport service to complete their journey".

6.13 Among the other points made by the Group were:

- . "The Government must take steps to eliminate the present inhibition caused to public transport planning by the private operator system."
- . "There ought to be extensive implementation of all possible methods of giving priority to public transport road vehicles to ensure that the public transport user is not delayed by traffic congestion."
- . "Public transport services ought as a matter of course to be provided as an integral part of the new residential areas."

Government Agencies and Related Bodies

6.14 The Melbourne and Metropolitan Tramways Board submission says - "It is probably inevitable that organizations concerned with a particular task consider that more funds should be directed to it and the Board certainly believes that there are a number of aspects of public transport which warrant additional investment.... The effects of shortages of funds are most evident in the

capital expenditure area; many of the Board's trams and much of the fixed equipment should have been withdrawn from service because of obsolescence. A number of workshops and servicing facilities are outmoded and do not permit efficient work practices. Employee amenities are, in many areas, below reasonable standards. In addition the Board is unable to fund a number of key projects which would improve service and financial results."

"This position is, to a large extent, a legacy of inadequate investment between the mid 1950s and the mid 1970s. For example in the decade 1960 to 1970 total new loan funds made available were \$4.6 million (approximately \$13 million at current values). However, it was necessary to use a substantial part of these borrowings to meet deficits incurred before Government assistance was made available for this purpose."

"Increased capital funds have been made available since 1974. The major increase occurred in 1974/75 when Commonwealth Grants on a two-for-one basis for new vehicles became available. The increased expenditure since that time has been achieved by substantially increased borrowings. Commonwealth Grants represented only 23% of new funds in 1978/79. As a consequence the Board's financial performance is being increasingly affected by debt servicing and leasing charges which have grown from \$1.63 million to \$5.37 million per annum since 1973.

6.15 The Board suggested that "the role of the Metropolitan Transit Council be increased and that it is responsible for the determination of priorities within public transport, the review of major public transport proposals and the allocation of funds between operating Authorities." The Board also suggested that the MTC should "assume a direct role in co-ordination of public transport inputs regarding town planning and traffic engineering."

6.16 The Melbourne Underground Rail Loop Authority submission stated that the underground rail loop is intended to increase the capacity and efficiency of the existing rail system. The submission emphasises that a rail system should be efficient, safe, reliable and convenient.

Other points made include:

- . Two-way radio and public address facilities on trains are vital.
- . Provision of an alternative to the regular mode of travel is desirable.
- . There should be adequate car parks at stations.
- . Ease of transfer between train and tram is important.

6.17 A submission by the Transport Regulation Board referred to the private bus system in Melbourne. The Board says:

"The problems that exist in the private bus sector generally relate to the franchise system. The number of owners could be reduced with some benefits to network planning, co-ordination and administration."

"In the Board's view, it would be losing touch with reality to say something is radically wrong in the way the private sector operates. It is essentially a feeder system, providing across town links, and generally performs the task well, at least within the constraints imposed by finance, patronage and the need to effect a number of co-ordinations, a problem encountered to a far less extent by the Government sector where arterial operations are the prime function. The system falls short in providing link/feeder services of a circumferential nature, but again the franchise arrangement and the lack of funds prevent improvements."

6.18 Later the Board said:

"Over the years, the private bus system in Melbourne has made service adjustments to match declining demand and there will always be some criticism of the level of service provided or, indeed, of the complete absence of service at particular times."

6.19 A submission by the Victorian Railways Board referred to the scope for rationalization of suburban passenger operations.

"Although the overall economics of the electrified suburban passenger system largely rests on wider questions such as pricing, peak period service levels and staffing of stations, limited opportunities exist to improve the cost-effectiveness of the system through rationalisation measures. These can be grouped as:

- . short-term replacement of trains with buses on certain routes at times when patronage is light, particularly Sundays.
- . longer-term rationalisation of certain closely spaced stations or parallel public transport routes."

6.20 "On several suburban lines, patronage is sufficiently light on Sundays to accommodate all passengers offering in a bus operating to the existing rail schedules. Such services operated under contract to VicRail, would reduce overall operating costs without significant detriment to service levels. The routes concerned are:

Flinders Street	-	Sandringham
Eltham	-	Hurstbridge
Camberwell	-	Alamein
Newport	-	Altona
Newport	-	Werribee
Dandenong	-	Pakenham

In addition, two other lines cover areas which are already well served by public transport in the form of M. & M.T.B. tram and bus services and the same principle could apply without the need to provide new alternative services, viz -

Flinders Street	-	Port Melbourne
Flinders Street	-	St. Kilda

This is a similar situation to the Flinders Street - Upfield line on which Sunday services have not operated for many years in view of the existing parallel tram service to North Coburg, and the high cost of manning the many level crossing gates on this line....."

6.21 "In the longer term, the general question of over-supply of public transport in certain areas should be addressed. There are several examples of virtually parallel train and tram or train and bus services operating in close proximity to each other where one mode would normally have the capacity to cope. In other areas, stations are far too closely spaced to allow for reasonable acceleration and braking rates for trains or to generate sufficient traffic within the relatively small area served. The Port Melbourne, St. Kilda and Upfield lines represent clear examples of the former while the retention of excessively closely spaced stations, such as those between Jolimont and Clifton Hill (three of which urgently require virtual reconstruction at a cost of \$1.2M), should be reviewed in relation to the readily-available alternative tram and bus services which already exist. Thus, it would be more logical to construct a modal interchange at Clifton Hill to allow passengers travelling to and from intermediate stations to transfer to trams and buses while passengers to Melbourne would enjoy an express run instead of making 5 intermediate stops."

Organizations and Other Bodies

6.22 Action in Melbourne considers that Melbourne needs a strong prosperous city centre which acts as a major point of attraction for a range of activities. To encourage this, the patronage of public transport should be increased - by more frequent services reduced off-peak fares, additional fare discounts, priority for public transport etc. Suggests consideration be given to the introduction of trolley buses in some areas, to tramway extensions, and to additional pedestrian subways to the new underground railway stations.

6.23 In a second submission Action in Melbourne says:

- . The role of private transport in providing direct access to the C.B.D. cannot be under-rated.
- . Public and private transport must be allowed to harmoniously exist.

6.24 A submission from the Advisory Committee for the needs of the Handicapped (City of Doncaster & Iemplestowe) summarises current deficiencies in public transport. It points out that transport is essential for those with a physical handicap and also that the facilities required by the handicapped are also required by the elderly and by mothers with prams. It recommends:

- . Modification of current public transport systems for maximum use.
- . An organisation to coordinate services, with needs being assessed at the local level.
- . An on-going training program for public transport staff.
- . Liaison with various handicapped persons organisations.

6.25 The Australian Institute of Urban Studies made available a report entitled "Staggered Work Hours and Peak Hour Congestion in Melbourne" and also a Consultants' report on "Staggered Work Hours Survey - Melbourne".

6.26 In a comprehensive submission the Australian Railways Union - Victorian Branch said that

- . Transport Planning must recognise the fuel situation.
- . Financial problems will not be solved by labour replacing technology, contraction of services and line closures.

6.27 The Australian Tramway and Motor Omnibus Employees Association submission included the following:

- . Public transport should be upgraded.
- . Trams should be given priority by means of legislation, or measures such as priority lights physical separation, etc.
- . All public transport in the metropolitan area should be under the control of one body, and there should be a separate body for intra-state services.

- . The tram system should be extended along most existing routes.
- . Innovative ticket arrangements should be available.
- . Tram services in freeway medians should be considered.
- . Bus operations on the Eastern Freeway (in the off-peak direction) should be rationalised.
- . The practice of replacing trams by buses on some routes on Sundays should be discontinued.
- . There should be more attention to safety and comfort on trams and buses.
- . Serious consideration should be given to the electrification of most heavily trafficked bus routes.
- . The third member of the Tramways Board should be elected by all employees of the Board.

6.28 In the view of the Bus Proprietors Association "greater efficiency and improved service to the public would result if a single Authority were to be responsible for all public transport services in each centre." ".... under such an Authority, private enterprise services could continue to play their present part - and could be expanded in their role with appreciable cost savings".

