



LINKING MELBOURNE

METROPOLITAN TRANSPORT PLAN



Melbourne is recognised as one of the most liveable cities in the world.

It enjoys an international reputation as a vibrant and exciting multicultural city, that is a great sporting, artistic and cultural centre. From the inner city to the outer suburbs, Melbourne offers a quality of urban life that is hard to match.

Minister's Foreword

I'd like to introduce you to *Linking Melbourne: Metropolitan Transport Plan* – a comprehensive and integrated transport plan for Melbourne.

As you know, the Victorian Government has been working to improve the transport system across Melbourne for some time.

Our achievements to date have been great, but the task ahead is a long and challenging one if we are to achieve the high transport standards we have set ourselves.

This Plan represents the first opportunity we have had to take an all-encompassing look at the transport network in inner and outer Melbourne.

We've considered personal travel – walking, cycling, trains, trams, buses, taxis, cars and motorcyclists – as well as the movement of freight via roads, rail and ports to determine how these modes can be managed in an integrated way to provide efficient and user-friendly services for the public.

As most of us know, inner Melbourne suffers from congestion. Instead of introducing new infrastructure in this area, the Government is keen to increase the efficiency of the existing systems.

In outer Melbourne however there is greater flexibility for development and we can consider the introduction of newer infrastructure.

The Metropolitan Transport Plan centres around four critical issues:

- safety
- rising congestion
- the growth of the metropolitan population
- promoting ongoing economic growth.

Within the Plan, key strategies and priority actions have been developed for each of these four important issues.

The primary principles underlying the Plan reiterate the transport objectives highlighted in the *Melbourne 2030: Planning for Sustainable Growth* program.

Consideration has also been given to best practice trends in other parts of the world to ensure we provide state-of-the-art and efficient services to our many and varied publics.

While the Plan cannot immediately address every transport issue given the size and complexity of the network, it acknowledges what the Government has achieved so far and provides a solid and practical foundation for future progress over the next 4–5 years.

It is important that we recognise that significant dollars and stakeholder involvement are essential for the success of the strategies described in the Metropolitan Transport Plan. In many ways, the integrated efforts of the various stakeholders are as critical as the integration of the different modes of transport described.

I encourage you to investigate the priority actions and strategies that are expected to deliver a truly service-oriented transport system for Melbourne.



Peter Batchelor MP

Minister for Transport



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Metropolitan Transport Plan



Linking Melbourne: Metropolitan Transport Plan is a comprehensive plan for the management and development of Melbourne's transport system.

The Plan identifies the key transport challenges posed by Melbourne's growth and development, and sets out directions and initiatives to meet these challenges over the next 10 years, with a particular focus on strategies and actions for the next 4–5 years.

The Plan maintains a focus on high-level social, economic and environmental outcomes – such as support for economic activity and growth, improved quality of access, provision and promotion of more sustainable travel options, a safer community and a cleaner environment. It, therefore, reinforces and supports the Government's strategic framework for managing land use and transport contained in *Melbourne 2030: Planning for Sustainable Growth*.

Melbourne's economic growth and vitality depend on a well-functioning transport system that enables freight to move easily across the metropolitan area, with good connections to

the port and to regional Victoria. At the same time, Melbourne's 'liveability' must be protected so that people can interact easily, safely and in a pleasant environment. This means making sure that cars do not always dominate and that people have other viable travel options. Improvements to public transport and better facilities for walking and cycling can help to counter the effects of traffic congestion on our roads, improve access to services for people with limited travel options, and contribute to better health outcomes. In outer metropolitan areas, roads will need to be upgraded and public transport services extended to cater for a growing population.

The Victorian Government has set a target that, by the year 2020, 20 per cent of motorised trips will take place on public transport. The programs contained in the Metropolitan Transport Plan will lay the foundation for future progress towards this target.



The Plan is divided into the following four sections:

- a safer transport system
- managing congestion
- metropolitan growth
- support for economic growth.

The Plan canvasses the critical transport planning issues facing inner and outer Melbourne and will be viewed as a blueprint for the Government's intended direction for the transport system. Each section of the Plan presents a range of integrated responses bringing together strategies for roads, public transport and non-motorised modes. For each strategy, a suite of priority actions are identified that could, either solely or in conjunction with other priority actions, contribute to achieving the Government's objectives.

In adopting the Plan as a foundation for future programs, the Government, in its budget deliberations, will evaluate the costs and benefits of individual initiatives and proposals prior to any funding commitments to ensure they provide the best means of achieving its objectives for an integrated system.

Background

In the development of Melbourne 2030, there was extensive community consultation in which transport was identified as a prime area of concern. Melbourne 2030 sets out eight long-term policies for the development of the transport system, including a requirement to 'Coordinate development of all transport modes to provide a comprehensive transport system'. The Metropolitan Transport Plan provides a substantial set of programs to meet this objective.

In recent years, several studies have been or are being undertaken and plans developed to address various parts of the transport system. These include: the *Metropolitan Bus Plan*, *Tram Plan* and *Train Plan*; the *Metropolitan Road and Traffic Management Strategy*; the *Victorian Freight and Logistics Strategy*; the *Northern Central City Corridor Strategy*; the *Inner West Integrated Transport Study*; the *North East Integrated Transport Study* and the *Outer Eastern Public Transport Plan*. These have involved consultation with various transport operators, user groups, local government, community organisations, industry representatives and other stakeholders.



The Metropolitan Transport Plan draws on the content of these various plans and studies and provides a truly integrated approach with clear priorities for action.

The key principles

Central to the development of this Plan are a number of key principles which are derived from Melbourne 2030:

Provide better access to activity centres and job opportunities, via alternative modes

The inner city and middle suburbs are well served by public transport. However, towards the outer areas, there are gaps in service coverage, less frequent services and inadequate connections between modes. Opportunities exist to develop bus services to provide viable travel alternatives – with improved connections to activity centres and workplaces.

As access in outer areas is predominantly road-based, it is important that the arterial road network performs satisfactorily – for the benefit of car users but also for pedestrians, cyclists and public transport users.

The Plan embraces better planning and design of routes and road layouts within new developments to accommodate buses, and the development of service contracts with appropriate incentives to improve public transport performance.

Replacement programs for buses, trains and trams have significantly improved access to public transport for people with disabilities. There is a need to continue these programs and to improve access to the tram system.

Make better use of existing assets - arterial roads and public transport networks

Trams and buses are caught in an increasingly congested road network. In the inner and middle suburbs, there is little opportunity to increase the capacity of roads and it is essential that most effective use be made of the limited road space available. Priority will be given to high-occupancy vehicles, particularly public transport. As Melbourne 2030 recognises, this approach should bring additional environmental and social benefits while increasing the quality of public transport services.



Improved interchange facilities and more Park & Ride facilities will be developed along congested corridors, supported by targeted investments in rail.

Improve access for freight and commercial traffic throughout the metropolitan area – with effective links to the port precinct and to regional Victoria

Efficient movement of freight is essential to Victoria's continued economic growth and will reinforce Melbourne's pre-eminent position as a hub for manufacturing and distribution. The Plan envisages an increase in the role for rail in freight transport, and the Government has set a target to move 30 per cent of port-related freight by rail by 2010. However, as much of the metropolitan freight is moved on roads, various strategies are needed to help contain the impact of congestion on road freight. These include encouraging people to use public transport, optimising flow on major arterials and implementing other traffic management measures, and targeted investment around key freight centres and on regional freight links.

Recognise the importance of non-motorised travel modes

Walking and cycling are important ingredients of an integrated transport plan. Better and safer access for pedestrians and cyclists is a priority, through the development of the Principal Bicycle Network, alternative routes for traffic and a program of traffic management measures.

Promote greater use of public transport and develop better public transport options

A range of measures is presented, including priority for trams and buses on congested roads, improved design of bus routes, increased application of SmartBus technology, improved connections and interchange facilities, and targeted investments in rail capacity.



Improve safety for users of all modes

Providing for the safe movement of people and goods is a fundamental requirement. Substantial social benefits will be gained by reducing road and other transport accidents. In addition, by addressing concerns about personal safety and security relating to public transport and non-motorised modes, travel options for many people will be expanded.

Provide information to enable better travel choices to be made

The programs presented in this Plan feature increased use of technology, better ticketing information and systems, and education programs such as TravelSmart to encourage changes in travel behaviour in favour of more sustainable forms of transport.

The Metropolitan Transport Plan recognises travel demand management as an important component of integrated transport planning for Melbourne. Further initiatives to bring about a change in travel behaviour will be investigated.



Government policies

Linking Melbourne: Metropolitan Transport Plan builds on previous policies which have set the direction for Victoria.

Growing Victoria Together

www.growingvictoria.vic.gov.au

Published in 2001, *Growing Victoria Together* presents the broad vision of the Bracks Government for Victoria, and identifies 11 strategic issues important to Victorians – along with the key priority actions needed to address these, and ways of demonstrating progress. Most of the strategic issues relate directly or indirectly to the metropolitan transport system:

- safe streets, homes and workplaces
- growing and linking all of Victoria
- promoting sustainable development
- more jobs and thriving, innovative industries across Victoria
- protecting the environment for future generations
- building cohesive communities and reducing inequalities

- government that listens and leads
- sound financial management

Melbourne 2030

www.melbourne2030.vic.gov.au

Melbourne 2030: Planning for Sustainable Growth presents the Victorian Government's vision and long-term plan for ensuring that Melbourne's growth is accommodated and managed in ways that are sustainable, economically, socially and environmentally. While a growing proportion of Melbourne's growth will occur in established areas, there will continue to be extensive greenfield development in outer areas, which needs to be directed into designated growth areas where it can be better serviced by road and public transport infrastructure.

One of the features of Melbourne 2030 is the encouragement of development in and around activity centres – which are connected by means of the Principal Public Transport Network (see Figure 1) and fed by local public transport services. This strategy will make jobs, community services and other activities more accessible, particularly by walking, cycling and public transport.



Melbourne 2030 also provides for better links with regional areas such as Geelong, Ballarat, Bendigo and the Latrobe Valley.

arrive alive!

www.arrivealive.vic.gov.au

The Victorian Government's road safety strategy 2002–2007 *arrive alive!* identifies and addresses a range of road safety challenges, to reduce road deaths and serious injuries by 20 per cent over the five-year period – a goal set in *Growing Victoria Together*. Initiatives are targeted at:

- driver behaviour (speeding, drink driving, fatigue and drug impairment)
- at-risk road user groups (young/novice drivers, older drivers, motorcyclists, cyclists, pedestrians)
- high risk crash locations (road design and roadside safety)
- vehicle safety (occupant protection, heavy vehicle safety).

Victoria: Leading the Way

www.dpc.vic.gov.au

Victoria: Leading the Way (Economic Statement April 2004) sets out the Government's priority actions to drive new investment, stimulate the creation of new jobs, lower costs for business and increase exports of goods and services. The transport actions include:

- deepening the channel to the Port of Melbourne
- improving access to the port
- building better supply chain links.

These and other measures aim to sustain the State's competitiveness and strong economic growth into the future – generating more jobs and thriving, innovative industries across Victoria.



Progress to date

The Government has already made considerable progress in dealing with challenges facing the metropolitan transport system.

The achievements listed below provide a solid basis to gain the benefits of implementing the strategies and actions identified in the Metropolitan Transport Plan.

A safer transport system

- Pursued a targeted campaign of initiatives to reduce the number of road fatalities in Victoria to a 50-year low.
- Introduced 50 km/h speed limit on residential streets.
- Introduced 40 km/h speed zones near schools.
- Substantially increased the number of frontline staff on the tram and train networks.
- Embarked on a major program to upgrade safety protection at road/rail level crossings and stand-alone pedestrian crossings on the rail system, with 12 crossings upgraded in 2003–04, a further 39 being upgraded in 2004–05, and a further 17 approved for 2005–06.

- Introduced Closed Circuit Television (CCTV) and improved lighting to improve security at railway stations
- Implemented a \$240 million 'Blackspot Program'.
- Introduced safety cameras in taxis.
- Introduced alcohol interlocks for serious and repeat drink drivers.

Facilities for cyclists

- Added more than 750 km to Victoria's networks of arterial bicycle lanes and paths over the past five years.
- Victoria Planning Provisions amended on 6 October 2004 so that 'end of trip' facilities such as secure bicycle parking and shower and change areas are provided for cyclists in new commercial and large residential developments.



Inter-regional and freight

- Completed the Hallam bypass.
- Completed the Geelong Road upgrade.
- Began the construction of the Craigieburn bypass.
- Continuing the upgrade of the Calder Highway with the Carlsruhe, Woodend and Black Forest sections completed.
- Completing the Geelong grain rail loop linking that part of the Port of Geelong to the standard-gauge rail network.
- Placed conditions on the sale of Freight Australia to protect competition and to address issues associated with access to the regional rail network.
- Implemented port reforms, including the establishment of the Port of Melbourne Corporation.
- Completed the rail connection to West Swanson Dock.
- Completed the extension of Dock Link Road to the North Dynon Rail Yard.

Development and management of the arterial road network

- Completed the 42 km Metropolitan Ring Road.
- Entered into contracts for the construction of the \$2.5 billion Mitcham–Frankston Project.
- Improved road traffic flows through measures such as regulating freeway on-ramp traffic, improving key intersections and improving traffic signal management.
- Boosted funding for outer metro arterial roads.



Passenger services to regional Victoria

- Progressing Regional Fast Rail services between Melbourne and Ballarat, Bendigo, Geelong and the Latrobe Valley.
- Restored V/Line passenger train services to Bairnsdale and Ararat.
- Progressing the redevelopment of Spencer Street Station, to be renamed Southern Cross Station upon completion.

Public transport service improvements

- Finalised new partnership agreements with Connex Trains and Yarra Trams to deliver better transport and customer service outcomes.
- Established Metlink to coordinate public transport services and marketing.
- Substantially increased the number of services on train and tram routes.
- Improved the reliability of ticket machines at rail stations.
- Set in place processes for the development of a new Smartcard ticketing system.

- Reduced the price of the Statewide Tertiary Student Concession Card from \$126.60 to \$75.00 in 2001, with a further reduction in 2005 to be the same price as the Primary/Secondary Concession Card (currently \$8.00).
- The Companion Card is now accepted on public transport, providing free travel for carers accompanying disabled passengers.
- All Health Care Card holders will be eligible for concession public transport fares from 1 January 2005. This will assist people who are unemployed or on low incomes, not previously entitled to public transport concessions.
- Created the Public Transport Industry Ombudsman.
- Successfully trialled 'TravelSmart' to increase the use of public transport, walking and cycling in the Alamein transport corridor.















Public transport network development

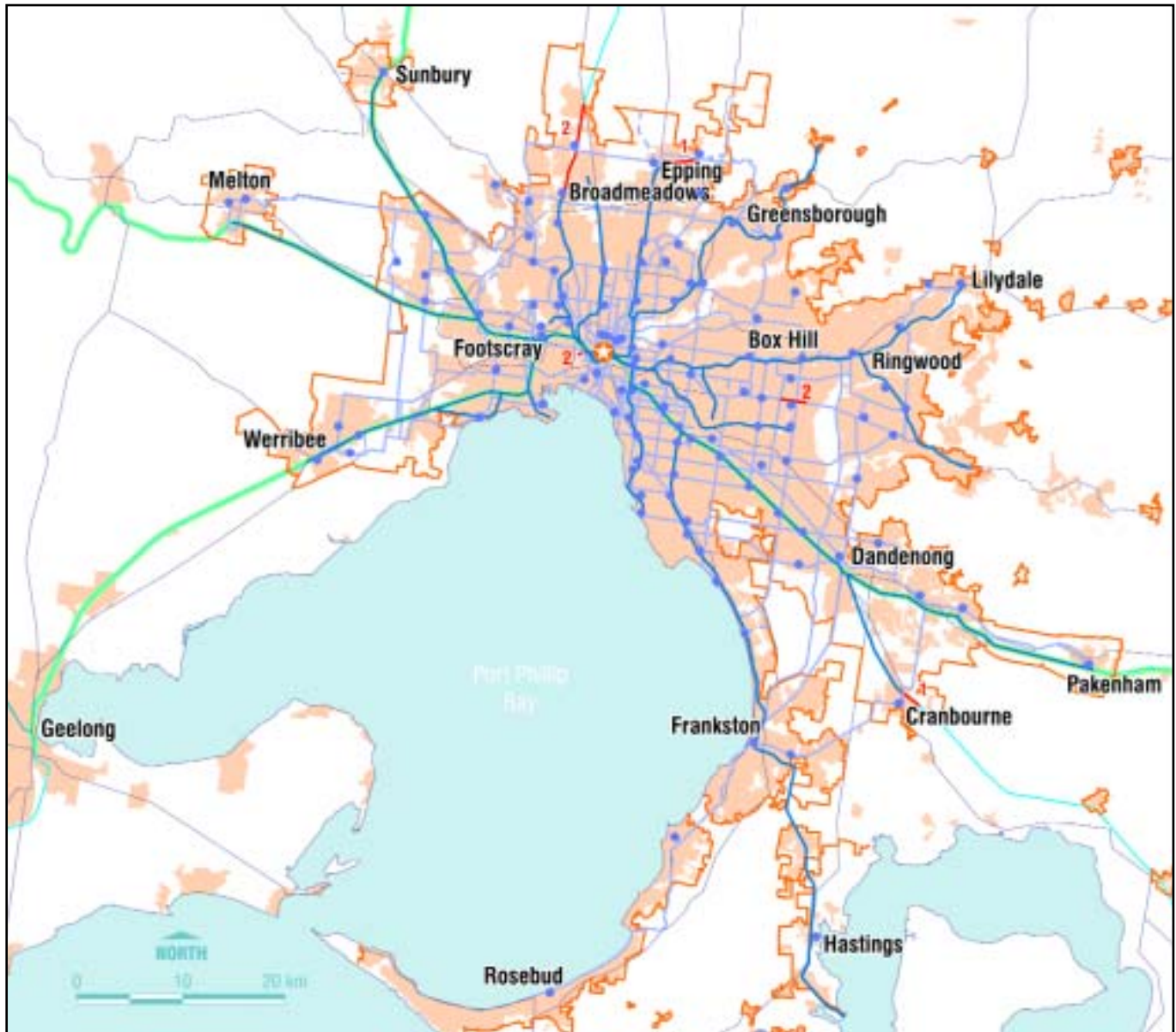
- Extended the electrified rail system to Watergardens (Sydenham).
- Extended tram route 109 from Mont Albert to Box Hill.
- Extended the tram network into Docklands.
- Oversaw the delivery of new rolling stock including trains and low-floor trams and buses.
- Provided Disability Discrimination Act compliant 'superstops' enabling better access to trams on selected routes.
- Progressing the electrification of the passenger rail network to Craigieburn.
- Progressing the extension of the tram network to Vermont South.
- Introduced SmartBus services along Blackburn Road and Springvale Road, with services on Warrigal Road and Wellington Road committed.
- Delivered the largest boost to bus services in 30 years with over \$60 million spent on new and enhanced bus services since 2000.

Taxi service improvements

- Issued the first additional 100 peak taxi licences of a total of 600 to be progressively released to improve taxi availability, particularly in peak periods and evenings.
- Introduced a customer service charter for taxis and a requirement for the accreditation of taxi operators, depots and networks.
- Overhauled taxi driver training, more than doubling training contact hours.

Figure 1. Principal Public Transport Network (June 2004)

- | | |
|---|---|
|  Bus and tram network (existing and proposed) |  Activity centre |
|  Melbourne metropolitan rail network |  Central Activities District |
|  Potential network option (rail, tram or bus) |  Urban growth boundary |
|  Presently operated as train link |  Major road |
|  Major public transport project under construction |  Rail (non-metropolitan) |
|  Urban area (2001) |  Regional fast rail |



Source: Department of Infrastructure 2004



01

A safer transport system

Providing for the safe movement of people and goods is a fundamental transport system requirement.

The Government aims to reduce the number of transport-related deaths and serious injuries, the associated trauma for those involved and their families and friends, and the costs to the community, business and the economy.

It also aims to improve safety on the public transport system and to provide better conditions for pedestrians and cyclists, so that people will be more at ease when travelling by these modes and will choose to use them more often.

01

Strategies

- Reduce road deaths and serious injuries
- Improve safety and access for pedestrians and cyclists
- Provide safer and better access to public transport
- Ensure the safety and security of transport infrastructure

A safer transport system

The Victorian Government's *arrive alive!* road safety strategy comprises a range of initiatives targeted at driver behaviour, pedestrian, cycling and public transport safety, heavy vehicle safety, road design and other key aspects of road safety.

The Government also aims to improve safety on the metropolitan rail system, particularly in the evenings or at other times of low demand, and to provide better protection for pedestrians and cyclists within the road environment. Improved safety for users of these modes is fundamental to increasing transport choice and to fostering a more sustainable transport system.

To make Melbourne a fairer city, the Government will improve mobility and access for people with limited transport choices, such as the very young, disabled, injured or elderly.

The Facts

- In recent years there has been a significant downturn in the number of metropolitan road deaths. However, the number of serious injuries arising from accidents on metropolitan roads has been increasing (see Figures 2 and 3).
- Major factors causing road deaths and injuries are speeding, driving under the influence of alcohol and other drugs and fatigue. The introduction of the 50 km/h urban default speed limit has reduced casualty accidents by 12–13 per cent and accidents involving pedestrians by 22 per cent.
- Enforcement of drink driving laws has resulted in a reduction of drink drivers on the road. Random roadside drug testing is the next road safety initiative.
- Forty-four per cent of fatalities and 60 per cent of serious injuries occur at intersections in middle and inner Melbourne. More than half a million 'running a red light' infringements occur in Victoria each year as too many people continue to demonstrate poor driver behaviour at intersections.

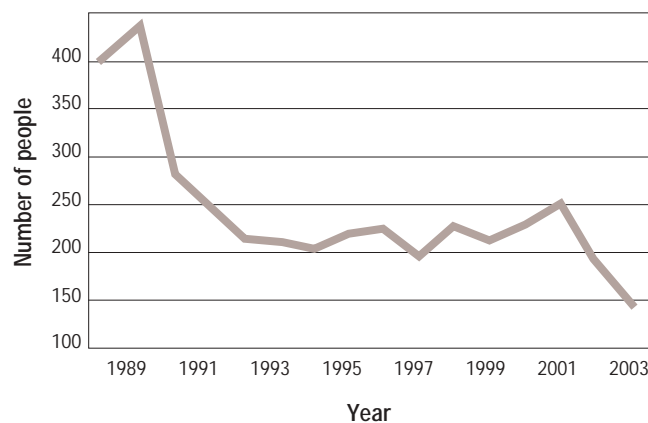


Figure 2. Metropolitan road user fatalities 1989–2003

Source: VicRoads 2004

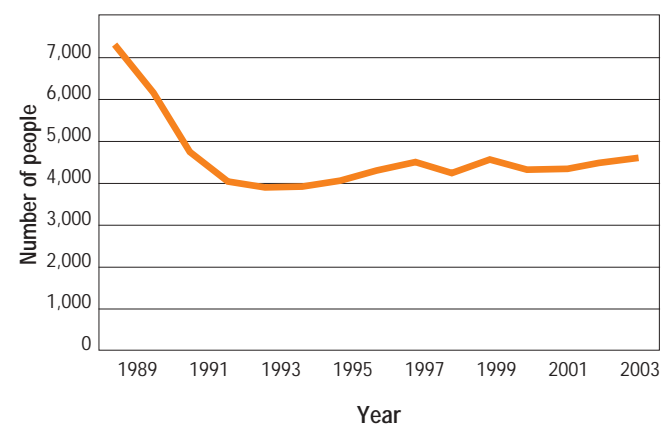


Figure 3. Metropolitan road user serious injuries 1989–2003

Source: VicRoads 2004

- Accidents involving pedestrians and cyclists make up a greater percentage of total accidents in inner and middle suburbs than in outer suburbs (see Figures 4 and 5). Pedestrians and cyclists benefit from lower motor-vehicle speeds and from better management and design of the physical road environment. In 2003, the number of pedestrians killed in metropolitan Melbourne was 48 per cent lower than the average of the previous five years. The introduction of the 50 km/h default speed limit in built-up areas has contributed to this improvement.
- In the outer metropolitan area, loss-of-control and run-off-road accidents account for 55 per cent of road deaths and 40 per cent of serious injuries. From 1999 to 2003, 34 per cent of fatalities and 19 per cent of serious injuries in outer areas resulted from collisions with poles or trees.

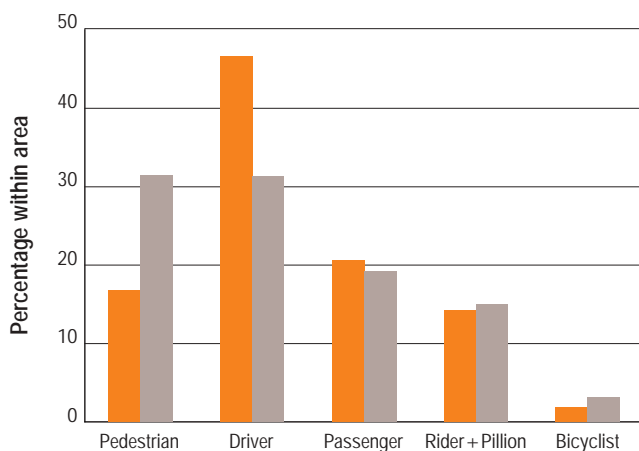


Figure 4. Road user fatalities 1999–2003

■ Outer MSD ■ Inner/Middle MSD (*MSD=Melbourne Statistical Division)
 Source: VicRoads 2004

- Outer metropolitan roads generally have more space for infrastructure improvements to reduce accidents – such as carriageway separation and widening, improved intersection treatments, separate turn lanes and improved road geometry, the removal of roadside hazards, the installation of safety barriers and specific provisions for pedestrians, cyclists and public transport. Due to space limitations, some of these measures are impractical in inner and middle metropolitan areas.
- While the number of fatalities resulting from collisions involving trams and buses is low, the safety of passengers alighting and boarding trams is still a major issue. Falls within trams are also common, often caused by a sudden braking of the tram as other road vehicles encroach on to the tram tracks.

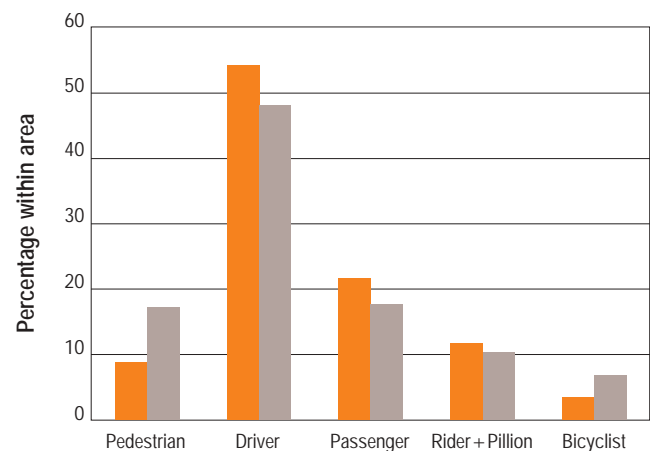


Figure 5. Road user serious injuries 1999–2003

■ Outer MSD ■ Inner/Middle MSD (*MSD=Melbourne Statistical Division)
 Source: VicRoads 2004

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- The safety of pedestrians and people using wheelchairs and mobility aids at pedestrian railway level crossings has been a major concern.
 - Customer surveys show that some passengers do not feel secure while travelling on public transport, especially at night. This is particularly the case for travel on trains and at railway stations and surrounding car parks.
 - To ensure the public transport system operates safely, rail managers and operators are required to establish management systems in which all risks are identified and properly controlled.
 - Train and tram operators are also required to maintain infrastructure assets in good condition under Partnership Agreements. The State has the power to inspect assets and ensure that operators are complying with relevant performance indicators.
 - Recent international terrorism events have prompted the Government to increase its focus on the management of security risks and the protection of critical infrastructure including roads, ports and public transport. This has become a major issue in the freight and logistics industry, especially for businesses involved in international trade.



strategy 1.1

Reduce road deaths and serious injuries

The Victorian Government aims to reduce the number of deaths and serious injuries arising from accidents on Victoria's roads by 20 per cent over the period 2002–2007.

Priority actions

General

- Implement the Government's road safety strategy *arrive alive!* This comprehensive strategy is referred to on p.7 and details of the action plan are available on the web site.

Motorcycles

- Consult with motorcyclists about their travel and safety issues.
- Identify and introduce improved motorcyclist training programs for novice riders and those returning to riding after a long absence.
- Develop motorcycling safety initiatives that relate to commuter, business and other travel in the metropolitan area.

Heavy vehicles

- Pursue uniform national reforms on road safety regulation for heavy vehicles, together with enforcement and transport security.
- Establish metropolitan truck stops to enable truck drivers to take rest breaks, particularly at major freight terminal locations such as the Port of Melbourne and strategic locations on the outskirts of Melbourne.
- Through improved compliance with standards, address community concerns about larger vehicles and council limits on access to local areas.

- Develop performance-based standards and a regulatory framework to promote the development of safe and innovative vehicles.
- Encourage the use of in-vehicle technology, such as Global Positioning System (GPS) navigation, to offer safety and productivity benefits.



strategy 1.2

Improve safety and access for pedestrians and cyclists

The Victorian Government aims to provide safer travel for pedestrians and cyclists, and to increase the number of people walking and cycling, through improved management of existing road space and the provision of more off-road paths and access.

Priority actions

Pedestrians

- Introduce more appropriate speed limits in shopping strips.
- Encourage through-traffic to avoid shopping strips and to use alternative routes where feasible.
- Improve the amenity of areas of intense pedestrian activity alongside arterial roads.
- Improve pedestrian safety near schools located on arterial roads through a Statewide program of school speed limits.
- Improve safety and provide more equitable access for pedestrians in high-use areas such as Transit Cities and multi-modal facilities via the Walk Safe program and other innovative and cost-effective measures.
- Establish a program to provide greater priority for pedestrian access across busy arterial roads which sever community activities.

Cyclists

- Improve the standards for bicycle facilities by providing safer measures that separate cyclists from busy traffic streams.
- Implement projects using the proposed new standards to demonstrate and evaluate a strategic route management approach on selected major cycling routes in the central and inner areas of Melbourne.
- Highlight bicycle lanes in potential conflict areas with green paving to improve visibility and safety. This initiative is consistent with standards in New South Wales, Queensland, South Australia and the Australian Capital Territory.

- Continue to build the Principal Bicycle Network (PBN) on arterial roads, with priority given to improving cycling access to activity centres, schools and public transport. Subject to funding, the target is to complete the PBN by 2015.
- Develop and implement guidelines to improve the linking of arterial road cycling facilities, off-road routes and suitable nearby local roads, where competing demands preclude development of sections of the PBN.
- Provide planning assistance to local government on complementary projects for cyclists on local roads.
- Review regulations to improve the visibility of cyclists through improved standards of lighting and the wearing of reflective vests.
- Provide better storage facilities for bicycles at activity centres and railway stations, starting with the installation of 250 new lockers in 2004 and 2005. From early 2005, all bicycle lockers at stations will be free of charge.



strategy 1.3

Provide safer and better access to public transport

The Victorian Government aims to improve safety on public transport by increasing on-system staffing, implementing safety technology and incorporating safety as a key design feature of public transport infrastructure works.

The Safe Travel Task Force has been established to bring together Victoria Police and other government agencies, transport operators, union and industry representatives and local government, to address personal safety and security issues and to coordinate initiatives.

The Government also aims to ensure that public transport services will be accessible to people with disabilities or with limited or restricted mobility. The Commonwealth *Disability Discrimination Act 1992* (DDA) requires all public transport services to be accessible by 2022. A combined effort from government agencies, transport operators and local government is necessary to meet this 2022 target, as well as interim accessibility targets.

Priority actions

Rail users

- Provide additional staff on trains and at railway stations.
- Provide improved lighting and monitoring of railway stations and their environs, and develop design guidelines to maximise the visibility on platforms and approaches to stations.