6.29 The Association suggested that such an Authority could improve cost-effectiveness in a number of ways:

- . At times of low demand, rail services could be replaced by buses.
- . The travelling public could benefit from common fare and ticket systems.
- . Means of monitoring government expenditure on transport to ensure good "value for dollar" by "setting criteria to determine how transport money should be spent" could be provided.

6.30 The Institution of Engineers, Australia, suggested that responsibility for public transport services in metropolitan Melbourne be transferred to a new metropolitan authority.

6.31 The Northern Suburbs Public Transport Action Group proposes increased spending on the tram network and on vehicles, new tram routes, better co-ordination of services, priority for trams, improved comfort and no further fare increases.

6.32 The Royal Australian Planning Institute made the following points:

- . The Study should give due regard to other relevant studies, such as the current MMBW work on metropolitan structure.
- . Different modes have characteristics that enable them to serve some needs better than others. The transport administration should enable the most appropriate modes to be chosen.
- . Transport systems should serve the needs of people.
- . Criteria are needed as a basis for assessing monitoring and changing the system to achieve long-term objectives.
- . All forms of transport (including pedestrian, cyclist, mini-bus, shared taxi, etc.) must be considered.
- . Social aspects, including community expectations and acceptance, as well as economic, physical and management aspects must be considered.
- . The Study should explore and set down goals and expectations for the transport system, and public transport is discussed in this regard.
- . The existing authorities and processes to provide for current and future transport needs should be critically assessed.

6.33 The Royal Automobile Club of Victoria indicated that its earlier comments on the Draft Transport Plan 1978 should be included as part of its submission. This submission can be summarised as follows:

The appropriate strategy of urban development is to utilise limited resources by encouraging growth in selected urban corridors and around sub-centres.

For the foreseeable future the motor vehicle will continue to be the best provider of mobility and accessibility.

Rising fuel costs will lead to some suppression of car travel, and this will lead to an increased likelihood that people will choose work places closer to their homes.

Public transport systems have an important role to play in relation to the C.B.D. and in the case of developed sub-centres in selected corridors.

Public transport policies need to be reviewed to recognise and give greater priority to road based transport of people and goods.

The need for transportation management on a regional basis is of paramount importance.

6.34 The Town and Country Planning Association proposed substantial reorganization of the responsibilities for planning, construction and operation of transport systems. In relation to public transport the Association advocated "The development of a co-ordinated and comprehensive public transport system to meet the needs of a re-structured metropolis.....". Their suggestion referred to the extension and improvement of the rail network, the development of modal interchange points served by local bus services and the linking of sub-regional centres by buses or trams.

6.35 A submission from Traffic Action supported the maximum utilization of public transport and also said that the optimum balance between public and private transport varies within the metropolitan area.

6.36 The Victorian Taxi Association, in its first submission, outlines future needs and requirements of a comprehensive transport system. It says that the gap in existing services is the provision of a full service "paratransit" system that will provide for shared demand responsive, or pre-arranged, transport for small groups of children, the elderly, and handicapped, particularly in low density communities. It says that the taxi industry with the likely use of larger multi-use van type vehicles, could, with Government capital assistance, be a major provider of such services.

6.37 In a further submission the Association says:

- . Some relief from government taxes and charges would result in lower fares and thus a better used taxi service.
- . Melbourne taxi depots have invested heavily in sophisticated two-way radio systems.
- . There is potential for an expanding role for taxis in programs of share rides for the disadvantaged and handicapped.

- . The taxi industry could cater for the "community transport systems" that are now being accepted as a Government responsibility.
- . The industry should not be self-regulated. The concept of Government regulation has proven to be in the industry's best interest.
- . The industry desires a role in TRB decision making.
- . The industry is concerned with the expansion of Council or Government subsidised community bus services.

Individuals

6.38 Relevant submissions were received from the following persons:

- . Ms J. Campbell, regarding public transport services to and from the Doncaster area.
- . Mr. M.E. Elliott, commenting on rail and bus services to Coolaroo.
- . Mr. A.L. Grigg, suggesting that rail networks should be expanded.
- . Mrs. M. McLoughlin, commenting on tram services.
- . Mr. R. Morgan, suggesting that there be a detailed study to examine the future of trams in Melbourne.
- . Mr. J.R. Prideaux, commenting on public transport development.
- . Mr. W. Rosier, supporting the upgrading of public transport.
- . Dr. C. Sowerwine, submitting a paper on national cost accounting and transport.
- . Mr. A. Stephan, recommending the use of mini-bus transport.
- . Mr. R.A. Vowels, discussing improvements to public transport service.
- . Mr. D. Wright, commenting on the effects of time-tabling and strikes on public transport usage.

7. PLANNING FOR TRANSPORT IN THE METROPOLITAN AREA.

7.1 In the early 1950's the Melbourne and Metropolitan Board of Works (M.M.B.W.) as the metropolitan planning authority was active in the preparation of a comprehensive planning scheme for the metropolitan area. In its 1954 plan for future metropolitan development, transport was a significant consideration. The plan included comprehensive road and public transport proposals.

7.2 In 1963, the Government established the Metropolitan Transportation Committee. The Committee carried out a detailed survey of travel in Melbourne, and as a result information was obtained on the daily movement of persons and freight throughout the metropolitan area, and on population, land use and transport system characteristics. In 1969, the Committee released a Transportation Plan for Melbourne. Features of the Plan were provision for the construction of the underground rail loop, proposed extensions to rail and tram routes, a considerable increase in bus services, arterial road improvements, and a proposed 490 kilometre network of freeways. The Plan was accepted in principle by the Government and all major public transport projects which have subsequently been implemented were part of that plan.

The Draft Transport Plan 1978

7.3 The Draft Transport Plan 1978 was released in three volumes for community discussion in December 1978.

7.4 Volume I describes the principal transport issues, the policies that the Government has agreed upon in response to these issues, the strategy for developing the program of works, and a process for updating the Plan.

7.5 Based on the considerations in Volume I, Volume II contains programmes for transport throughout Victoria for the five year period 1978-79 to 1982-83 based on a capital expenditure over the period which was assumed to be 10% higher in real terms than the expenditure that would be achieved by continuing the 1977-78 level of expenditure. It also indicates proposals beyond the five year period.

7.6 The Draft Transport Plan says that "the main features of the Government's metropolitan planning strategy that affect transport are:-

- To re-affirm the role of the Central Business District as the core of metropolitan Melbourne and Victoria.
- To re-vitalize the inner and middle areas.

- To encourage urban growth within Preferred Development Areas of selected corridors based on the major transport routes and other services, and to maintain as non-urban the "wedges" between corridors.
- To encourage increased densities along the main transport routes.
- To assist and attract increased populations to the north and west as far as practicable, and to fore-close options in areas of environmental sensitivity to the east and south."

7.7 The Draft Transport Plan says that "the transport strategy must:-

- Work within realistic funding limits.
- Focus on a short to medium term works programme rather than a longer term blue-print.
- Place more emphasis on obtaining best use of existing facilities by appropriate modifications.
- Be flexible seeking to preserve as many options as possible for future development.
- Use stage construction as far as possible.
- Include a process for continual monitoring of supply and demand factors, periodic review, and co-ordinated planning and implementation."

7.8 The Plan also says "The Government is faced with the task of making best use of both the public transport and road systems for both personal and goods movements. Where it is considered that the current balance of tasks performed by the different modes is inappropriate, action to change this balance should take account of two main requirements."

"The primary requirement is to achieve a mix of transport services that optimizes community benefits within appropriate levels of funding. In general, emphasis on fixed track transport is most suitable when large numbers of travellers wish to travel in the same direction, such as for radial travel to the inner areas of cities, especially in peak hours. Hence fixed track public transport is most suited for high volume movements in the more densely developed corridors. Road transport modes are most suitable for personal travel in diverse directions, as in the middle and outer suburbs".

"The second requirement relates to pricing of services. In most sectors of industrial and commercial activity, prices are generally aimed to cover costs and profits. However, applying the same principle to public transport would cause more people to travel in their own cars, resulting in diseconomies to the community at large. In practice users are asked to pay only a share of the total cost of public transport.

7.9 A set of policies which "form the basis of the Transport Plan" are listed, including the following:-

"The Government will:

- continue to improve the State's public transport service wherever it is in the overall community interest;
- encourage the use of public transport wherever possible;
- keep public transport fares at lowest practicable levels;
- improve the availability of transport to those without access to private cars or existing public transport services;
- (et al)".

7.10 The Melbourne and Metropolitan Board of Works continued its studies into the further growth of Melbourne and, in March 1979, released a report titled "The Challenge of Change." The purpose of this report was "to outline Melbourne's recent growth characteristics and policy responses to date, to illustrate some implications of expected growth patterns and, within that context, to comment on recent Board investigations into the desirability and feasibility of modifying the city's growth pattern over the next two decades."

7.11 The report said that: "A 'new Melbourne' has developed since 1945 characterised by the private car and the detached house and increasing dispersal of employment. There has been a general reduction in population and many activities in much of the ... central city and inner and middle suburbs."

" 'New Melbourne', however, has been relieved from the constraints of the predominantly Victorian Age fixed rail networks by the comparatively low real prices of cars and petrol. Residents of the dispersed city, in the main, travel by private car. Journeys to shops, schools, entertainment, to almost everywhere and anytime except the Central Business District in the peak hour, are undertaken predominantly by car.

It is easy to forget that such widespread personal mobility is very recent, and has been revolutionary in its impact upon the city's structure. There is no doubt that the average Melbournian is very attached to his or her car. It has undoubtedly afforded a much wider range of recreation, shopping and employment options than the previous generation's. Nonetheless, there is still a large number of households in Melbourne that does not possess a car."

"Melbourne as we know it will not function without the motor car or its replacement. The suburbanisation of employment has greatly complicated the journey-to-work pattern. Workplace destinations, let alone residential area origins, increasingly cannot be reached conveniently by train or tram, and even conventional buses require concentrations of population and activity for optimum operation. In consequence, tram patronage has declined significantly since the late 1940's and most of the numerous suburban railway stations of 'old Melbourne' have experienced a fall of between 15% and 40% in ticket sales since 1960."

7.12 Following release of "Challenge of Change" and community responses to it, the Melbourne and Metropolitan Board of Works released a report on "Alternative Strategies for Metropolitan Melbourne" in October 1979 and "Alternative Strategies for Metropolitan Melbourne-Background Papers" in November 1979. The October 1979 report examined the implications of four basic development alternatives for Melbourne, namely:-

- Dispersing Growth - this alternative is basically a continuation of the dispersal of population and activities. It would entail the accelerated development of land in defined corridors. Population levels in inner and middle suburbs would be likely to continue to reduce.
- Centralised Growth - this alternative would give relative emphasis to the Central Business District as the focus of commercial activity rather than the further growth of centres in suburban areas, and to the use of radial public transport networks rather than the provisions of major road improvements in suburban areas.
- Suburbanised Growth - this alternative would encourage the location of activities at selected centres serviced by fixed rail transport and surrounded by intensive housing development.
- Incremental Growth - this alternative would maintain a vital Central Business District and provide for some re-development of the inner suburbs, with controlled development in middle and outer suburbs, and allowing higher densities along fixed rail routes and development in areas already well serviced.

7.13 The report did not express a preference for any one alternative, but said that it was "intended to provoke discussion of the path which Melbourne should follow in its development as a preliminary to the eventual selection of an appropriate development strategy."

7.14 In July 1980, following consideration of responses to the October 1979 report, the Board issued a report entitled "Metropolitan Strategy."

7.15 This report recommended the Incremental Growth Strategy and states that this strategy entails actions to:-

" - develop a balanced transport concept for the metropolitan area, which takes into account the vital relationship of the movement of people and goods and the location of activities. Such a concept should maintain high accessibility to Central Melbourne by both private and public transport, provide for circumferential travel and place major emphasis on traffic management."

7.16 This report also says :-

"Since activities have been increasingly dispersed throughout the metropolitan area, there is a need for public transport to be provided in a more dispersed way. A basic public transport system is required both for people who do not have a car available and as an alternative or a back-up to car travel. Undoubtedly subsidies will be needed. In some cases only a very basic service is required (such as in mornings and evenings for school and work trips). Improvements to services generally are desirable with some areas deserving immediate attention."

"Public transport efficiency must be maintained and, where possible, improved. In this respect, a review of public transport operations should be undertaken. This should be directed at such matters as the high labour costs presently experienced and the desirability of standard fares and computerised ticketing systems. Experience overseas suggests that measures taken in these areas help to revitalise public transport."

7.17 The M.M.B.W. Strategy Plan has recently been endorsed in principle by the Government.

COMMENTS

8.1 Over the past 30 years Melbourne has experienced rapid change in population, technology, economics, and expectations. The Study Group believes that the public transport systems have failed to adapt to the changing needs of the community. To be both cost effective and generally acceptable to the community, in future, major changes will be needed and must be made promptly.

8.2 There is enough evidence of lack of adaptation to the changing circumstances in the failure to rationalise in the inner areas where population loss, together with increased car ownership, has led to reduced need and in the outer areas where services have not been provided at a rate to match the rapid expansion and the reasonable community expectations.

8.3 There is no doubt that significant portions of Melbourne's fixed track public transport system would not be constructed today to meet current patronage levels. It has been claimed that the costs of continuing to operate these services are much less than would accrue from a new investment. However, for lightly trafficked sections of the fixed rail systems, this claim is very much open to doubt when the costs of purchasing trams and trains, in the light of the interest rates currently pertaining, are compared with the purchase of buses to carry out the same tasks. Furthermore, at low levels of demand the operating costs of trams and trains are substantially higher than the costs of operating buses when costs associated with infrastructure such as rails, signals, stations, and other maintenance and modernisation costs are taken into account.

8.4 The Study Group believes that there should be a reassessment of the basis for allocating priorities in capital budgeting with greater emphasis being placed on financial return. However, the availability of capital funding is clearly not the only requirement for increased efficiency. It is appropriate to now fully study the desirability of retaining lightly trafficked sections of the train and tram systems, and to eliminate a situation of competition within the public transport system.

8.5 The Study Group has not sought to investigate the management, staffing and operations methods of the public transport authorities. However, in the course of the Study, the Group has travelled on trams and trains, has visited railway workshops and maintenance facilities and has discussed the preparation of budget and other management information with senior staff of VicRail and the MMTB.

8.6 It is impossible not to reach the conclusion that work practices in both Authorities are much more labour intensive than is the case in many comparable organisations.

8.7 About 25% of MMTB buses and all trams are two-man operated. This may be compared with the situation in European cities where large articulated trams are almost invariably one-man operated and in North America, and other Australian cities, where street public transport is provided predominantly by one-man buses. Similar comparisons may be made between the staffing levels of the VicRail suburban system and overseas rail systems.

8.8 A key to achieving improvements in productivity is claimed to be the introduction of a fare structure and ticketing system which does not require the present level of labour involvement. Features of such a system could include greater use of pre-purchased periodical tickets, ticket issuing machines at some locations and the simplification of cash fares to enable coin boxes to be used on buses and trams.

8.9 However, this would not be a solution to all current financial problems. The public authorities are still providing peak period levels of service reminiscent of those provided to meet the patronage of the 1940s in areas where patronage has declined to the extent that not all seats available are occupied in peak periods, and in competition with other lightly loaded modes of public transport in the same areas.

8.10 In this regard survey information shows some eight out of eighteen rail services provided in peak periods are normally less than fully loaded, whilst other services from some of the outer suburban stations continue to be overcrowded.

8.11 The usual retort to criticism of such a service is that the customers are being provided with the service they require, as evidenced by the customer surveys. The reaction of the provider of the subsidy, i.e., the general public, is of course, rarely sought.