Tram and bus users

- Improve the safety of people at and around tram and bus stops through road improvements.
- Review road rules in relation to trams and other road users to ensure measures are in place to protect public transport users at tram and bus stops, and reduce the need for sudden braking by public transport vehicles.
- Launch an education and enforcement program concerning road rules related to trams to reduce the number of incidents involving cars passing stationary trams.

- Introduce CCTV on trams to deter and detect motorists who endanger passengers by passing stationary trams or otherwise cause danger to public transport users.

Safety and access for people with disabilities

- Implement DDA access improvements to the public transport system including:
 - > continuing vehicle replacement programs which provide for vehicles with low floors and better access
 - > improving access at rail stations and tram stops
 - > designing a range of cost effective DDA compliant tram stops to suit a variety of traffic environments, including facilities for ramp deployment
 - > working with local government to ensure bus stops (which are the responsibility of councils) are accessible.
- Increase safety at rail level crossings, particularly for people using mobility aids, and implement the remaining recommendations of the Wheelchair Safety at Rail Level Crossings Taskforce.



strategy 1.4

Ensure the safety and security of transport infrastructure

The Victorian Government aims to ensure that transport security programs are prepared and improved security is provided around important transport infrastructure – including ports, rail, roads and structures.

Safety regimes for public transport services are included in public transport operator agreements and are supported by mandatory accreditation regimes and audits. Operators are required to have comprehensive safety and risk management systems in place, as well as the financial capacity and insurance to meet reasonable potential accident liabilities.

Priority actions

Operational safety

- Pursue uniform national reforms on rail operating practices and support a co-regulatory safety framework for rail.
- Install train protection systems for trains operating on the regional fast rail corridors and in other designated areas over time.
- Install data loggers and brake upgrades on the suburban rail fleet, undertake an upgrade of the deadman device and review the train signalling system.

Infrastructure maintenance and renewal

- Review the adequacy of the metropolitan rail system infrastructure in terms of age, efficacy and ability to cope with higher utilisation in the future.
- Further develop maintenance and asset renewal plans for the metropolitan rail network and ensure their effective implementation.
- Improve heavy vehicle compliance with mass and speed limits to protect road infrastructure.
- Undertake works to reduce the risks of road accidents at high risk locations.

Security

- Assess preparedness for incidents that threaten critical infrastructure for all relevant modes, as well as response and recovery capabilities, and improve these where necessary.
- Develop State security strategies and contribute to national security requirements.



Spencer Street Station – to be renamed Southern Cross Station (artist's impression).



Managing congestion

Rising levels of road congestion are one of the frustrations of urban living. Increasing road capacity through road building programs alone cannot solve traffic congestion. Instead, the Government is proposing a range of complementary approaches. These include better management of the existing road system, improving the performance of the public transport system, and actively promoting travel by public transport, walking and cycling.

02

Strategies

- Improve the reliability and flow of road-based public transport
- Make existing roads operate better
- Improve service coordination, integration and customer interface
- Promote sustainable travel through better demand management

Managing congestion: strategies for inner and established suburbs

Congestion adds to the cost of many activities. The total cost of congestion in Melbourne is estimated to be around \$3 billion a year and this could triple over a 20-year period, unless addressed.¹

The majority of congestion currently occurs in the inner to middle suburbs – within 15 km of the Central Business District. As shown in Figure 6, congestion is most common during the morning and evening commuting periods.

To combat the rising levels of road congestion, the Victorian Government proposes a combination of approaches that will make best use of existing transport infrastructure and achieve the most efficient movement of people and goods. It will:

- > provide priority to trams and buses over other traffic, to reduce delays and improve service reliability
- > make better use of the limited road space available through more effective control of traffic flow on arterial roads, movements at intersections and kerbside parking
- > promote greater use of public transport, particularly in established areas where the supply is relatively good

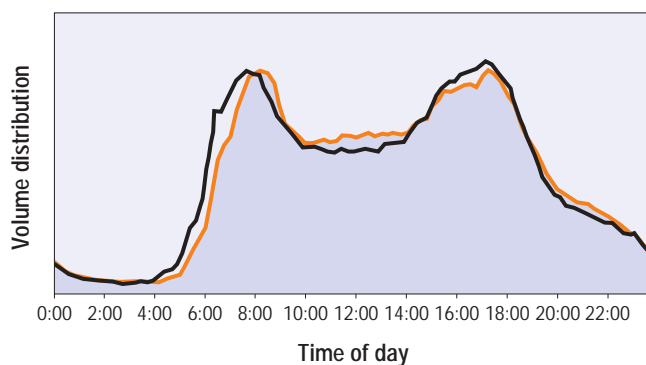


Figure 6. Daily traffic profile

■ Arterial Roads ■ Freeways

Source: VicRoads 2004

- > promote greater use of walking and cycling for shorter trips
- > make the existing public transport system more user-friendly through improved coordination of services (for example, bus and train timetables), real-time passenger information, better facilities at stations and stops, and an improved ticketing system in due course
- > introduce a high-quality, high-frequency network of cross-town buses for people who do not travel to and from the central area (to be discussed in section 03, Metropolitan growth)
- > provide people with better information about travel options and the associated costs and benefits, to assist their travel decisions.

Background

- At peak times, approximately 640 km of the arterial road network operates under congested conditions. By 2021, if changes are not made, congestion will spread to over 1300 km of the arterial road network (see Figures 7 and 8).
- Melbourne traffic contributes approximately 2.9 million tonnes of CO₂ a year due to congestion.² More than 60 per cent of the greenhouse gas emissions from transport is attributed to private cars.

- Congestion impacts on freight and commercial transport, reducing productivity for both staff and vehicles and diminishing the competitiveness of the Victorian economy.
- Approximately 40 per cent of total tram travel time in Melbourne is taken up by delays attributable to other road vehicles. On arterial roads the average travel speed of trams is only 16 km/h (compared to 40 km/h for private cars). Largely due to congestion, 30 per cent of trams are regularly outside their schedules.³

- Congestion on arterial roads and freeways can result in drivers searching for alternative routes through local streets, reducing the amenity of residential areas and other sensitive precincts.



Figure 7. Congested road links 2001

— Congested road link (AM peak volume at or exceeding capacity)
 Source: Department of Infrastructure 2004



Figure 8. Congested road links 2021

— Congested road link (AM peak volume at or exceeding capacity)
 Source: Department of Infrastructure 2004

Figures 7 and 8: The maps show congestion on the metropolitan road network. For links marked in orange, the traffic volume exceeds the capacity (based on modelling results). The images are schematic, as congestion may be concentrated at particular locations, rather than continuous along the road length. Congestion will spread outwards over time. However, note the expected impact of the Mitcham - Frankston project in reducing congestion in Melbourne's east.

strategy 2.1

Improve the reliability and flow of road-based public transport

The Victorian Government aims to achieve the public transport mode-share target of 20 per cent, by 2020. This will require a significant increase in the performance of the public transport system. The purpose of this strategy is to reduce delays to trams and buses and improve their reliability.

Priority actions

Trams and buses

- Implement innovative signal systems that give priority to trams and buses at intersections and on approaches under specific circumstances.
- Separate cars from trams and/or buses on road lengths between intersections where possible – for example, by using dynamic priority systems, particularly during peak times, and new delineation standards for dedicated public transport facilities such as red paving for bus-only lanes.
- Implement more effective controls on kerbside parking, particularly at locations where public transport is impeded.
- Roll out the tram priority program across the routes shown in Figure 9. These route priorities have been determined on the basis of heavy levels of patronage, slow travel speeds and low reliability. Other routes will be upgraded subsequently.
- Achieve a 25 per cent reduction in tram travel time and associated improvements in reliability on the target routes. As these are made, timetables will be adjusted to pass on the benefits to tram users.
- Link the tram operation control centre with VicRoad's traffic management system. This will ultimately allow late trams to make up lost time through real-time changes to traffic priority.
- Implement bus priority principles on cross-town bus routes in middle and outer areas via the SmartBus program (strategy 3.2 in the Metropolitan growth section).

- Improve Eastern Freeway bus travel times and reliability through inner city improvements such as Victoria Parade/Hoddle Street transit lanes.
- Implement bus priority treatments for Johnston Street and east-west services in the inner north.

Education

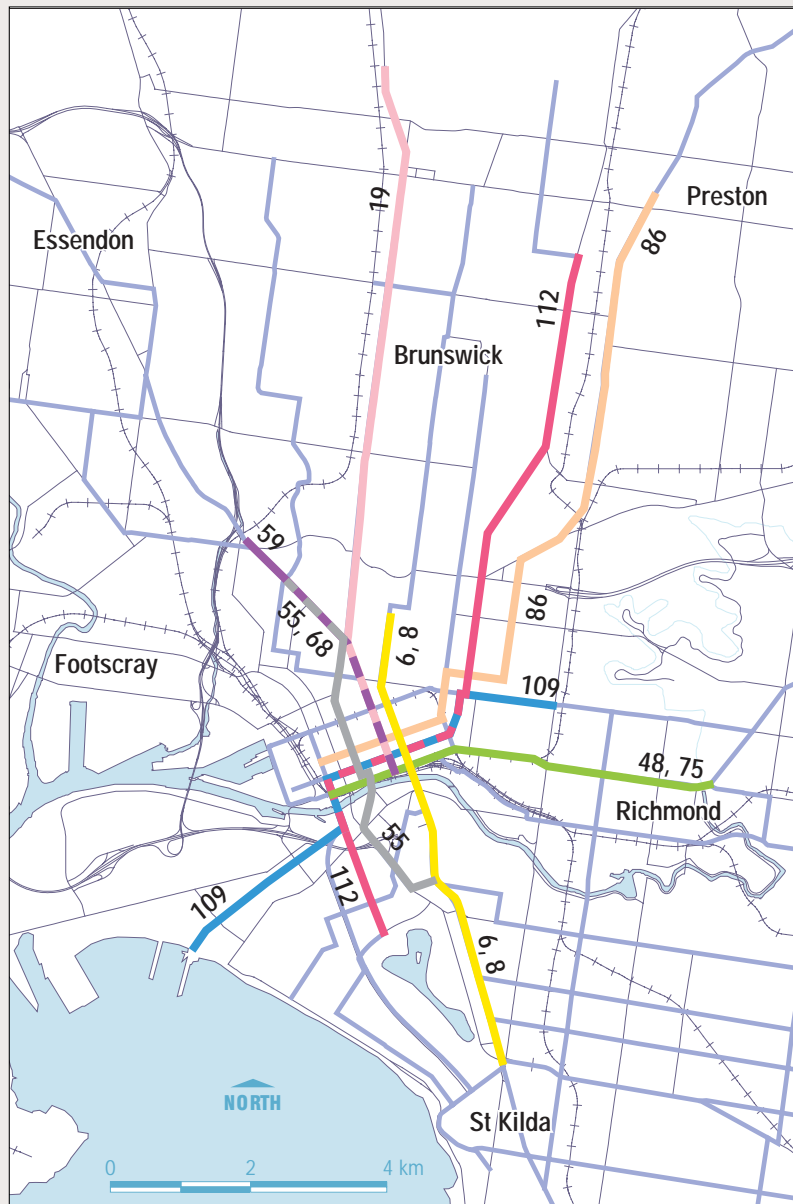
- Develop an education campaign around priority for trams and buses, to ensure motorists observe fairways, clearways and turn bans. This will include targeted promotion campaigns, better signage and possibly enhanced training as part of the driver licence testing process.
- Review regulations and penalties relating to fairways, clearways and turn bans to ensure the rules are commensurate with the impact on passenger safety and tram operations and on par with other road safety penalties.
- Increase enforcement, including the use of tram-mounted cameras to record offences, particularly where the safety of tram passengers is jeopardised.

Congested corridors

- Develop Park & Ride facilities at strategically located train, bus and tram terminals. High-priority sites will be along heavily travelled routes where there is an efficient peak public transport service.
- Further develop options for the improvement of public transport in the Doncaster corridor.
- Provide comparative travel time information on congested routes that offer efficient public transport alternatives, to encourage a shift in mode.

Figure 9. Tram route priority for speed and reliability improvements

- Existing tram routes
- 109** — Tram priority routes
- Major road
- ++ Railway



Source: VicRoads 2004

strategy 2.2

Make existing roads operate better

Arterial roads must respond to a range of demands as public transport, freight and commercial traffic, and private vehicles compete for available road space. Through-traffic competes with the needs of adjoining land use, local traffic, parking and pedestrians.

The Victorian Government aims to ensure the most effective use is made of the limited arterial road space available, with the purpose of moving people and goods safely, to meet the community's economic and social needs.

Priority actions

Establish a hierarchy of use

Priorities for the use of roads will be established for some sections of arterial roads that have differing functions. This will enable the overall arterial network to best meet the needs of all users. In particular, it will improve traffic flow in Melbourne's inner and middle suburbs where there is limited road space available and where the abutting land-use patterns are well established.

These priorities will reflect the following principles.

- Public transport will have first priority on designated routes on the Principal Public Transport Network (PPTN).
- Freight vehicles complying with normal mass and dimension limits will generally have unrestricted access across the arterial road network. Where there are currently restrictions, such as curfews, on particular access roads to major terminals, alternative routes will be developed to enable unrestricted access. Special routes will be designated for over dimensional loads.
- Where there are significant conflicts with abutting land use (such as heavily trafficked arterial roads through strip shopping centres with significant pedestrian activity), alternative routes will be developed where practicable and designated as preferred traffic routes. Peak traffic will be encouraged to use these routes.

- Available road capacity will be fully utilised on preferred traffic routes, with restrictions on kerbside parking as and when required.

Network priorities will be established on a regional basis in consultation with local government, transport industry representatives, local communities and other key stakeholders.

Establish more effective access controls

An arterial road access management policy will also be established for use by councils and developers. The policy will define a hierarchy of access management categories for arterial roads, taking into account appropriate access requirements for adjacent land.

The policy will provide substantial benefits to the development industry, road agencies and the wider community. It will be implemented by streamlining the planning approval process, to promote a more integrated approach to land use and road management, minimise traffic disruption, improve safety on arterial roads and facilitate safe and adequate access to adjacent land.

The policy will be established in consultation with local government and will apply to proposed future developments only.

Manage kerbside parking

The supply of parking on congested arterial roads will be reviewed and an implementation plan developed to fully utilise available road capacity to facilitate the movement of people and goods, while considering adjacent land-use requirements.

Clearway times will be reviewed for the network to align with travel demand, commencing with the inner area. For high traffic routes, without any pronounced difference between the peaks, longer clearway periods will be considered.

Where it is necessary to remove existing kerbside parking, special provision may be made for indented parking or other parking facilities where appropriate. Changes to kerbside parking will be planned in consultation with local government, key stakeholders and the community.

Optimise peak traffic flows on major arterial roads

Improved traffic flow will reduce the environmental effects of emissions generated by flow breakdown (congestion). Peak demands will be managed and traffic flows optimised on heavily trafficked routes. Travel delays will be monitored on all metropolitan freeways and major arterial roads, in relation to off-peak baseline travel times.

- Priority for travel time improvements will be given to routes that carry the heaviest traffic volumes; that is, the Principal Road Network (PRN) as shown in Figure 24, and preferred traffic routes. Competing demands will be managed in accordance with defined principles. Plans will be developed on a route basis to achieve flow improvements.
- Intelligent transport systems will be adopted as the preferred means of improving traffic flow, to maximise use of available road space.
- On Melbourne's freeway network, which facilitates the movement of up to 20 per cent of the city's road-based travel, improved performance will be achieved through responsive incident management and deployment of intelligent systems. These include dynamic speed control and ramp metering to improve safety and traffic efficiency.
- Investigations will be undertaken to identify potential applications of tidal flow or one-way traffic arrangements.

Improve direction signage and navigation aids

Improved destination signing for significant locations will be implemented for all major metropolitan roads to enable more effective navigation and travel by road users. Information will be provided to map publishers advising on the network hierarchy of use.