8.12 Later in this report, a program of investigation designed to rationalise service across the organisational boundaries of the authorities is recommended. The Study Group considers that the success of such a program could be contingent upon the prior introduction of an effective common fare system which does not penalise those passengers required to change mode. Irrespective of this future benefit it is considered that such a step could be justified on grounds of simple equity - the absence of

common tickets requires those least well served by the public transport system to pay more. The fare systems introduced from 1 August 1980 are of course, a step in the direction of a common fare system.

8.13 The Study Group endorses the concept that a comprehensive plan for the introduction of a common ticket system for travel on trains, trams and route buses should be developed after proper identification of costs, benefits and patronage effects of the proposed scheme.

8.14 The Study Group believes that scope exists to increase fares to a level where commuters cover their costs of travel.

8.15 Such a policy would inevitably result in some diversion from public transport. Exactly how much is not clear.

8.16 Commuters who leave public transport, as a result of pricing, will not necessarily travel to the same location by car. Perhaps at the risk of oversimplifying, if a commuter currently making a long rail journey to work, and being heavily subsidised in doing so, is able to obtain suitable employment close to his home then personal and community benefit could result.

8.17 This Study was not intended to involve research into the relationships between public and private transport and between transport and city form. Current practice, in providing very substantial fare subsidies to commuter travel and investing in costly modal interchange facilities, apparently places a very high valuation on the community benefits which flow from public transport use in peak periods. Whatever the magnitude of these benefits, there seems ample reason to question whether they are sufficiently large enough to justify the present level of subsidy and capital expenditure.

8.18 The Study Group believes that a policy of increasing fares more frequently and at a greater rate than cost increases, should be adopted. The effects of this policy should be carefully studied and implementation should be reviewed at appropriate intervals, but the objective should be aimed at elimination of the subsidy within a reasonable period.

Efficiency

8.19 For almost 25 years following the 1939-45 war there was little investment in urban public transport. While the 'Harris' trains had been built and part of the M&MTB bus fleet replaced, Melbourne's public transport Authorities entered the 1970s with predominantly obsolete equipment and with organisation and staffing practices which had largely been developed by the 1930s.

8.20 While investment increased in the 1970s a very large proportion of the funds made available have been directed to asset replacement, for example new trains and trams, or to the provision of additional facilities, for example the Underground Rail Loop. Throughout the decade only a very small portion of funding has been available for projects directed to cost reduction or improved operational efficiency, other than the extent to which newer vehicles may be more reliable.

8.21 Thus we have now entered the 1980s with a public transport system which in many areas is performing poorly, the problems caused by cancellations and delays to the rail system being the most publicised, and is facing the prospect of meeting increasing real labour costs as well as increased capital servicing charges flowing from investments made in the 1970s.

8.22 The public transport system has entered the 1980s with a patronage profile which has as the main groupings:

- . workers travelling to the central business district
- . secondary and tertiary students
- . workers at metropolitan locations, predominantly with lower than average income, more frequently female and almost invariably without access to car travel for the trip.

8.23 These groups together form a large segment of total patronage. They make up approximately 90% of peak patronage and, as such, largely determine the size and cost of the public transport system. It has been claimed that these groups are not likely to vary significantly in numbers, but a change in methods of transport of students and shift in jobs to suburban areas could still have a marked effect on public transport patronage within the foreseeable future.

8.24 While substantial increases in car availability are expected, much of the increase will be as a result of households, which already use public transport infrequently, acquiring additional vehicles. It is also clear that there are many households where a car will not be acquired - the household head may, for example, be a welfare recipient.

8.25 The patronage estimate discussed earlier projects a "most likely" patronage change for public transport over the next decade of 1½% per annum increase. This estimate assumes a continuation of the current subsidy in constant real terms.

Public Transport in Outer Suburbs

8.26 An important item raised during the course of the Study was the level of public transport in developing outer suburbs. Discussions held with a number of groups of residents of the City of Knox largely concerned the problems which may be experienced by people without motor vehicles in such areas.

8.27 The public transport services available in outer suburbs are principally private operator buses and rail. For many residents the key to their ability to use public transport is the proximity or otherwise of a bus route. Adverse comments have been made about the frequency, reliability and route coverage of these services.

8.28 In the outer suburban areas, where the privately operated buses are the principal form of public transport, the system provided is entering the 1980s in a handicapped situation with characteristics similar to those of the systems operated by the public transport authorities involving:

- Peak demand characteristics for work and school trips.
- Very poor patronage in the off-peak periods which has fallen to such levels that there is no justification for continuation of services after 6.30 p.m. in most areas, (this characteristic also applies to fixed rail services).
- Insufficient revenue to justify continuation of services without assistance through government subsidy.
- Government control over standards and frequency of services.
- Pressures from government and local government for retention or extension of poorly patronised cross town services.
- Difficulties in funding prompt and adequate replacement of equipment.

8.29 Notwithstanding these handicaps however, the cost of operating these services has been substantially less than the cost of operation of MMTB bus services and a reputation for efficiency has consequently been achieved.

8.30 However, the Study Group is constrained to comment on the magnitude of the subsidy and the extent of government control and direction now being exercised over the private operators of the outer metropolitan services. The result of such government activities could well be that of management being involved in managing the relationship with government rather than in managing and operating efficient transport services. However recent changes in the subsidy scheme have been introduced which have, as an objective, the provision of a base level of assistance, and the acceptance of subsequent commercial responsibility by operators for service decisions.

8.31 The substantial difficulties involved in providing public transport service are illustrated by comparing 1976 census results for inner and outer suburban areas. St. Kilda, for example, had a residential density approximately seven times that of Knox and a car availability, in vehicles per household, little more than half that of Knox.

8.32 There are other factors of course - the location of employment for outer suburban residents tends to be more remote from residences and dispersed than for inner suburban residents. In some areas, street layouts designed to restrict motor traffic travelling through residential areas have the effect of further reducing bus service efficiency and also make pedestrian access to bus stops more difficult.

8.33 Elsewhere in this report a number of re-evaluations of services in inner and middle suburbs are recommended. It is hoped that this will make available some resources, both physical and financial, which may be re-deployed to areas where relatively poor public transport is experienced.

8.34 However it would be unfortunate if residents of outer areas formed unrealistic expectations of service improvement. The current situation is that passengers on private operator buses, largely in outer suburban areas, receive an almost equivalent subsidy as those passengers using the tram system. The most heavily subsidised rail and M&MTB bus journeys also originate in outer areas. Thus on a basis of equity a large diversion of public transport resources to outer areas could not be expected if higher patronage cannot be guaranteed.

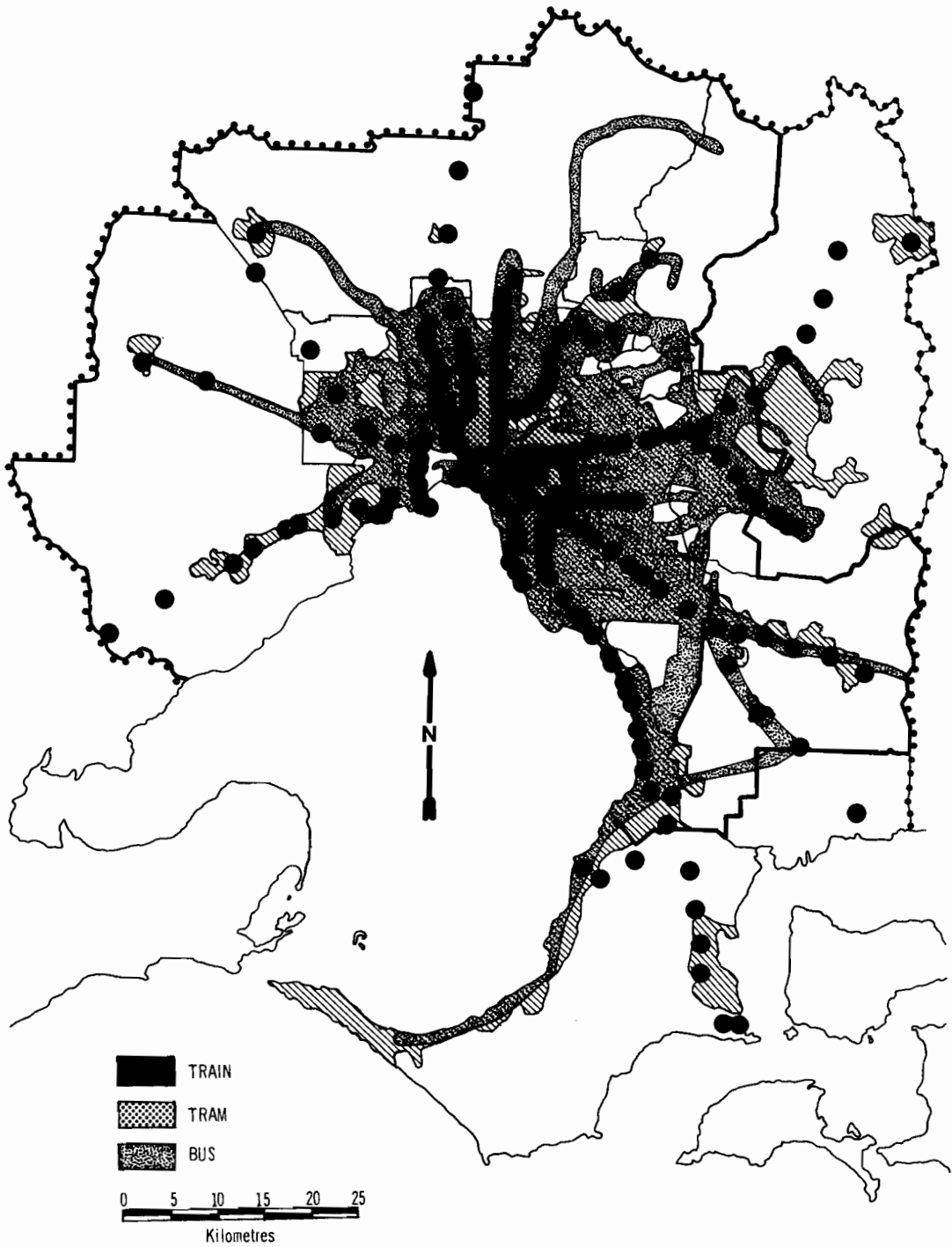
8.35 The areas in question have largely been developed since the motor car became the predominant form of urban transport. While many residents would have purchased in these areas intending to use cars as their main form of transport many would have expected, on the basis of historical precedent, that public transport would follow development. Over the last 10 to 15 years this historical pattern has not continued, at least not as extensively as was the case up until the 1960s. It seems unreasonable to expect that this trend will reverse in the 1980s. It would be even more unrealistic to seek to provide public transport in outer suburbs by extension of the tram network.

8.36 Figure 9 shows the coverage of existing public transport in Melbourne. While this diagram presents an incomplete picture of the level of public transport service it is clear that a large part of the metropolitan area is within reasonable walking distance of existing services. While it may be argued that those who live outside this area have chosen to accept a lower level of public transport service, there remain some trip purposes, for example, travel to secondary schools, for which public transport is required.

8.37 The details of Government financial assistance to the private bus industry by contractual arrangements are, at the time of writing, being negotiated with the Bus Proprietors Association. It is anticipated that the final resolution will provide a basis for the effective responses by local operators to changed demands and travel requirements.

8.38 However, the characteristics of these bus services, as discussed in earlier sections of this report, parallel those of the public transport authorities in the inner suburban and central areas, viz. demands for services which cannot be economically justified other than on the basis of heavy subsidies being met by the public at large. The concept that everyone must be within reasonable walking distance of transport is a carefully preserved relic of the 19th Century, nurtured by public transport authorities, and the cause of a large proportion of the inefficiencies in the public transport service.

8.39 Alternative means of providing travel facilities for residents of outer areas should continue to be investigated. The Study Group recognised that there is a proportion of the people of the metropolitan area who are disadvantaged insofar as needed travel is concerned, although the proportion is not as high as many making representations to the Study would have it believe.



Source : M.M.B.W.

FIGURE 9 AREAS SERVED BY PUBLIC TRANSPORT, 1978

8.40 Where such necessary services are outside the scope of social or welfare service subsidies, consideration should be given to lower cost methods of providing appropriate services without going to the extent of providing regular bus, train or tram services which would be lightly patronised even though heavily subsidised, if current patronage of existing services can be taken as a guide.

8.41 The Study Group believes that consideration should be given to a trial of joint use taxis as a means of providing local public transport in areas without conventional public transport. It is suggested that local government and State Government be jointly involved in funding the trial. Particular attention should be directed to investigating the feasibility of a scheme based on hourly hiring rates at night when taxis may be expected to be more readily available.

Organization

8.42 A number of organizations indicated that they considered the establishment of a new authority to assume responsibility for all metropolitan public transport was desirable. The reasons put forward in support of this view can be summarised relatively simply :

- such an authority would be able to plan capital investment programs and provision of service on a basis free of any organizational biases
- such an authority would be able to achieve more effective integration of services and ticketing.

8.43 Consequently the Study Group has considered both the establishment of an overall Transport Planning Authority and the amalgamation of the existing operating Authorities.

8.44 The amalgamation of VicRail and the M&MTB is not recommended as there would not appear to be any substantial economies of scale to be derived from such an amalgamation. Experience in New South Wales, where rail and bus operations were amalgamated and the large body thus created has subsequently been separated into two new authorities does not encourage the view that amalgamation is a desirable step.

8.45 In regard to the former proposal it is noted that legislative provisions concerning the coordination of planning and operation now exist under the terms of the Ministry of Transport Act 1958.

8.46 Specifically the Act says:

"For the purpose of securing the improved development and better coordination of railway, tramway and road transport in Victoria there shall be a Ministry of Transport under a Minister of Transport who shall be a responsible Minister of the Crown."

"The Minister of Transport may from time to time make determinations of policy in relation to fixed route passenger transport services available to the public in the Melbourne metropolitan area on any matter that concerns:

- (a) the effective coordination of services.
- (b) the development of a suitable pattern of services throughout the metropolitan area.
- (c) the achievement of satisfactory levels of carrying capacity and frequency.
- (d) the development of integrated ticket systems.
- (e) the maintenance of proper standards of comfort and convenience for passengers, and
- (f) the efficient use of public moneys made available for transport purposes."

"The Minister may request the Metropolitan Transit Council to make a report on any matter before he makes a determination in relation to it."

"To assist the Minister in carrying out his functions under this Part there shall be a Metropolitan Transport Council consisting of:

- (a) the Director of Transport (who shall be Chairman)
- (b) the Chairman of the Victorian Railways Board
- (c) the Chairman of the Melbourne & Metropolitan Tramways Board
- (d) the Chairman of the Transport Regulation Board; and
- (e) four persons appointed by the Governor in Council.

8.47 The Act provides that the Ministry shall have "such officers and employees as are deemed necessary". In addition it is provided that the Minister, with the consent of the body concerned, may "make use of the services of any officer or employee" at the V.R.B., T.R.B., C.R.B., and MMTB (among others).

8.48 The Study Group believes that a clear need exists for increased effort to reassess operation of the public transport system and foresees that this will lead to increased fare levels and the withdrawal of services and facilities. If these matters are to be effectively addressed it is important that:

- . Appropriate technical studies are carried out and that this work is either free of institutional biases by being carried out by a group separate from the Authorities or, alternatively, is critically reviewed by a suitably skilled group.
- . Effective means is found to balance broad public interest against local or sectional interest.

8.49 Some significant changes to Government structure have been suggested. The possibilities are broadly:

- that responsibility for the effective coordination of public transport continue to rest primarily with the Minister of Transport.
- the establishment of a Passenger Transport Authority and a Passenger Transport Executive based closely on the U.K. model. In this case enabling legislation would be required to establish the basis for appointing or electing members of the Authority and for its funding. If the U.K. practice was to be followed a metropolitan property rate would be used to partially fund public transport service. Passenger Transport Authorities in the U.K. are discussed in Appendix 1.
- the devolution of responsibility for planning, and presumably financing, of urban public transport, and the operation of trams and buses, to a new Metropolitan Council based on the M&MBW. This was recommended by the Board of Review of the Role, Structure and Administration of Local Government in Victoria.