Provide real-time information to encourage better travel choice

The Drive Time system currently provides travellers with information to assist them to choose the best route. The system has been installed on the Monash, West Gate, Tullamarine and Eastern freeways. It provides accurate, real-time information on travel times through trip information signs, incidents through variable message signs, and freeway condition and ramp control signs. The information is also accessible through the internet to enable route choices to be made prior to a journey.

The Drive Time system will be extended progressively to other metropolitan freeways and significant routes on Melbourne's PRN.

Comparative travel time information will be provided to users of congested routes with good public transport alternatives, to encourage a shift in mode choice towards public transport.

Improve vehicle occupancy

High-occupancy vehicle lanes will be implemented and enforced on major congested routes to encourage greater vehicle occupancy during congested periods.

Initiatives to promote car-pooling will be developed to increase vehicle occupancy rates.



strategy 2.3

Improve service coordination, integration and customer interface

The Victorian Government aims to make the public transport system more user-friendly through the integration of timetables, more uniform presentation of information and improved ticketing.

Better coordination and information

The launch of Metlink in 2003 was an important step towards developing a common and easily understandable interface between passengers and public transport operators. Through the new Metlink Services Agreement, Metlink is directly accountable to the State for its performance.

Metlink will have a clear role in providing information, marketing services, coordinating customer services and handling complaints, and managing revenue distribution and ticketing. It is also responsible for new industry-wide functions such as the collection of data on patronage and fare evasion, to support its objective of generating substantial and sustainable increases in patronage.

Many trips involve multi-modal transfers and as travel needs become increasingly complex and multi-modal trips become the norm rather than the exception, seamless transfers must be the goal for the entire network.

Bus operations also need to better meet the needs of commuters, to increase the number of people who use public transport as their principal means of getting to work. This will require more effective interchanges and improved timetable coordination.

Better facilities

Interchange facilities need to meet the increasing demands of the multi-modal traveller. Building on the success of the Connecting Transport Services program of upgrading interchanges, existing facilities will be progressively reviewed for future upgrades over the next five years. This will involve facilities not only for linking route services, but also for car parking, drop-off and taxi facilities.

Park & Ride facilities in particular have been effective in attracting public transport patronage, and opportunities to expand such facilities will be investigated, particularly in congested corridors.

Fares and ticketing

For the first-time or infrequent public transport traveller, the ease with which the ticket system can be negotiated is a measure of the user-friendliness of the system itself. For regular users, persistent defects in the system can cause frustration and encourage fare evasion. Where the ability for fare evasion exists and is exploited, the burden falls on the Victorian taxpayer.

Since the beginning of 2002, the performance of the automatic ticketing system has improved dramatically. In 2001, some 28 per cent of ticket machines on the train network were malfunctioning or out of order at any given time. This figure is now less than 2 per cent (99% availability as at March 2004).

Recent changes to ticketing products have focused the fare structure on fare types that match passenger profiles. Confusing and unenforceable fare types have been removed, and fare structures now also allow for more emphasis to be placed on discounted off-peak use. Future changes will provide an incentive for people to travel in the off-peak where possible, thereby containing the growth in peak demand.

Priority actions

Integrating services under the Metlink banner

- Progressively improve timetable coordination across modes; for example, by encouraging train and tram operators to appoint full-time managers to oversee liaison with bus operators.
- Improve facilities for real-time passenger information and trip planning, including online services, SMS-based information services and real-time displays.
- Scope and deliver a further five-year modal interchange upgrade program, building on the success of the Connecting Transport Services program.
- Support and develop the role of Metlink as the integrated face of public transport in Melbourne, including the next stage of Metlink signage roll-out across the network.
- Investigate the opportunity for further Park & Ride facilities at outer railway stations.
- Improve the coordination of taxis with late-night services such as the NightRider bus service.

A new Smartcard ticketing system

The expiry of the contract for the automated Metcard ticketing system in 2007 gives Victoria the opportunity to develop and deliver a world-class ticketing system. The Government is proposing to introduce a new Smartcard system which will offer the customer a faster, easier way to interact with public transport.

To manage the transition to the new system, the Government has created the Transport Ticketing Authority, which will investigate, recommend, deliver and then manage the best ticketing solution for Melbourne and Victoria.

Action will also be taken to improve ticket distribution channels both on and off the system.

Transport fare structures

- Focus fare structures, products and incentives on discounted off-peak travel options.
- Improve the Statewide integration of fare structures across the metropolitan area, the urban fringe, regional centres and regional Victoria.
- In conjunction with the operators, improve enforcement and fare evasion counter-measures through an integrated approach including education, training and facility design – recognising that the majority of passengers who pay are rightly offended by those who do not.

strategy 2.4

Promote sustainable travel through better demand management

The Victorian Government aims to encourage people to use public transport, walk or cycle rather than use the car, where this is practicable. This will require a significant shift in travel behaviour.

Travel demand management is any measure that is aimed at modifying travel behaviour to reduce or redistribute travel demand.

Although people generally recognise the environmental benefits of travel by public transport or non-motorised modes, they are more likely to modify their travel behaviour when there are direct personal benefits – such as cost savings or a healthier lifestyle. The TravelSmart program helps people to explore and assess their transport options.

In the future, it will be increasingly important for regulatory structures, including pricing, to reflect the full economic, social and environmental costs of transport. Around the world, a number of pricing initiatives have been introduced to manage car travel in congested or sensitive areas. These initiatives will be monitored, and their implications for Melbourne examined.

Initiatives in car sharing will also be monitored with interest, and encouragement given to local government to assist such schemes.

TravelSmart

The TravelSmart program aims to achieve a sustainable change in personal travel behaviour from single-car occupant to sustainable modes of travel (public transport, walking and cycling), smarter car use (car pooling) and in some cases, travel substitution (teleworking).

TravelSmart employs intensive, customised marketing campaigns conducted within local communities, schools, universities and workplaces, to ensure that people who might be swayed by the benefits of using alternative modes have full information about the choices available to them.

TravelSmart programs are particularly effective at increasing the off-peak utilisation of public transport. In conjunction with

ticketing and fares initiatives, behavioural change programs such as TravelSmart will play an important role in shifting travel from peak times to shoulder periods.

TravelSmart is likely to be most effective in inner-to-middle suburbs where the density of population is above average, the supply of public transport is good, and the existing mode share (via public transport) is at least moderate (see Figure 10).

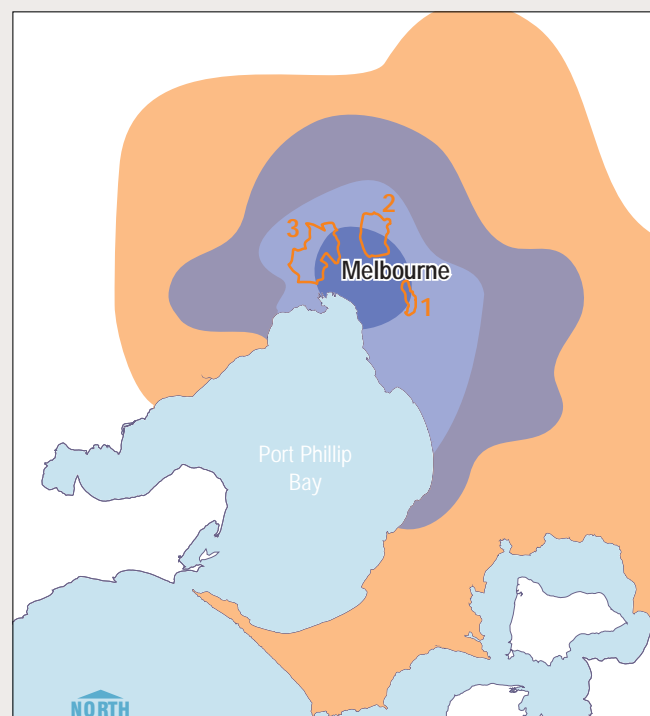
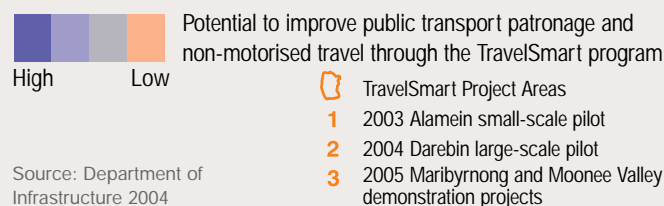


Figure 10. TravelSmart growth opportunities



In the innermost areas, TravelSmart is expected to encourage more walking and cycling as well as off-peak public transport, whereas in outer areas, where public transport options are less readily available, smarter car use options will be more relevant.

In 2003, a pilot program involving 6,100 households was conducted along the Alamein train line (in the City of Boroondara) where the conditions for TravelSmart appeared to be good. The results were rewarding (see Figure 11) and are consistent with findings in other programs conducted in Australian and overseas cities.

During 2004, a full-scale TravelSmart campaign involving 30,000 households is being undertaken in the City of Darebin, which also appears to offer suitable conditions for significant behavioural change.

TravelSmart will be extended to a further 50,000 households in the municipalities of Moonee Valley and Maribyrnong in Melbourne in 2005. Further large-scale TravelSmart projects will be rolled out to around 500,000 households in communities in inner and middle suburbs over the next 10 years.

In addition to the community-based programs mentioned above, TravelSmart is being implemented at:

- universities: pilot programs have now been conducted at Monash (Clayton campus) and La Trobe (Bundoora campus) with a particular focus on first-year students as they enrol and start to form their travel patterns. In 2005, the program will be extended to include up to nine university campuses.
- schools: parents driving their children to school contribute to congestion near schools and increase concern about child safety in traffic. There is significant potential to reduce car travel by encouraging children to walk or cycle to school. A number of schools are already piloting TravelSmart as part of the curriculum, or developing 'School Travel Plans' that employ TravelSmart principles. These programs will be expanded, with a focus on areas with high traffic congestion.

- workplaces: TravelSmart is being promoted among large employers, and 'Workplace Access Plans' are being piloted in areas of significant congestion. These initiatives currently involve nearly 50 workplaces and are being delivered with the assistance of 10 local councils.

Investigate pricing arrangements

The cost of owning and operating a car can be substantial. However, the costs of congestion that motorists impose on one another and the environmental impacts are not reflected in current pricing structures.

There is a need to build greater awareness of the full economic, social and environmental costs of travel options. Establishing a closer link between actual and perceived costs is an essential element that requires further investigation.

Priority areas for monitoring, review and investigation include:

- pricing arrangements for private vehicles and public transport, including differentials between peak and off-peak travel
- possible distortions in existing taxes and charges that may need modification in order to encourage the use of alternative modes
- overseas developments in transport pricing and their possible implications for Melbourne
- parking policies.

Results of the Alamein TravelSmart pilot program

The success of the TravelSmart trial around the Alamein train line indicates that many Melbournians are interested in more sustainable travel options, but have not sought out relevant information. As part of the program, 6,100 households were contacted and, depending on their response, offered more intensive forms of information – including individual consultations – about their travel options. As part of the trial:

- 2,900 TravelSmart packages were home delivered
- 14,890 public transport timetables were distributed
- 1,279 community members requested information on walking
- 137 one-on-one meetings were held with householders regarding public transport
- 79 one-on-one visits were made by the TravelSmart team to discuss cycling options.

Results at the end of the trial period showed that across the target population (including both participating and non-participating households):

- car driver trips were down by 10 per cent

- public transport trips increased by 27 per cent
- cycling trips increased by 23 per cent
- walking trips increased by 26 per cent

relative to a control population who were not covered by the TravelSmart project.

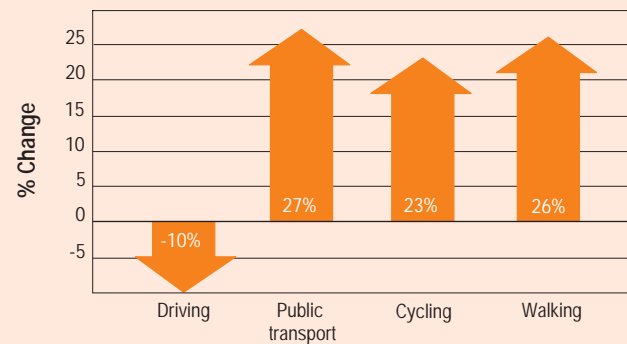


Figure 11. Alamein TravelSmart impact

Source: Department of Infrastructure 2004

Special events

Melbourne is a city of events – including international events such as the Australian Open tennis tournament, the Melbourne Cup, and the Formula One Grand Prix, regular football and other sporting fixtures, the Royal Melbourne Show, parades such as ANZAC Day, Moomba, and numerous local street festivals. One of Melbourne's strengths is its capacity to provide transport services for these occasions based primarily on public transport.

Melbourne 2006 Commonwealth Games

In March 2006, Melbourne will host the XVIII Commonwealth Games. Around 4,500 athletes from 71 nations will visit Melbourne. More than two million spectators are expected to join them to experience the Commonwealth Games at first hand.

Traffic and transport services will feature public transport as the primary mode of access for spectators and for people enjoying the cultural program. The aim is to minimise private vehicle use and maximise public transport, walking and cycling. Legacy initiatives will build on Games transport activities and promote long-term behavioural change in transport patterns.

In addition, greenhouse gas emissions from the Commonwealth Games, including Games transport emissions, will be offset by a Games carbon-neutral tree-planting program.

Management of other events

Organisers of major events such as the Formula One Grand Prix and the Australian Open recognise the importance of an integrated approach to traffic, transport and emergency planning. They bring together decision-makers from the police and emergency services, transport operators and agencies, the City of Melbourne and other relevant councils and stakeholders in meetings and workshops, to ensure that detailed traffic and transport plans form part of their operational plans. This expedites a speedy resolution of issues, both in the planning phase and during the running of the event.

Using this model, the Department of Infrastructure (DOI) is developing a process for the transport planning of events such as local festivals and street parades in all metropolitan councils. This will enable efficient and effective traffic and transport solutions with the objectives of increasing public transport use and minimising interruptions to regular services.



03



Metropolitan growth

In outer metropolitan Melbourne, transport infrastructure has not kept pace with the growth in demand that has followed from strong population increases.

Growth of population and employment in the next 20 years will give rise to substantial increases in personal and business travel, resulting in further demand for new transport infrastructure and services.

Road and road-based public transport networks will need to be developed so that households in outer areas will have access to a range of job opportunities, to educational and other institutions, and to community services. New neighbourhoods will need to be planned with better provision for travel by walking, cycling and public transport.

03

Strategies

- Improve outer metropolitan arterial roads
- Increase access via public transport in middle and outer areas
- Improve access via the passenger rail network

Managing metropolitan growth: strategies for outer areas

In outer metropolitan areas, substantial increases in the population and the longer travel distances required to reach jobs and other activities have led to a significant rise in motorised travel. Since 1994, there has been a 21.5 per cent growth in vehicle kilometres travelled in the outer region, compared to 5.8 per cent growth in the inner region (see Figure 12).

The growth of population and employment in metropolitan Melbourne in the next 20 years will continue to drive large increases in personal and freight/commercial travel. The transport challenges include:

- keeping up with demands for improved and/or additional transport infrastructure and services
- influencing travel demand and providing travel choice in areas that are currently highly car dependent
- planning new neighbourhoods to support access to local activities and services by walking, cycling and public transport.

The strategies presented below relate to issues of metropolitan growth. The focus is on outer areas where existing services and infrastructure need further development to support our growing city. The strategies relating to safety (in Section 1; A safer transport system) and to making best use of existing transport infrastructure and services (in Section 2; Managing congestion) may also be relevant in some circumstances.

Population and employment projections 2001 to 2021

- Over the 20-year period, Melbourne's population is expected to increase from 3.5 million to 4.2 million (22 per cent).
- 55 per cent of this growth (some 420,000 people) is forecast to occur in six outer municipalities of Cardinia, Casey, Hume, Melton, Whittlesea and Wyndham and is expected to be focused within corridors in the vicinity of the Cranbourne, Pakenham, Epping, Broadmeadows, Sydenham and Werribee rail lines.
- Population growth will continue in the inner suburbs but at a lesser rate, with some 13 per cent of total growth forecast to occur in the municipalities of Melbourne, Yarra and Port Phillip.
- Employment is projected to increase from 1.53 million to 1.87 million (22 per cent).
- The Mitcham–Frankston corridor in the south-east will develop as a distinctive economic subregion providing some 30 per cent of Melbourne's employment. Much of this employment is associated with industrial and manufacturing activities, which will increase freight and commercial travel across Melbourne.