8.50 The Study Group does not believe that a case can be made to embark upon the very substantial changes implicit in the latter alternatives. Suggestions that operating costs of metropolitan public transport, over and above fare revenue, should be funded by a metropolitan tax and that policy decisions regarding fares and levels of service should also be made at that level are apparently attractive. However, the benefits which may follow from such a step

must be balanced against the costs and the organisational difficulties implicit in establishing what would, in effect, be a fourth level of government. It is also difficult to envisage that the new body, be it a Passenger Transport Authority or a Metropolitan Council, would possess any inherent advantage in making decisions regarding public transport than the State Government. It is relevant to note that urban public transport is a State Government responsibility in every other State with the exception, to some extent, of Queensland, where the Brisbane City Council operates bus services.

8.51 One general theme of this report is that inadequate adaptation of the public transport system to meet changed demand has taken place. If such a process is to adaptation, rather than expansion, and if services and facilities, provided to meet demands which no longer exist, are to be reduced or removed then local opposition must be anticipated. As such opposition can only be expressed politically, it would seem unrealistic to believe that a final decision on such matters could be made other than at the political level.

8.52 It is important that moves to increase operator efficiency not be wholly directed to those 'visible' activities which interface with the travelling public.

8.53 Both government authorities have large staffs involved in such activities as vehicle maintenance, electrical distribution, permanent way, signalling, scheduling and rostering, wages and general administration, as well as in activities not directly related to the transport task.

8.54 The Study Group is of the opinion that considerable scope exists for improved effectiveness in many of these areas and it is recommended that specific attention be directed to:

- the improvement of staff training and development programs;
- more formal application of methods and systems evaluation and of industrial engineering skills;
- use of management consultants, where appropriate.

8.55 This is not to suggest that the Study Group believes that management efficiency in the public transport authorities is lower than in other Government and semi-Government bodies. The Group has no evidence to this effect. Rather, it is the Group's belief that scope exists for improvement, and that the necessary skills to effect improvements should be developed.

Rationalisation

8.56 It would seem that there could be substantial reductions in the cost of operation through a reduction in the need to maintain a number of routes, as well as reducing service on others. There is also little doubt that considerable savings in the need for capital expenditure could result from rationalisation of the rail and tramway systems.

8.57 Whilst there is an apparent policy for the Authorities to increase service in response to overcrowding there are distinct inhibitions in reducing services. As a result there is a demand for additional equipment to provide better service for passengers travelling further distances. This in turn leads to lower productivity and increased costs whilst at the same time services which could be reduced as part of a process of rationalisation are still retained.

8.58 There is need for coordination by the Ministry and the Authorities to identify the most cost-effective means of providing public transport throughout the metropolitan area. It may well be that a number of services could be withdrawn at night and weekends with other services being extended as necessary.

8.59 The Study Group believes that initial attention should be directed to the Prahran/Malvern/Caulfield and the Brunswick/Coburg/Preston/Collingwood/Fitzroy areas, each of which are served by a number of parallel tram routes, railway services and intersecting bus services.

8.60 Particular attention should also be directed to reducing the number of rail stations in inner suburban areas already served by tram or bus routes.

8.61 The services which should be considered for elimination are those being operated at relatively low patronage levels, particularly at off-peak periods. In some areas a number of services are being provided so that there is not only competition between modes, but, in some cases, competitive services within the one mode are operated in close proximity.

8.62 In many cases, the substitution of an improved bus network would seem to offer potential to bring about an improved level of service, mainly in the form of increased service frequency, as well as reduce costs.

8.63 Suggested changes which should be considered are:

- Elimination of rail passenger services on the following lightly trafficked lines:
 - Flinders Street - Port Melbourne
 - Flinders Street - St. Kilda
 - Flinders Street - Upfield
 - Newport - Williamstown
 - Newport - Altona
 - Flinders Street - Sandringham
 - Camberwell - Alamein
 - Eltham - Hurstbridge

- Elimination of tram services on the following routes:
 - City - South Melbourne Beach
 - City - South Melbourne and St. Kilda Beach
 - City - Camberwell
 - Kew/Cotham Road - St. Kilda Beach
 - North Richmond - Prahran
 - City - West Maribyrnong
 - Footscray - Moonee Ponds

- Concentration of railway and tramway equipment onto the remaining services, thereby permitting scrapping of obsolete equipment now being used to maintain services, achieving better utilisation of modern equipment in areas of maximum demand,

and providing efficient and reliable service to patrons.

- Modification of bus services into a system complementing the remaining rail and tram services.

8.64 All bus routes to the central business district should be reviewed and, where cost savings would ensue they should be re-routed to act as feeders to rail.

8.65 In addition to the savings which could result from the truncation of the tram system, it is appropriate to consider the future role of trams as an on-street public transport mode.

8.66 The 1969 Transportation Plan prepared by the Metropolitan Transportation Committee included the following comments on the future of trams:

"As a fixed rail system, sharing the space of congested streets with moving and parked motor vehicles, it is becoming increasingly difficult to maintain headway and timetables and, as a consequence, to maintain sufficient capacity and reasonable speeds, particularly at peaks when the main demand for tram services occurs."

8.67 The Committee made the following comments on trams and buses:

"The tram car as a public transport vehicle is ideal for moving big loads for distances up to 7 or 8 miles. It is impeded in its task through having to share the existing road width with other vehicles and through having its speeds and timetables impaired by traffic delays throughout its journeys. It is, of course, often argued that a fixed rail system in the middle of streets already inadequate to handle motor traffic, contributes materially to street congestion. In cities in Europe and elsewhere, where trams are being retained, the congestion problem is being solved by putting them underground in the inner city areas and elsewhere by giving the trams their own reserved tracks and thus separating them from motor traffic."

"While the modern bus as an alternative vehicle to the tram is a more flexible unit in traffic and enables fare collection and passenger handling from the foot-path, factors such as road width, traffic volume, kerbside parking and traffic delays would still militate against any substantial improvement in bus headways and speeds by comparison with trams which, unit for unit, have a 50 per cent greater passenger carrying capacity."

"In the opinion of the Committee, it would be quite unrealistic to scrap the tramways network and it is recommended that trams should continue to operate as a part of the system of street public transport."

"In the period up to 1985, the committee believes that modification of the present network may well be required. Until 1985, and even beyond that year, the committee can see the trams still playing an important role in street public transport, even though the present system of routes may, in the meantime, undergo modification and some routes now served by trams be converted to bus operation. In the longer term it is considered that the continued operation of trams must ultimately depend upon the feasibility of providing separate rights-of-way in heavily built-up areas."

8.68 Since that time no contractions of the tram system have occurred, and one extension, of approximately 3.4 km from Warrigal Road to Middleborough Road, East Burwood, has been made.

8.69 In 1974 a program of new tram purchase was commenced and by 1982 a total of 215 new trams will have been acquired. It is understood that the program was commenced following financial analysis by the M&MTB. Tram replacement was also evaluated by the Bureau of Transport Economics and, on the basis of results of this work, substantial Commonwealth grant assistance has been made available for tram purchase.

8.70 A submission concerning the future role of trams has been received from Mr. R. Morgan, who states:

"Trams are just one of many types of road vehicles which must share limited road space. The basic question is not whether buses are better than trams, but is, rather, whether buses mixed with other traffic is a better system than trams mixed with other traffic on roads."

8.71 When the Metropolitan Transport Committee considered the future role of trams an extensive freeway network was proposed to reduce congestion on arterial roads. In the intervening period it has become clear that the construction of such a network of new facilities is not practicable and greater emphasis must be placed on the management of existing road systems. Some potentially useful traffic engineering measures, including tidal flow and five lane approach treatments, are not able to be used on streets with trams.

8.72 The MMTB now has up to date experience of operating modern trams and buses - a situation that did not prevail at the time of the MTC study.

8.73 The Study Group has been advised that the current cost of a tram to the MMTB is approximately \$440,000. When this is compared with a current cost for a bus of approximately \$90,000 and it is also noted that MMTB expenditure on maintenance of trackwork and electrical overhead in 1978/79 was approximately \$4.2 million it is considered that a real need exists to fully investigate cost relativities.

8.74 The Study Group is aware that considerable effort is being expended in the promotion of continued tram services and the general attitudes that prevail regarding the long term availability of petrol for private motoring and bus services. A report on the energy situation has been produced by the Study Group in the light of the comments received.

8.75 In a situation where the cost of providing tram services for relatively small segment of the metropolitan population can only be supported by application of a subsidy of the order of \$30 million per annum, the justification for continuing to provide such services is very remote and earlier decisions to retain and upgrade the tram system would seem to have been based on political rather than financial considerations.

8.76 Patronage of the tram service is lower than that of 1913, and the appropriateness of the financial priorities of the MMTB in replacing trams is very much open to debate as is the efficacy of providing right-of-way for trams. The Study Group believes that there is an urgent need to study in detail the various segments of the transport task being carried out by tram, with a view to elimination of all those services which are effectively bankrupting the MMTB, and their replacement where justified by lower cost public services.

8.77 What was not said in the 1969 Transport Committee Report was that most tram services in the world had been replaced by more efficient services, and most of those in high density European cities that hadn't were being modified to recognise the transport needs of a substantial part of the population at large, not just a relative handful of patrons.

8.78 It is recommended that a study be undertaken to identify the costs and benefits of replacing obsolete green trams with buses rather than new trams.

8.79 The Study Group sees no justification in the continued operation of poorly patronised and costly passenger bus services in the metropolitan area by the Victorian Railways Board. In this regard it is understood that East Kew services date back to the abandonment of the outer circle route, a reason which has no relevance to the continued operation of the service in 1980. There is no financial justification for Vic Rail's other metropolitan bus services.

8.80 Representatives of the Victorian Taxi Association pointed out that there were long periods during the day and night when taxis are under utilised. This is reflected in the operating costs and in fare levels.

8.81 The Association drew to the attention of the Study Group the possibility that this capacity could be utilised in the provision of public transport services for the general public, in areas where demand is low, and for the elderly, the handicapped and other disadvantaged people.

8.82 It is not in the best interests of the people of Victoria if local government and social welfare organisations spend money on capital facilities to provide services which could be available at lower cost, under contract from taxi operators, or bus proprietors, particularly during period of under utilisation of these services. It would be appropriate for this to be investigated whenever the acquisition of a small bus is contemplated.

8.83 Another suggestion which was made was that the existing licensing system be modified so that the number of taxis licensed was not limited by a decision of the regulating Authority. The Study Group was unable to consider this in the detail which would be required, particularly if an increasing role for taxis in providing mobility in outer suburbs is envisaged.

8.84 The Study Group does believe however that serious attention should be given to the evolution of more flexible "public" transport facilities, through schemes to extend the use of taxis, and the development of "para transit" services.

8.85 Whilst there is little doubt that Melbourne has an excellent taxi service, controlled and supported by regulation and licensing conditions, the consequences of such regulation and pricing could be that taxi services may be "priced out of the market" as people tend to seek lower cost personal transport services.

8.86 It is of concern that the current licensing system and limitations on the number of licences granted are related to commercial regulation of the taxi industry in support of the taxi proprietor rather than to the need of the public for personalised transport service. This is the type of regulation which was tried to support the existing rail system and which eventually led to the demise of the rail system as a general freight carrier.

8.87 "Para transit" systems have evolved in recent years particularly in the United States of America, Britain and Europe. These include "mini cab" services, leased taxi services, and mini bus services whose licensing provisions are basically related to driver competence and vehicle conditions rather than to support of the commercial viability of the services offered. These services are oriented towards user needs and acceptance and it is understood that there is considerable use of mini cabs in the provincial cities and towns of Britain, in competition with orthodox taxi services plying for hire on the streets or from taxi ranks.

9. CONCLUSIONS

9.1 Consistent replies to interviews and study questions have shown that reliability is the most keenly sought factor in public transport. Other factors which people wish to see in public transport are frequency of service, comfort and convenience. In most instances, fares are somewhat irrelevant. The relatively low ranking of fare levels in determining attitudes and in governing the choice of transport has been a consistent finding over a number of years.

9.2 The Study Group investigations have shown that there is insufficient data available on requirements of the various segments of the metropolitan area for public transport. Some research has been carried out, but there has been little segregation of research facts to distinguish between the comments of users and non-users of public transport, the reasons for using or not using public transport, the actual costs and revenues related to providing the various services, the effect of competition between public authorities for patronage, the level of costs being incurred and the subsequent subsidies, and many other factors of importance to conducting a well run and co-ordinated public transport system.

9.3 The motor car dominates travel in the Melbourne metropolitan area, and levels of public transport patronage now pertaining are at 19th century levels, heavy subsidies are the order of the day, the total public transport task relates to no more than 16% of the number of trips in the Melbourne metropolitan area, the transport task is characterised by sharply peaked traffic demands and the subsidised public transport systems are competing for traffic.

9.4 The motor vehicle is likely to continue to be the best provider of mobility and accessibility for the individual and industry for an increasing range of goods and services, and the most important mode of passenger transport within the Metropolitan area for many years to come. The extent of motor car usage is illustrated by car ownership which now amounts to 1.3 per household.

9.5 The Study Group believes that public transport has a continuing role to play in relation to the Central Business District and, to some extent, in developed centres of urban growth. The existing fixed rail system are inflexible, and have only limited potential to encourage development of urban growth. Any further developments of public transport in the foreseeable future should utilise buses in view of the flexibility of bus travel in an urban environment.

9.6 There is evidence of competition between the various modes of public transport, with resultant poor financial performance, in a number of areas, and serious impact on the level of subsidy being afforded the public transport authorities to remain in business. The Study Group believes that there is an urgent need to rationalise services in such areas and particularly in situations where the capacity of traditional services is far greater than current patronage levels.

9.7 The level and nature of public transport services being provided in some areas within the metropolitan region are excessive, and in others substantially less than considered desirable by the residents of those areas.

9.8 The level of public transport services provided in specific parts of the metropolitan area should be governed by financial performance, and not by traditional concepts requiring heavy subsidy.

9.10 The Transport Regulation Board's practice of discouraging the provision of independent school buses for the transport of students where public transport is available, amplifies demands for peak hour travel on public transport services with adverse effect on the requirements for substantial capital investments in poorly utilised equipment.

9.11 The low level of patronage on the tram system does not warrant the continued operation of a widespread network of fixed rail services, or its extension. In view of the very substantial yearly expenditure in the redevelopment and maintenance of the tram system, as well as the very substantial expenditure involved in modernising and in operating the tram fleet, compared with the cost of purchase and operation of more flexible buses, widespread replacement of tram services should be contemplated as soon as possible.

9.12 The government subsidy provided for public transport should be withdrawn as soon as possible, and the fare structure changed to reflect the cost of provision of the services.

9.13 The Study Group recognises that there is a need to provide transport services for the disadvantaged. However, the nature of the services provided should reflect the needs and the suggestion that the metropolitan taxi fleet could provide such services under contract to the Ministry of Transport, or through social service arrangements, in off-peak

periods should be seriously explored. The provision of vehicles by concerned groups for the transport of the disadvantaged, including the involvement of local government should be encouraged. In this regard attempts to regulate passenger traffic to public transport should be curtailed.

9.14 Provision of train and tram services in peak periods is related to demands for work and student travel, and not the basic needs of transport of the disadvantaged. Indeed the design of the vehicles involved is not conducive to providing effectively for the needs of the disadvantaged.

9.15 The Study Group is of the opinion, in the light of the range of likely patronage changes over the next 10 years, that little more than a static situation, or a decline, will persist insofar as public transport is concerned. Under these circumstances public transport Authorities should:-

- Reduce the resources devoted to the provision of public transport to the level necessary to achieve similar productivity to that of the 1950's, by concentration of effort into those areas where such patronage levels can be maintained, and by elimination of routes or modification of services in favour of lower cost alternatives where patronage cannot be maintained, and
- Increase charges and reduce costs with a view to making up the loss in physical productivity by financial means.