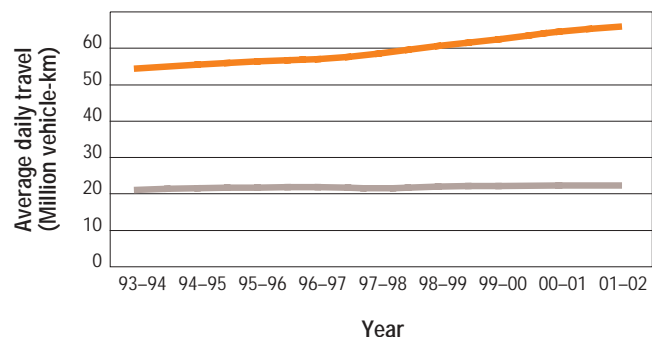


Figure 12. Road vehicle travel

■ Outer region ■ Inner region

Source: VicRoads 2004

Melbourne 2030:

- Melbourne 2030 has set the framework for addressing the challenges of metropolitan growth. It has established an urban growth boundary to manage urban expansion, protect valued areas of non-urban land use and encourage urban consolidation. The projected pattern of population growth to 2011 is shown in Figure 13.
- Melbourne 2030 aims to encourage a gradual increase (1–2 per cent per year) in the proportion of new households locating in strategic redevelopment sites that are well served by existing services.
- However, greenfield development will continue. The high rates of growth in the fastest growing municipalities, as shown in Table 1, are likely to continue in the near term.
- Melbourne 2030 provides for improved access by designating activity centres, where clustering of activities such as retailing, commercial offices and community services is encouraged. Workplaces, residential development and institutions will also be concentrated in and around activity centres. This will result in better access by walking, cycling and public transport.

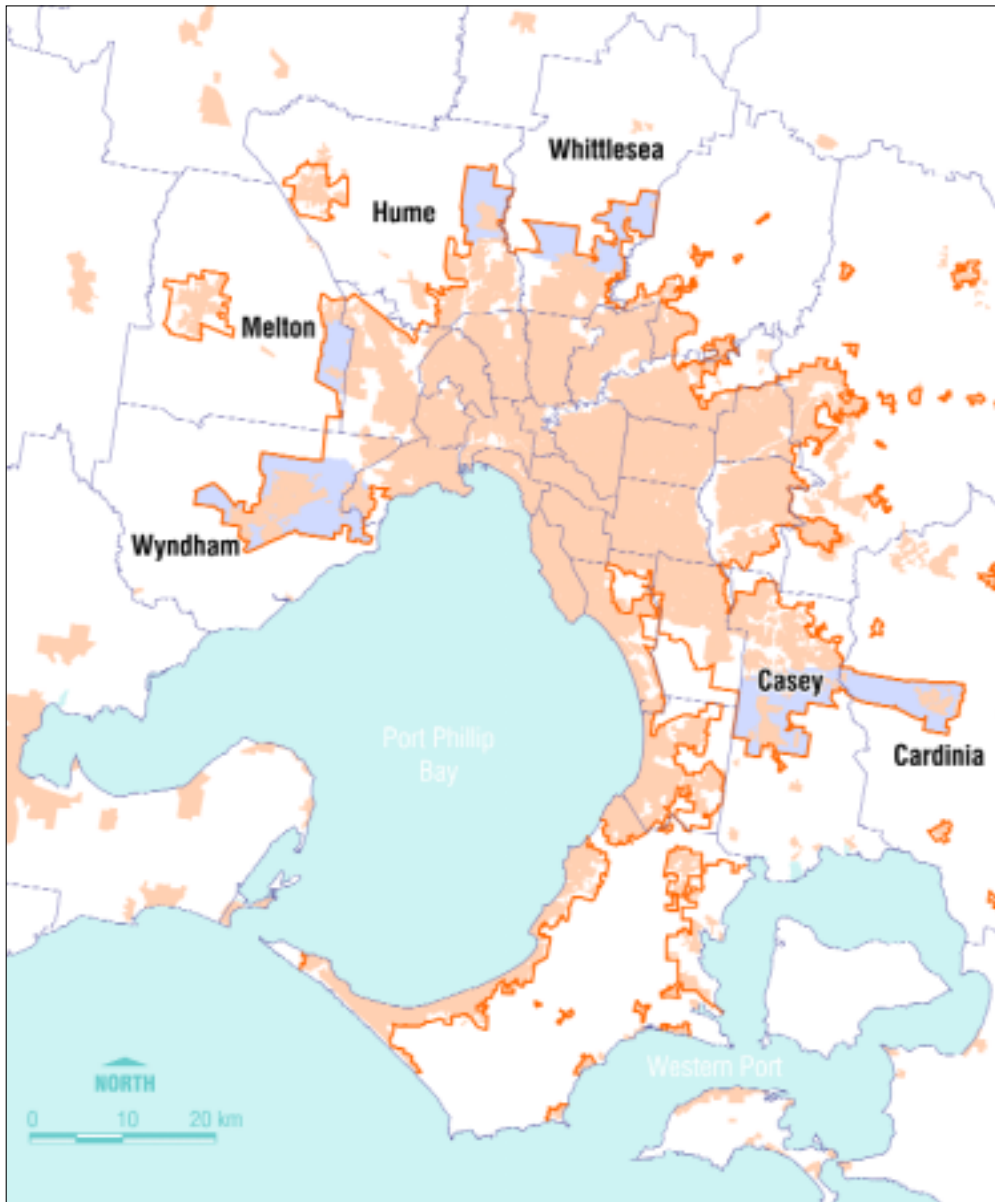
- Importantly, activity centres will be aligned with public transport provision. A classification of activity centres has been defined, with proximity to the Principal Public Transport Network being an important element.
- Transit Cities – such as at Dandenong, Frankston, Ringwood, Box Hill and Footscray – are a special class of activity centres, and are the subject of intensive planning to demonstrate what can be achieved by transit-oriented concentrations of mixed-use development. Particular attention is being given to the layout and design of Transit Cities to ensure efficient access for users of all modes (including freight and commercial vehicles) and to provide separately for through traffic so as to minimise congestion around the centre.
- To ensure that transport and land use planning initiatives for the development of growth areas, Transit Cities and other activity centres are well integrated and coordinated, the Government will require integrated transport plans to be prepared for all major developments in the metropolitan area. Requirements for both motorised and non-motorised modes will need to be addressed.
- DOI will seek to become a referral authority under the Victoria Planning Provisions, to enable the Director of Public Transport to review developments that impact on the Principal Public Transport Network.

High growth municipalities	Population		Increase in population 2001–11 (%)
	2001	2011	
Melton	52,800	97,800	85
Cardinia	47,000	78,500	67
Wyndham	87,100	142,700	64
Casey	181,500	236,400	30
Hume	136,000	161,400	19
Whittlesea	118,000	142,000	20

Table 1. Population projections of selected outer municipalities

Figure 13. Growth areas

- Urban growth boundary
- LGA boundary
- Growth area
- Urban area



Source: Department of Infrastructure 2004

Transport requirements in outer areas:

- Travel surveys in the outer metropolitan area show that on weekdays:
 - > 50–80 per cent of people's trips start and finish within the same municipality.
 - > generally 90 per cent of trips start and finish within the same or an adjoining municipality.
 - > typically less than 5 per cent go to the Central Business District.
- The transport system in outer areas needs to be flexible and primarily road-based. Improving the arterial road network in outer areas is therefore a significant priority.
- Local trips by walking and cycling also require a safe road network, as well as subdivision and activity centre design that provides good 'connectivity' for people walking and cycling, including well-located off-road paths.
- To be convenient and attractive for people living in outer areas, public transport needs to offer:
 - > expansion of local bus services – to provide residents in developing suburbs with basic access to activity centres and the Principal Public Transport Network
 - > cross-town connections – so that people can access a much wider range of activities or opportunities within their region
 - > good operating hours and more frequent services
 - > the connections and capacity to enable access to the opportunities available in the inner city.
- Greater flexibility and innovation, such as demand-responsive services, may be needed in the future development of public transport services in areas of low travel demand. A greater role for taxis is also likely with any shift towards demand-responsive services in outer areas.
- The Multi Purpose Taxi Program will continue to provide essential access to services for people with permanent and severe disabilities.

- The rail network is important in serving tidal movements in the morning and afternoon peaks between predominantly residential areas in outer Melbourne and inner areas that are rich in jobs and services. Patronage on Melbourne's passenger rail network has been growing at about 3 per cent a year for the past decade and this growth is projected to continue. In some corridors, rail patronage is approaching capacity and there is limited ability to add train services owing to existing infrastructure constraints. The upgrading of rail lines along key corridors is emerging as an important issue.



strategy 3.1

Improve outer metropolitan arterial roads

The Victorian Government aims to provide people with better access to activity centres and job opportunities and to improve access for freight and commercial traffic throughout outer metropolitan Melbourne.

In outer metropolitan areas, generally 90 per cent of trips start and finish within the same or an adjoining municipality. Arterial roads support local trips and the cross-town movement of goods and people by all modes.

Transport infrastructure in outer areas has not kept pace with growth in demand due to the rapid pace of outer suburban development. Two-lane, two-way roads constructed to service rural land use now carry large volumes of traffic, causing safety issues and significant delays to private and commercial traffic and public transport.

While progress has been made in recent years to improve the standard and safety of outer metropolitan roads, a substantial ongoing program is required to address deficiencies.

Integrated transport and land-use planning for the development of growth areas, activity centres and Transit Cities across Melbourne is under way. Transport agencies are working closely with the Department of Sustainability and Environment (DSE) and local councils in the planning and delivery of Transit Cities, and in the development of initiatives to improve traffic flow and access by all modes in and around activity centres.

Mixed-use development of activity centres is a key element of Melbourne 2030 aimed at reducing travel distances. Good access from the surrounding area or subregion is vital for the success of these centres, where employment, retail, business, residential and entertainment activity will be concentrated. An efficient arterial road network is required to provide access for both public and private transport.

Through the Smart Growth Committees, established as part of Melbourne 2030 implementation, the Victorian Government is working in conjunction with local councils and other stakeholders to determine the long-term requirements for transport infrastructure and services in growth areas. Work is

underway in all five growth areas –Wyndham, Whittlesea, Casey–Cardinia, Hume and Melton–Caroline Springs.

The Government has recently committed \$164 million to upgrade metropolitan arterial roads in outer growth corridors, including Mill Park, Berwick, Point Cook, Roxburgh Park, Langwarrin, Attwood, St Albans and Endeavour Hills. Further priority actions for improving outer metropolitan arterial roads are to upgrade poorly performing links and identify future network requirements.

Priority actions

Upgrade poorly performing links

A program of road capacity improvements will be implemented with priorities determined by the need for:

- improved access to activity and employment centres
- efficient access to the Principal Road Network.
- supporting planned growth patterns and boundaries
- efficient movement of freight and public transport
- improved safety.

Candidate projects will be considered among other transport priorities and submitted to the Government annually to continue a rolling program of road upgrades.

Facilitate development of activity centres and 'Transit Cities'

- Initiatives will be developed to improve traffic flow in and around activity centres.
- Traffic studies will be undertaken to identify traffic management objectives and to assist planning to enable the Transit Cities to operate effectively. This may also involve investigation of alternative routes to divert through traffic to reduce congestion around these centres.
- The Transit Cities of Dandenong, Frankston, Ringwood, Box Hill and Footscray will be a high priority.

Identify future network requirements and secure reservations

Requirements for future arterial roads in developing areas need to be identified in Municipal Strategic Plans, with reservations secured and access controls established in advance of major land development. These will be identified through appropriate transport and infrastructure investigations such as growth area plans, activity centre structure planning and transport studies for specific subregions.



strategy 3.2

Increase access via public transport in middle and outer areas

The Victorian Government aims to improve access while reducing car dependence, by providing people with better public transport options in middle and outer suburbs.

Buses are the most immediate public transport mode for over two million Melbournians. This compares to the one million people that live within ready access of train and tram services.

Melbourne's bus network grew from small, regional bus services and today's services still reflect these historic catchments. Providing better local bus services and cross-city connections will require a re-examination of bus franchise arrangements.

SmartBus services will make public transport a suitable option for many cross-town trips and provide faster long-distance connections around Melbourne.

SmartBus services have been trialled on Blackburn Road and Springvale Road, and both have been highly successful. From 2002 to 2003, patronage on Route 703 (Blackburn Road) grew by 19.4 per cent and on Route 888-9 (Springvale Road) by 30.4 per cent. Patronage growth has been even higher for full-fare passengers – suggesting the importance of these services for travel to and from work. The Government has also committed to introduce SmartBus services on Warrigal Road and Wellington Road.

Key SmartBus routes have been identified as a priority for delivery in coming years. The routes connect to form four orbital routes, with some additional routes between the orbitals (see Figure 14). This network will provide better transport connections with activity centres.

Local bus services are needed in outer Melbourne to provide access to the Principal Public Transport Network and activity centres, and local mobility for those who have few alternative transport choices. To be an effective option, public transport will require longer spans of operating hours, including weekend and evening services, and greater service frequencies.

New low-floor air-conditioned buses and 50 new or expanded services in outer Melbourne have offered significant improvements in the quality of local bus services, but service frequency and reliability on a congested road network will need to improve. Improvements to the operations of existing bus services are also important, with the Government committing \$3 million in 2004 to address 'red spots', or delay points, on the bus network.

What is SmartBus?

SmartBus represents a new, high-tech approach to delivering bus services in Melbourne. SmartBus provides 'cross-town' bus services using arterial roads to efficiently and reliably link railway stations, activity centres and community facilities.

SmartBus includes:

- more frequent bus services and extended services at night, on weekends and public holidays
- more punctual bus services
- better connections with train and tram services
- accessible, low-floor buses and bus stops
- better information about services at bus stops and from other locations.

Running times for existing SmartBus routes have been reduced by an average of 10 per cent, providing better services, greater punctuality and more efficient utilisation of buses.

Innovative SmartBus technology includes:

- use of GPS to identify where each bus is located along the routes
- Traffic light priority measures to allow the bus to have priority at traffic lights
- Intelligent passenger information signs to provide 'real time' information about the expected arrival time of the bus at key stops, and information on bus, tram or train services at key interchanges.

Priority actions

Roll out the SmartBus network

- Complete the Red Orbital SmartBus route, including the committed Warrigal Road (Mordialloc to Box Hill) section, and extend to Northland Shopping Centre and then through the northern and western suburbs to Altona.
- Establish a communication technology system to support the operations management of the services, the provision of passenger information and traffic priority capability.
- Develop and deliver the Doncaster to Frankston SmartBus orbital route on arterial roads including Dandenong–Frankston Road and Stud Road to Maroondah Highway.
- Deliver a SmartBus route from Rowville to Caulfield along Wellington Road and the Princes Highway in Melbourne’s south-east, providing a connection between Caulfield, Chadstone Shopping Centre, Oakleigh, Monash University and Stud Park.
- Upgrade key existing PPTN bus services to SmartBus standard with a focus on northern and western Melbourne.
- Develop performance-oriented contracts for bus services, with incentives for better service and initiatives to grow patronage.

Improve local bus services

- Deliver better bus services in the areas of greatest need. These are being identified based on criteria such as population levels and/or expected growth, and current service levels. Bus services in these areas will be reviewed from a zero base to better meet the needs of local communities for access to jobs and services in activity centres, and to connect to rail and/or SmartBus. This approach will:
 - > establish closer working relationships with local government in the delivery and coordination of bus services

- > ensure new bus contractual arrangements include incentives to improve performance.

- Ensure new developments support local bus services:

- > develop and implement design guidelines to ensure that the design of new residential developments supports the delivery of public transport and that developments are configured to allow for efficient bus operations
- > define requirements for integrated transport plans prepared by developers for all major developments in accordance with State government policies. Integrated transport plans for greenfield developments will be expected to assess and document public transport requirements
- > increase the extent to which public transport capital works and services are provided under Development Contribution Plans.

- Investigate innovative approaches:

- > investigate more cost-effective forms of service provision in areas where levels of demand are low – including the possible use of demand-responsive services, taxi and bus combinations, and community-based approaches.

Figure 14. SmartBus routes



Source: Department of Infrastructure 2004

strategy 3.3

Improve access via the passenger rail network

The Victorian Government aims to provide residents of outer areas with access to the employment opportunities and many other activities that are concentrated in central and inner Melbourne.

The suburban rail network provides these important connections. There are several significant capacity constraints in the rail network as shown in Figure 15.

The need to upgrade rail capacity, particularly on the Dandenong line and the lines from the north and the west that run through North Melbourne, has been brought forward by the introduction of Regional Fast Rail (RFR) services in 2006, for which rail track capacity has been reserved.

Initially, upgrading will incorporate changes in service patterns and improved operational and asset management to deliver better reliability. Sustained investment will then be required over the next decade to provide capacity to meet growth in demand.

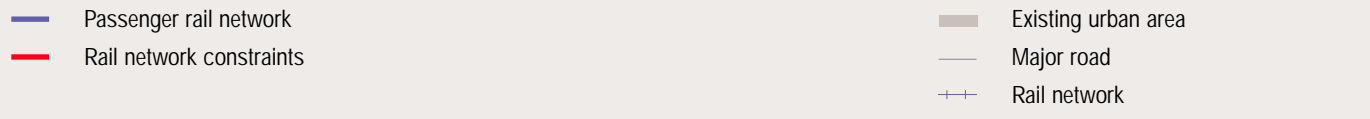
This will include upgrading of rail tracks and supporting infrastructure, including stations and modal interchanges, provision of additional rolling stock, and substantial changes to the way the train system is managed.

Priority actions

Development of the passenger rail network will be focused upon the following projects:

- progressive service and timetable adjustments, based on extensive market research and understanding of user needs, to provide continuous improvement of capacity and reliability taking into account RFR services, demand growth and proposed system upgrades
- design and construction of a third track on the Dandenong line between Caulfield and Dandenong
- redevelopment of North Melbourne Station and optimising platform stopping patterns to improve the ability of passengers to transfer between loop and direct services
- design and delivery of track and signalling improvements on the group of lines from the north and west including: the City Loop and Spencer Street Station approaches; the Footscray to Sunshine line, and the Werribee line
- improvements to the Clifton Hill group including addressing restrictions in the Clifton Hill–Jolimont section; upgrading of signalling on the Hurstbridge line between Greensborough and Eltham, and conducting a feasibility study for the future duplication of track in this section
- investigation of the need for an additional platform at Sandringham
- investigation and delivery of signalling, train operations and platform management improvements for City Loop lines, to maximise reliability and available capacity
- review of fleet requirements (including stabling and maintenance) to ensure rolling stock needs are met into the future
- investigation of proposed new station developments on existing lines in growth areas
- a program to upgrade train stations, starting with Heatherdale, Dandenong, Noble Park and Kananook stations
- reservation of the Epping North corridor for future public transport north of the Epping line towards Craigieburn Road
- detailed investigation and planning for extension of the rail network to South Morang and options for the introduction of flyer trains on the Ringwood line.

Figure 15. Rail constraints



Source: Department of Infrastructure 2004

Integrated transport in the Mitcham–Frankston corridor

Melbourne's outer east and south-east constitute a major economic subregion. The municipalities of Manningham, Maroondah, Whitehorse, Monash, Knox, Greater Dandenong, Kingston, Casey and Yarra Ranges accommodate more than 1.25 million people and contain around 40 per cent of Victoria's manufacturing output and more than 30 per cent of Melbourne's employment. Travel demands in the area, both personal and commercial, tend to be dispersed.

Mitcham–Frankston Project

The Mitcham–Frankston Project, which comprises the former Scoresby Freeway alignment with a link from the Eastern Freeway and associated improvements, will:

- link industrial growth areas
- provide significant travel–time savings for households and businesses across Melbourne's south-east
- reduce peak traffic loads and congestion on other roads in the area
- provide for public transport, with wide shoulders for future SmartBus operations, provision for a future rail corridor, and provision for bus stops at all interchanges
- provide a shared-user path for pedestrians and cyclists along the corridor
- free-up road capacity in Springvale Road and Stud Road for more efficient public transport services
- upgrade connecting arterial roads to provide for the significant growth in freight and personal travel, and to address safety issues
- improve connections to the Transit Cities at Dandenong, Frankston and Ringwood.

The project will attract new investment by improving access to services and amenity within the region.

Outer Eastern Public Transport Plan

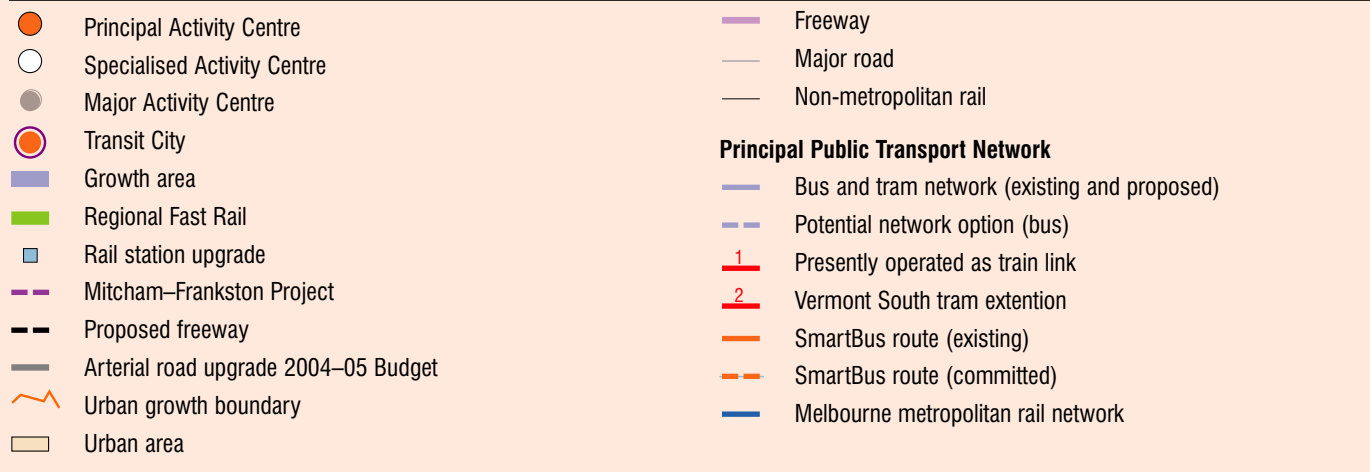
In late 2001, the State Government began work with several councils to develop a long-term public transport plan for Melbourne's outer east, from Lilydale to Cranbourne. The work undertaken for the Outer Eastern Public Transport Plan has provided a valuable foundation for the development of this Metropolitan Transport Plan.

It has also guided the policy and investment decisions made by the Government around the Mitcham–Frankston Project, including initiatives such as the Wellington Road SmartBus and railway station upgrades.

Public transport improvements were identified to complement the Mitcham–Frankston Project and to build on the success of recent and committed projects such as:

- the introduction of low-floor buses
- upgrades to modal interchanges at Glen Waverley, Ringwood, Dandenong, Oakleigh, Croydon and several other locations
- upgrades of Bayswater, Mooroolbark and Narre Warren stations to premium status
- additional train services each week, staffing of extra stations in morning and afternoon peak periods and the deployment of new SafeTravel staff on the train system
- the Park & Ride facility at Doncaster
- SmartBus services on Springvale Road and Blackburn Road
- additional or expanded bus services on numerous routes (630, 664, 665, 670, 671-2, 681, 682, 683, 688, 692, 693, 695, 697, 698, 753, 754, 791, 802, 804, 826, 837, 839, 840-1, 842, 843, 844, 845, 849, 850, 861, 862, 892, 893, 894 and 896)
- extension of the route 75 tram to Vermont South with connecting bus services to Knox City
- extension of the route 109 tram from Mont Albert to Box Hill.

Figure 16. Melbourne's outer east and south east



Source: Department of Infrastructure 2004



Community consultation in the development of the plan included six council information sessions, eight community forums and 32 other submissions.

As the vast majority of travel is within the region, the focus of the plan is on bus services with their ability to provide flexible intra-regional and local travel. However, access to inner Melbourne must also be considered. Rail connections, rail capacity and integration of services are therefore important to any regional solution.

The key areas for transport improvement are:

- strengthening the PPTN
- improving local bus services
- upgrading transport interchanges at the major activity centres and other railway stations
- implementation of travel awareness programs.

Specific proposals which form part of this Metropolitan Transport Plan include:

- additional high frequency SmartBus services on arterial roads in the corridor (for example, services on Warrigal Road and Wellington Road are committed, and Stud Road is identified as a priority)
- upgrading selected train stations in the corridor (including Heatherdale, Dandenong, Noble Park and Kananook stations) which will mean better passenger facilities, as well as enhanced Park & Ride facilities at some stations
- significant investment in the passenger rail system (for example, triplication of the Dandenong rail line between Caulfield and Dandenong) to support one of Melbourne's strongest growing corridors
- bus reform and further investment to develop better bus services in a number of areas within the corridor.



Support for economic growth

The efficient movement of freight and commercial traffic is essential for Victoria's continued economic growth and prosperity. Melbourne is a major hub for manufacturing and distribution, with well-established links to regional areas, other States and overseas.

One of Melbourne's strengths is its freight infrastructure – ports, airports and road and rail systems. The Victorian Government will ensure that best use is made of this infrastructure and will invest where necessary to overcome critical bottlenecks and to develop the transport system to support industry and economic growth.

04

Strategies

- Improve access to key freight areas
- Improve national, regional and cross-town freight connections
- Manage safety and environmental issues relating to commercial transport

Support economic growth by improving the efficiency of freight and commercial traffic

The following outlines the actions that are necessary to support the efficient movement of freight and commercial traffic to, from and within the metropolitan area. Reducing transport costs and increasing reliability in the freight and logistics sector will help build market opportunities.

Victorian freight flows in 2000 are shown in Figure 17. The projected doubling of the metropolitan freight task over the next 20 years will pose a major challenge to the port, road and rail systems and the intermodal linkages.

The Government has a target of 30 per cent of port-related freight to be carried on rail by 2010, up from 10 per cent in 1999. The measure applies to Victoria's four commercial ports: Melbourne, Geelong, Portland and Hastings.

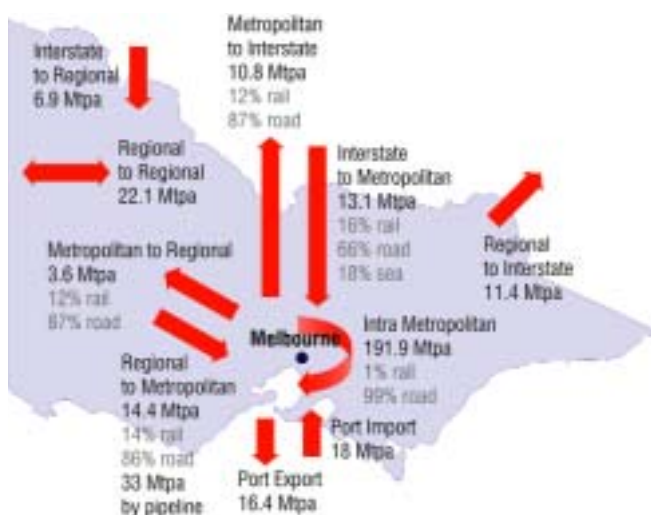


Figure 17. Victorian freight task 2000

Mtpa = Million tonnes per annum

Source: Department of Infrastructure 2004

The port/rail precinct

- Approximately \$70 billion of trade passes through the Port of Melbourne every year.¹ It is Australia's largest container port, handling 1.7 million TEUs (twenty foot equivalent units) in 2003–04, which is 37 per cent of Australia's container trade. By 2020, this figure is expected to rise to 3.8 million TEUs.
- In *Victoria: Leading the Way*, the Government announced an action plan which includes:
 - > deepening the channel to, and berths at, the port to enable access for larger ships.
 - > development of the Dynon–Port rail link, with separation of rail access from Footscray Road.
- The Government will promote improved efficiency in the port/rail precinct by:
 - > protecting strategic land around the port for freight-related activities
 - > reconfiguring access links so that more freight can be moved by rail and specialised port vehicles rather than commercial trucks
 - > encouraging the transfer of some port-related freight at outer metropolitan terminals (such as Altona and Somerton) connected to the port precinct by rail.
- By 2010, there will be an estimated five million truck movements a year (14,000 movements a day) associated with the container trade, putting significant pressure on port access roads. In some nearby suburbs where truck movements impact on the amenity of residential areas, alternative routes for heavy vehicles will need to be found, and use of rail to the port will need to be promoted to relieve some of the burden.

Links to regional Victoria and interstate

- To improve export competitiveness and regional economic development, the Victorian Government will continue to foster projects that improve freight access and efficiency along inter-regional and interstate corridors and, where appropriate, to secure funding from the Federal Government through the AusLink program.
- Rail transport is most suited to bulk freight such as grain and the long-distance movement of containerised freight. To improve the efficiency and competitiveness of rail freight, the Government placed conditions on the sale of Freight Australia to Pacific National, and a number of other measures are being pursued. These include:
 - > upgrading the Sydney–Melbourne rail corridor with the Federal Government to improve reliability and travel times and encourage growth of rail between the nation's largest economic centres
 - > redeveloping the Dynon area to combine the Port of Melbourne and the adjacent Dynon rail terminals into a fully integrated freight hub
 - > providing for improved and, where appropriate, standardised rail track on selected sections of the country network – including Mildura
 - > improving rail links into the Port of Geelong by connecting Corio Quay and Lascelles Wharf to rail, and improving standard-gauge rail capacity into the Port of Geelong
 - > port access improvements to separate freight from other traffic at the Port of Portland
 - > reforming rail access arrangements and providing additional terminal capacity to enable competing operators to run trains in Victoria.

- As roads will continue to carry much of the regional freight, improvements are required along major corridors. Heavily congested sections which need to be addressed include:
 - > the Western Highway, between the Western Ring Road and Caroline Springs
 - > the Princes Freeway East, through Pakenham
 - > the Calder Freeway, in Keilor Park and at the Tullamarine Freeway interchange
 - > the South Gippsland Highway at Cranbourne.

Distribution within the metropolitan area

- Most freight carried in Victoria is within the metropolitan area and road is often the most practical mode for the majority of this freight. However, there is significant potential to develop intermodal solutions using a combination of road and rail, with freight being shuttled by rail between the port and intermodal terminals.
- Non-metallic minerals and other bulk products such as landfill, soil, aggregate and construction materials account for around 75 per cent of the tonnage but only 7 per cent of the value. In contrast, food accounts for 4 per cent of the volume but over 25 per cent of the value.
- Freight and commercial vehicles comprise only 14 per cent (300,000) of all vehicles in the metropolitan area. Of these, 83 per cent are light commercial vehicles, 15 per cent are rigid trucks and 2 per cent are articulated vehicles. Articulated vehicles (greater than 24 tonnes) transport over 50 per cent of freight tonnage. Growth in vehicle-kilometres is mostly due to light commercial vehicles, while growth in tonne-kilometres is mostly due to articulated trucks (see Figures 18 and 19).
- Articulated vehicles are expected to carry more of the tonnage, and require an efficient cross-town network of roads. However, light commercial vehicles will account for more trips and require efficient access to all parts of the road network.