9.16 There is little that can be done to increase patronage notwithstanding wishful thinking, planning or marketing in spite of what was said in submissions to the contrary, unless reliable services are developed and maintained. Payment of subsidy will not ensure reliable services, this is a matter for proper management and involvement of the whole spectrum of employment within the system.

9.17 Perhaps what is not generally recognised by management and employees of the public transport systems is that during periods of interruption of those systems, most of the people of the metropolitan area have not needed to change their work pattern to any great extent as a result of lack of public transport. Indeed the transport task currently carried out by the public transport systems could be matched by a small increase in car occupancy at peak periods, without adding to street congestion.

9.18 The Study Group is concerned with the apparent concentration within the authorities on balancing the fare structure to meet anticipated costs plus a level of subsidy considered acceptable to government. There is also concentration on labour content of traffic operations as the only section where obvious cost reductions could be achieved by labour reductions. More attention needs to be given to the various efficiency factors with a view to:-

- Increasing productivity through reduction in non operational personnel and overheads.
- Increasing productivity through elimination of activities not directly concerned with the transport service.
- Reduction in operating costs by elimination of low return routes before services on busier routes are reduced.
- Improvement in maintenance by investment in more reliable equipment, management of finances, contracting maintenance and reduction in maintenance personnel.

9.19 The taxi industry has become a formalised segment of the transport industry, and whilst providing an excellent service, is tending to limit its clientele through its commercial practices and demands for security and regulation in the interests of taxi proprietors, by restrictions on entry to the industry.

9.20 An opportunity for the evolution of multiple hiring or "para transit" systems currently exists and government should ensure that such services are made available to the general public, with minimum of regulation as to licensing and registration with no commercial regulation overtones.

10. RECOMMENDATIONS

It is recommended that:-

1. Co-ordinated programs of rationalisation to identify and implement the most cost effective means of providing public transport throughout the metropolitan area should be undertaken. Consideration should be given to withdrawal of some services at nights and weekends with other services replacing them as necessary.

Initial attention should be directed to the Prahran/Malvern/Caulfield, Brunswick/Coburg and Fitzroy/Collingwood/Northcote/Preston areas each of which are served by a number of parallel tram routes, railway services and intersecting bus services.

2. Investigation of rationalisation for cost efficiency should include consideration of withdrawal of service on lightly trafficked rail and tram routes, thereby permitting scrapping of obsolete equipment and better utilisation of modern equipment in areas of maximum demand. This would be expected to lead to a more efficient and reliable service to patrons. In many cases the substitution of an improved bus service would seem to offer potential to bring about an improved level of service, mainly in the form of increased frequency, as well as reduced costs.

Suggested changes which should be considered are:

- Elimination of rail passenger services on the following lines.

Flinders Street	-	Port Melbourne
Flinders Street	-	St. Kilda
Flinders Street	-	Upfield
Newport	-	Williamstown
Newport	-	Altona
Flinders Street	-	Sandringham
Camberwell	-	Alamein
Eltham	-	Hurstbridge

APPENDIX IPASSENGER TRANSPORT AUTHORITIES IN THE U.K.

A U.K. White Paper published in 1967 says that "the planning and operation of public transport can only be done intelligently over areas which make sense in transport terms. This means that planning must cover not only a large city or town, but also the area around it for which large numbers of people travel to the centre for work, shopping or pleasure."

"In these major conurbations suburban rail services play a substantial part in the movement of peak hour traffic; and full integration of the planning of rail and road services is a pressing need."

In the 1960's Passenger Transport Authorities were established covering:-

Greater Birmingham	(West Midlands)	2.78 million people
Greater Manchester	(Selnic)	2.43 million people
Greater Liverpool	(Merseyside)	1.50 million people
Greater Newcastle	(Tyneside)	0.94 million people

Under a subsequent re-organisation of local government in England and Wales the functions and responsibilities of the four existing Passenger Transport Authorities were transferred to the appropriate Metropolitan County Councils. In 1974 two new passenger Transport Areas were also created covering the Metropolitan Counties of South Yorkshire (Sheffield) and West Yorkshire (Leeds).

The new county councils, in their role of Passenger Transport Authorities, are governed by the same statutes as the previous Authorities, though they have somewhat greater powers of control over their Executives than did the Authorities; but the Executives continue to operate as specialist management bodies in control of day to day affairs. The new system facilitates a comprehensive approach to land use and transportation planning, since the county councils are responsible for policy concerning town planning, roads, traffic and parking as well as that concerning public transport.

The county council is responsible for laying down policies related to levels of services and fares, but is not responsible for the day to day management of the undertaking which is the task of the Passenger Transport Executive.

8. In order to increase efficiency of the Melbourne and Metropolitan Tramways Board and the suburban operations of Vic Rail that specific attention be directed to:-
 - The improvement of staff training and development programs;
 - More formal application of methods and systems evaluation and of industrial engineering skills;
 - Use of management consultants, where appropriate.
9. Consideration should be given to a trial of joint use taxis as a means of providing local transport in areas without conventional public transport. It is suggested that local government and the State Government should be jointly involved in funding the trial.
10. Multiple hire taxi, mini bus services and "mini cab" services, available on request on similar bases to those developed overseas should be permitted to develop, particularly in areas beyond the reach of the fixed rail public services. The keys to the success of such services could be maximum encouragement of entrepreneurial development, perhaps some support by local government in areas of special need, and minimum regulation.

Elimination of tram services on the following routes:

City	-	South Melbourne Beach
City	-	Scuth Melbourne & St. Kilda Beach
City	-	Camberwell
Kew/Cotham Road	-	St. Kilda Beach
North Richmond	-	Prahran
City	-	West Maribyrong
Footscray	-	Moonee Ponds

3. Bus services should be modified into a system complementing the remaining rail and tram services. All bus routes to the Central Business District should be reviewed and, where cost savings would ensue, they should be re-routed to act as feeders to rail.
4. A study should be undertaken to identify the costs and benefits of replacing obsolete trams with buses rather than new trams.
5. There be a reassessment of the basis for allocating priorities for capital expenditure on metropolitan public transport. All proposed investments should be evaluated on a common basis and priority for funding should be principally on the basis of return on investment.
6. A comprehensive plan for the introduction of a common ticket system for travel on trains, trams and buses should be developed after proper investigation of costs, benefits and patronage effects of the proposed system.
7. A policy of increasing fares more frequently, and at a greater rate than cost increases, should be adopted. The effects of this policy on total transport costs should be carefully studied and implementation should be reviewed at appropriate intervals. The objective should be the elimination of the subsidy within a reasonable period, but increased operational efficiency should also contribute to this.

The Passenger Transport Executive (P.T.E.) is an expert professional body whose prime function is to see that the Area has a properly integrated and efficient system of public transport. The P.T.E.'s studied the future development of public transport in their Areas and produced strategic plans to achieve their aims.

Soon after their establishment, the planning staffs of the P.T.E.s started to review the local rail services. These services had been making a useful, but in most cases not a large contribution to local travel. In general, they were much in need of physical improvement if they were to be attractive to the travelling public.

The P.T.E.s were confronted with the problems of understanding the complexities of railway finances and costing techniques, of comprehending the complications of railway operations and of determining which passenger services they would be prepared to support in the knowledge that, if they were not prepared to support the service, the government was likely to introduce closure procedures. The matter was further complicated by services which were partly commuter services within the area of the authority, with a substantial local travel content but which also operated outside the Area boundary. The future of these services had to be determined on a tripartite basis between the Authorities, the British Railways Board, and the Government, who were supporting by grant the services outside the boundary.

British Rail and the transport executives worked closely together to resolve the particular operating difficulties associated with common use of lines by inter-city services, freight services and the services requested to meet the authorities needs and to resolve the associated difficult financial and costing problems.

The Executives, and subsequently the County Councils, were empowered to enter into agreements with the Railways Board with respect to passenger services in their areas and for radial service up to 25 miles beyond their boundaries. They have control to the extent that they can specify the level and quality of services they support financially.