- Figure 20 shows routes that are heavily used by freight. The highest number of freight tonnes travel on the West Gate Freeway, Monash Freeway and sections of the Western Ring Road, each road carrying more than 100,000 tonnes per day.
- To accommodate the projected increases in freight and commercial traffic, better use must be made of existing roads, rail and public transport infrastructure. As indicated in Section 02, Managing congestion, various initiatives are proposed including:
 - > a road network hierarchy and implementing traffic management measures such as access and parking controls
 - > encouraging private-car users to take public transport to free-up road space
 - > using technology to optimise traffic flows on major arterials and freeways
 - > improving direction signage and navigation aids
 - > supporting the use and expansion of intermodal terminals

- > monitoring international developments in road pricing and investigation of possible opportunities that might lead to more efficient use of road space.
- There is also a need to improve flow on some critical parts of the network where capacity improvements are not currently proposed, such as along the Monash Freeway and West Gate Freeway corridors, and other locations as shown in Figure 24.
- The Victorian Freight and Logistics Council, together with the Victorian Government, has started work on a program to identify time and cost advantages of intermodal solutions. Port rail shuttles have begun operation from intermodal terminals at Somerton and Altona.
- Measures to improve safety and manage the environmental impacts from heavy vehicles will be pursued – including the development and implementation of performance-based standards for vehicle safety and emissions.

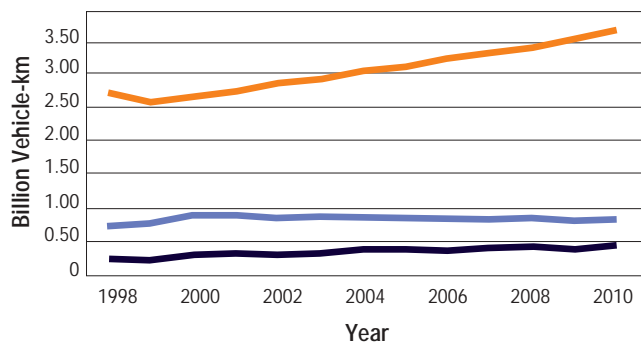


Figure 18. Freight task: metropolitan vehicle travel

■ Light commercial vehicle
 ■ Rigid truck
 ■ Articulated truck
 Source: VicRoads 2004

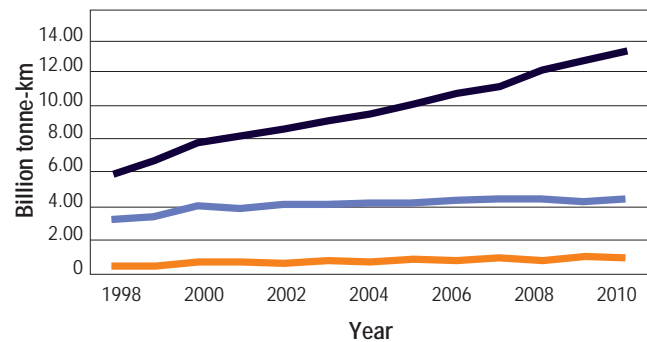
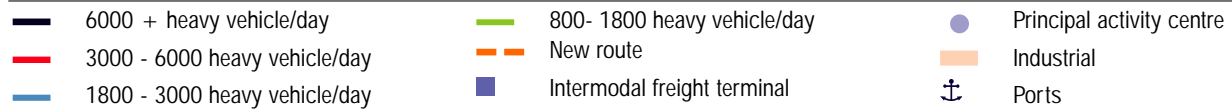


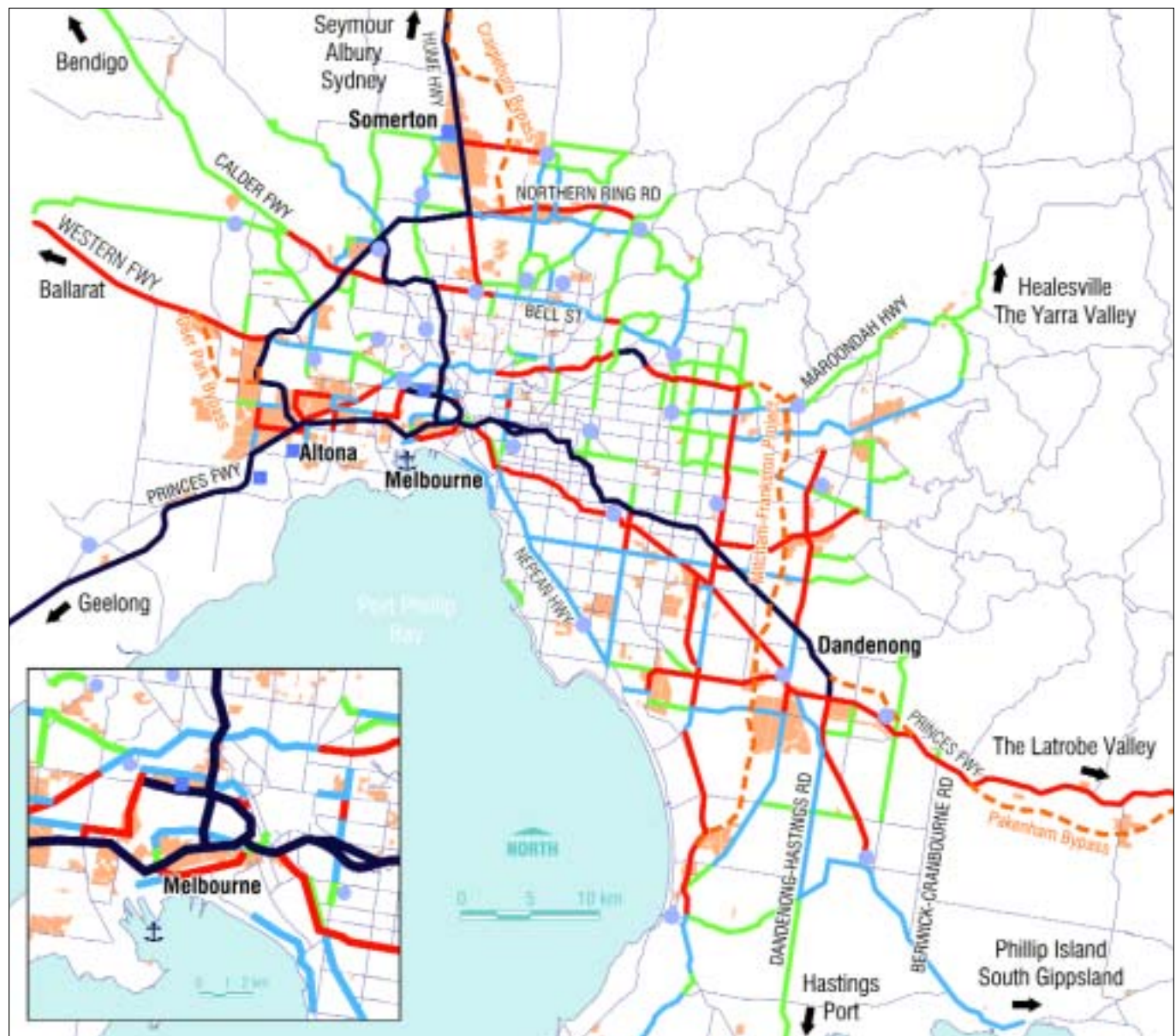
Figure 19. Freight task: metropolitan freight carried

■ Light commercial vehicle
 ■ Rigid truck
 ■ Articulated truck
 Source: VicRoads 2004

Figure 20. Metropolitan truck volumes



Note: heavy vehicle = Austroads class 3 or greater



Source: VicRoads 2004

strategy 4.1

Improve access to key freight areas

The Victorian Government aims to maximise the value of existing infrastructure and remove impediments to efficient access to the Port of Melbourne, Melbourne's airports, key freight corridors and major zones of freight activity.

Priority actions

Channel deepening

Channels to the Port of Melbourne are too shallow for around 30 per cent of container ships that use the port, without part loading restrictions. Figure 21 shows the trend in the size of container ships.

Subject to obtaining environmental clearances, the Victorian Government will support the Port of Melbourne Channel Deepening Project as a priority project. The Government contributed \$14.9 million in the May 2004 budget to expedite design and technical works. An independent panel is currently considering the Environmental Effects Statement and hearing submissions from interested parties.

Rail access

Currently, the Port of Melbourne's only on-dock rail access is via a single track that crosses Footscray Road. The current alignment adversely affects rail operations and delays road traffic.

The Government is designing an overpass of Footscray Road across the rail track, and realigning the rail into the Port of Melbourne. The Dynon-Port rail link is of national importance and funding of \$110 million has been secured from the Federal Government through its AusLink initiative. The Victorian Government has allocated \$2.1 million for design work on the project in 2004-05.

The project will improve rail access between South Dynon and port terminals, improve on-dock rail facilities, reduce double handling between road and rail, allow train access to existing and future terminals and reduce the cost of container movements.

Melbourne Port@L

The Melbourne Port@L vision is to improve freight efficiency in the port area through improved connections between modes and a world class intermodal freight terminal. Redevelopment will combine the Port of Melbourne and the adjacent Dynon rail terminals into a fully integrated freight hub. To ensure an integrated approach, the Victorian Government has established the Melbourne Port@L Board which draws together the expertise of authorities responsible for the Port and Dynon precincts and the approach roads. Key elements of the program include:

- enhancing rail and road access to and between rail and shipping terminals
- using information technology to improve supply-chain performance

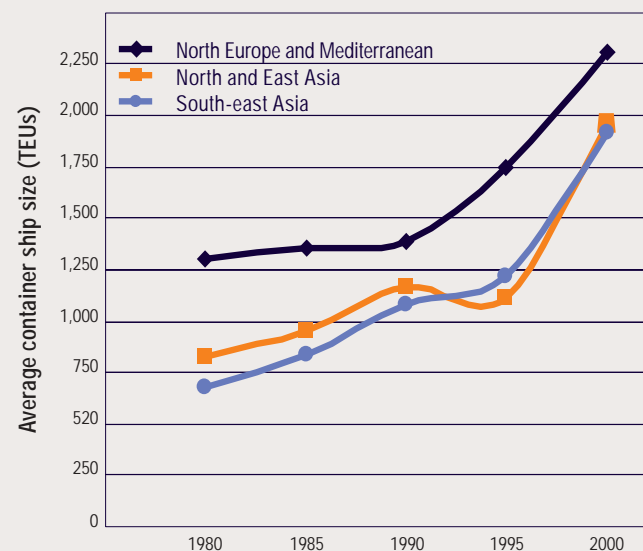


Figure 21. Trends in ship size

Source: Dewry Shipping Consultants Ltd 2001

- reducing road congestion around the port
- freeing up strategic land around the port for freight-related activities
- facilitating the development of outer metropolitan intermodal terminals servicing the port
- increasing the Port of Melbourne's capacity, including the container terminal capacity at Swanson Dock.

Port development projects

- development of Victoria Dock as a freight terminal by Westgate Ports will include on-dock rail connections and involve the transfer of 50 per cent of cargo by rail
- extending Mackenzie Road and closing part of Coode Road to improve access to and within the port precinct and providing P&O with an opportunity to move containers between its rail and container terminals with straddle carriers and forklifts rather than trucks
- extending Dockside Road to the West Gate Freeway interchange ramps at Todd Road and Cook Street to facilitate access to a new cargo terminal to the north of Webb Dock in the longer term.

Technology and freight

Smart Freight involves working with industry to introduce information and communications technology (ICT) solutions to generate efficiency gains and reduce freight congestion in and out of the Port of Melbourne. The Government has committed \$4 million to foster and support this initiative. Pilot projects are currently being commissioned.

The Victorian Government is supporting the establishment of a National Intelligent Transport Systems Centre of Excellence in Melbourne as part of its program *Building Better Supply Chain Links* (Economic Statement, April 2004).

Protection of freight areas

Existing and future freight areas will be protected, in consultation with industry and the community, to improve access to (and further development of) major terminals and provide balance between the interests of residential land use and freight and logistics activities.

Major freight areas include Melbourne's airports, the Dynon/Port of Melbourne precinct, the ports of Geelong, Portland and Hastings, and sites suitable for the location and/or expansion of intermodal freight terminals such as Altona and Somerton.

Initiatives include:

- development and implementation of freight transport plans, strategic land-use plans and planning guidelines for major freight places that can be reflected in the State Planning Policy framework
- identifying land required for transport corridors and access to freight terminals, including adequate buffer zones, and protecting this land by including appropriate measures in local planning schemes. This will allow effective operations for freight activities, minimise land-use conflicts at the perimeter and manage any adverse effects (for example, relating to safety, noise, vibration, gas and particle emissions).

Loading and unloading facilities

Loading and unloading facilities will be improved by:

- improved planning to ensure adequate provision in new developments
- reviewing design standards
- working with local government to implement the standards.

strategy 4.2

Improve national, regional and cross-town freight connections

The Victorian Government aims to improve inter-regional and interstate connections to help build market opportunities, reduce the cost of transporting goods and increase reliability of the supply chain.

Currently the majority of interstate and inter-regional freight movements are by road. Efficient national and regional road connections are, therefore, crucial.

At the same time, improvements to the rail network are vital to increasing rail's share of the freight task for these longer distance trips. This will assist in reducing the economic, social and environmental impacts of road traffic.

Figure 22 shows the types of transport infrastructure within the major freight corridors. Figure 23 shows the types of freight carried on the national and intrastate rail networks.

Efficient distribution within the metropolitan area is critical to the freight task. Road is the dominant and most practical mode for much of the intra-metropolitan freight task, and the requirements for freight vehicles will be an important consideration in establishing a network hierarchy of use (see Strategy 2.2 in the Managing congestion section). It is also important to address restrictions on the cross-town arterial road network to provide better connections and improve the reliability of travel times.

The initiatives described below complement those in the Managing congestion section to help free-up valuable road space for freight and commercial traffic.

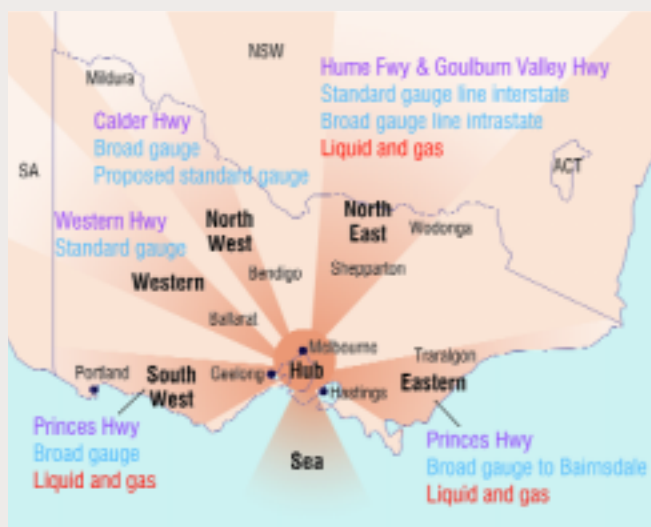


Figure 22. Victorian freight corridors

Road Rail Pipeline

Source: Department of Infrastructure 2004

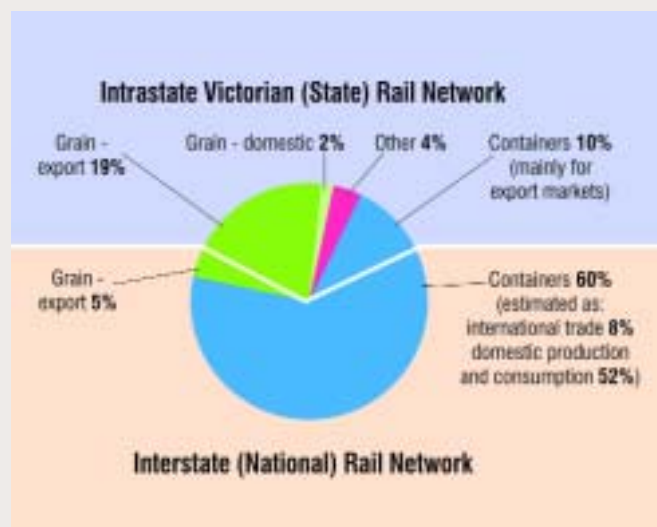


Figure 23. Victorian rail freight

Source: Department of Infrastructure 2003

Priority actions

Rail freight network

- Reform rail access arrangements and provide additional terminal capacity to enable competing operators to run trains in Victoria.
- Upgrade the interstate rail network, as agreed with the Federal Government and Australian Rail Track Corporation, to reduce travel times between Melbourne and Sydney.
- Work with industry to review the intrastate rail network and identify the most beneficial rail projects for investment.

The Victorian Government will continue to seek Federal funding to increase the efficiency of key rail linkages to our ports and to reduce constraints on nationally significant rail corridors. For example:

- with support through Auslink, a \$40 million project is being undertaken to increase the capacity of the standard-gauge line between the Tottenham yards and Dynon, to eliminate a current rail freight bottleneck.

National and inter-regional road freight links

Road freight links between Melbourne and Sydney, Adelaide and regional Victoria will be improved by addressing performance gaps and bottlenecks on the major connections. The Principal Road Network shown in Figure 24 provides the major road transport routes across and around Melbourne.

- The Craigieburn bypass is already under way, connecting the Western Ring Road to the Hume Freeway. It is due for completion in mid-2005.

Other high priorities are:

- Pakenham bypass: this is a 20 km bypass on the Princes Freeway, linking to the Latrobe Valley and Gippsland. It is expected to reduce travel time by 10 to 20 minutes and provide benefits of \$40 million a year. Planning is well under way and the joint State and Federal funded project is expected to be completed by late 2007.
- Deer Park bypass: the 9.3 km freeway bypass on the Western Highway will improve the connection between Melbourne and Ballarat, Western Victoria and South Australia. It will reduce travel time by at least 10 minutes and provide benefits of \$20 million a year. Planning approvals have been obtained and Federal funding for part of the cost has been secured through AusLink.
- Berwick–Cranbourne Road: development of this road and Clyde–Five Ways Road as an alternative to the South Gippsland Highway will provide a bypass of Cranbourne and a high standard link with Phillip Island and South Gippsland. The Government is committed to the duplication of the section between Greaves Road and Pound Road, as part of a package of outer metropolitan road upgrades. Planning for the future development of the remaining section between Pound Road and the South Gippsland Highway is well advanced.

Address restrictions on major cross-town routes

Freight bottlenecks and network deficiencies will be identified and addressed to improve network connectivity and freight efficiency and reliability. High priorities include:

- construction of the 40 km Mitcham–Frankston Project through Melbourne’s eastern and south-eastern suburbs. The significance of this project is described in section 3 Metropolitan growth (see Figure 16). It is expected to be completed in 2008
- upgrading the Calder Freeway/ Tullamarine Freeway interchange in Essendon to allow for easier movement between the two freeways, improve safety and capacity, and reduce congestion
- developing alternative routes for freight in residential areas near the Port of Melbourne.

For the foreseeable future, traffic flow improvements between the Eastern Freeway and Tullamarine Freeway will be achieved by traffic management measures and better travel information.

A study of the maintenance and ultimate capacity requirements of the West Gate Bridge is being undertaken to develop maintenance and traffic management strategies and to optimise the use of this important facility.

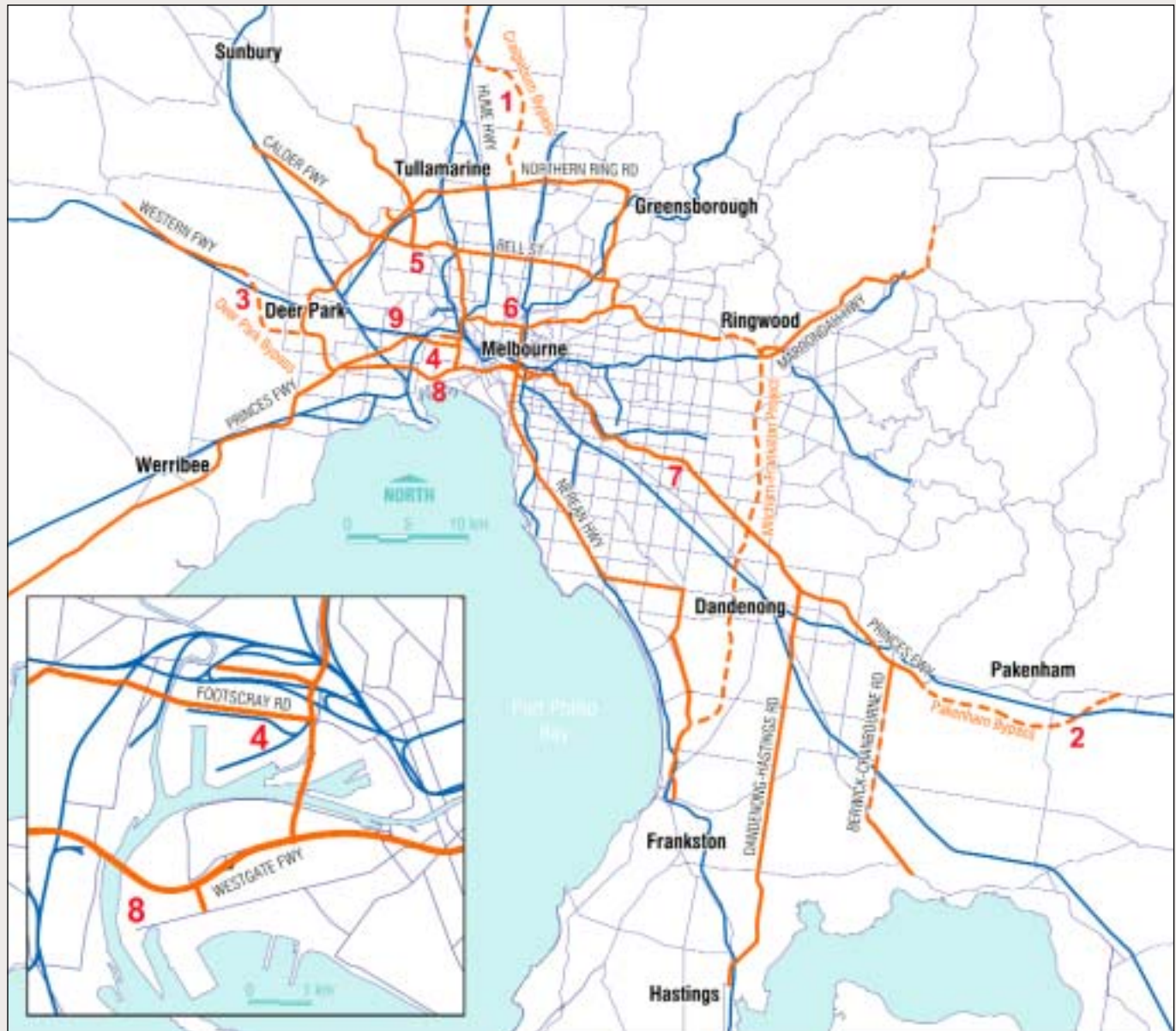
A comprehensive network of Intelligent Transport Systems (ITS) will provide real-time traffic information to drivers and freight operators, to assist delivery scheduling and route selection. ITS applications include:

- traffic signal coordination and signal activation organised for heavy vehicles on high-volume freight routes to minimise freight travel times
- dynamic advisory signs on key arterials
- incident detection.



Figure 24. The Principal Road Network and the rail network

- Principal Road Network
- - - Committed/Proposed works
- 1 Performance issue (refer notes opposite)
- Rail network



Source: VicRoads 2004

Figure 24. The Principal Road Network provides the major road transport routes across and around Melbourne and the major connections to regional Victoria. It consists of the metropolitan freeway system and other major metropolitan highways linking the freeway system.

Within this network there are a number of sections where performance needs to be addressed. Major improvements already committed include the Craigieburn bypass (1), the Pakenham bypass (2) and the Deer Park bypass (3).

Access to the port precinct will be improved through the Dynon – Port rail link and grade separation at Footscray Road (4). Full integration of the Port and Dynon rail facilities will be progressed under Melbourne Port@L to create a world class intermodal terminal.

Upgrading the Calder/Tullamarine freeway interchange (5) is recognised as a high priority.

Consistent with the findings of the Northern Central City Corridor Strategy, congestion in the vicinity of the western end of the Eastern Freeway (6) will be managed through a coordinated set of traffic management measures, and improved transit options for the Doncaster corridor will be investigated. Flow on the Monash Freeway (7) will be optimised through ramp metering and dynamic speed signs, with real-time information for drivers, and commuters will be encouraged to use public transport – particularly the Dandenong rail line which is a priority for upgrading.

The West Gate Bridge and freeway approaches (8) are regularly at capacity and will require the development of integrated transport solutions based on comprehensive examination of travel demands in the Wyndham corridor.

Rail improvements at the Tottenham yards will increase capacity and address an existing rail freight bottleneck (9).

strategy 4.3

Manage safety and environmental issues relating to commercial transport

The Victorian Government aims to improve safety and the environmental and amenity impacts related to freight and commercial transport.

Improvements to regulatory frameworks and systems management are proposed to reduce these potential impacts.

Community concerns about the safety and environmental impacts of larger vehicles and rail operations will be addressed through improved compliance with standards and development of alternative routes, where applicable. The use of technology such as GPS navigation to increase safety and productivity will also be encouraged.

Priority actions

Safety in the freight and logistics sector

As indicated in the Safety section, safety actions will include:

- pursuing uniform national reforms on road safety regulation, a co-regulatory safety framework for rail, rail operating practices and transport security
- requiring ports, rail and major transport infrastructure owners to implement safety plans
- improving compliance with safety standards
- establishing truck stops to encourage drivers to take rest breaks, particularly in major terminal locations such as the Port of Melbourne and at strategic locations on the outskirts of Melbourne.

Emissions management

A range of regulations and standards to manage emissions from vehicles has been developed through a federal process involving State jurisdictions (including the Victorian Environmental Protection Authority (EPA) and VicRoads) and the Federal Government.

In 2002, the Federal Government introduced a package of new Australian Design Rules (ADRs) which set emission standards for new vehicles and new fuel-quality standards. These standards will improve the emissions performance of all new vehicles in Australia.

The Victorian EPA, in conjunction with the motor-vehicle repair and service industry, has developed a number of programs to improve practices in vehicle maintenance to help reduce emissions from existing vehicles on roads.

Further work to improve environmental performance will be delivered by the freight industry through:

- an independently audited Environmental Management Systems approach
- development of environmental performance recognition awards and ratings
- development of incentives to adopt more environmentally-friendly technologies and practices
- encouragement of higher environmental standard vehicles.

Managing traffic noise

Noise is a significant concern to communities living near high-traffic roads, rail lines and freight terminals. A program will be undertaken to reduce the impact of noise through the following activities:

- new freeways and the widening of major arterial roads will be designed to ensure that noise levels do not exceed current standards
- traffic noise from freeways and other major new roads will continue to be ameliorated through the noise barrier retrofitting program
- specific management plans will be developed and implemented to minimise heavy vehicle intrusion on residential areas in the port area and near other major freight terminals. The plans will balance the need for freight access and amenity outcomes
- initiatives to reduce noise at the point of generation will be developed and implemented
- road and traffic management solutions in sensitive areas will include smoother and quieter road surfaces, and reduced speed limits
- Victoria, through the Australian Transport Council, will continue to pursue the adoption of international best practice in vehicle noise emission standards
- freight operators will be encouraged to reduce vehicle noise by adopting improved vehicle management and maintenance systems and quieter tyres.



The future

The demands of the metropolitan transport system are extensive and complex. This Plan cannot address every issue. The focus of this Plan is on priority actions that can be implemented to make significant improvements within the next 4–5 years.

This Plan is the first iteration. Over time, and as progress is made in managing the metropolitan transport system, the Plan will evolve and be refined to address new issues and priorities as they arise.

Implementation: programming and funding

The Government will work with transport partners and other key stakeholders to successfully implement the strategies presented in the Metropolitan Transport Plan.

The funding and implementation of specific transport investments and initiatives will be determined as part of the Government's normal budget processes. This will involve more detailed design and development of projects (including consideration of design options and costings) together with 'triple-bottom-line' assessments and prioritisation.

Local government

The support of local government will be sought for implementation of the strategies and initiatives presented in the Plan including:

- priority for trams and buses on arterial roads
- establishing a network hierarchy of use
- formulation of guidelines for the provision of public transport to serve new urban development
- development of the Principal Bicycle Network and bicycle facilities
- safety in the vicinity of public transport stations and stops
- implementation of travel demand management initiatives
- improving access around key freight centres and facilitating the efficient movement of freight and commercial traffic
- planning and zoning changes to ensure freight activities and local communities can co-exist.

Federal Government

The Federal Government, through AusLink and earlier programs, has a responsibility to provide support for significant transport projects that underpin economic development, especially projects along interstate and inter-regional corridors that directly support the movement of freight and commercial traffic.

It needs to be recognised that there are significant interactions between freight and personal travel, and between inter-regional and intra-metropolitan movements. Strategies that help to divert travel from private cars to public transport or non-motorised modes can have benefits for freight vehicles and for the economic activity which they service, particularly along major corridors. These interactions will be further investigated, and Victoria will continue to seek Federal support for integrated solutions to address major transport issues.

Monitoring progress

The Government's performance targets for Melbourne's transport system are to:

- reduce the annual number of deaths and serious injuries arising from road crashes by 20 per cent by 2007
- increase the share of freight tonnage transported to and from Victoria's commercial ports by rail to 30 per cent by 2010
- increase the percentage of motorised trips in Melbourne taken on public transport to 20 per cent by 2020

Progress towards these targets is being monitored.

The performance of the metropolitan transport network and of public transport services is also monitored by DOI through a number of key performance indicators and targets, which can be found in DOI's *Corporate Plan*.

For public transport, quarterly performance reports are published on the internet at www.doi.vic.gov.au. These include detailed measures of punctuality and reliability of services, and of customer satisfaction. Actual performance against punctuality and reliability benchmarks is linked to incentive and penalty payments to public transport operators, and to any compensation payable by these operators to passengers.

Performance reports for the road system are published by VicRoads. Traffic System Performance Monitoring updates include traffic profiles, travel speeds and lane occupancy information.

Supplementary indicators of performance will be developed as necessary to assist in monitoring the Metropolitan Transport Plan. These are expected to focus upon the performance of the transport network (such as appropriate measures of road congestion), the outputs and the success of particular initiatives, and the progress towards key outcomes such as improved access.



Appendix

Strategies by mode and agency

	Strategy	Mode	State Agency
Safety	1.1 Reduce road deaths and serious injuries	Road	VicRoads/Victoria Police/TAC
	1.2 Improve safety and access for pedestrians and cyclists	Cycling and walking	VicRoads in conjunction with DOI Public Transport Division
	1.3 Provide safer and better access to public transport	Train, tram, bus and taxi	DOI Public Transport Division in conjunction with VicRoads
	1.4 Ensure the safety and security of transport infrastructure	Port and rail freight	DOI Freight, Logistics and Marine Division
Train, tram and bus		DOI Public Transport Division	
Road		VicRoads	
Managing Congestion	2.1 Improve the reliability and flow of road-based public transport	Tram and bus	VicRoads in conjunction with DOI Public Transport Division
	2.2 Make existing roads operate better	Road	VicRoads
	2.3 Improve service coordination, integration and customer interface	Train, tram, bus and taxi	DOI Public Transport Division
	2.4 Promote sustainable travel through better demand management	Cycling, walking, train, tram and bus	DOI Planning and Policy Division and DOI Public Transport Division
Metro Growth	3.1 Improve outer metropolitan arterial roads	Road	VicRoads
	3.2 Improve access via public transport within middle and outer areas	Bus and taxi	DOI Public Transport Division in conjunction with VicRoads
	3.3 Increase access via the passenger rail network	Train	DOI Public Transport Division
Economic Growth	4.1 Improve access to key freight areas	Port and rail freight	DOI Freight, Logistics and Marine Division
		Road	VicRoads
	4.2 Improve national, regional and cross-town freight connections	Rail freight	DOI Freight, Logistics and Marine Division
		Road	VicRoads
	4.3 Manage safety and environmental issues relating to commercial transport	Road	VicRoads
Port and rail freight		DOI Freight, Logistics and Marine Division	

Notes

Section 2

Managing congestion: strategies for inner and established suburbs

1. Bureau of Transport and Regional Economics, *Urban Transport – Looking Ahead, Information Sheet 14, 1999*
2. Bureau of Transport and Regional Economics, *Urban Congestion – the implications for Greenhouse Gas emissions, Information Sheet 16, 2000*
3. 2002–03 figures: M>Tram 68.5 per cent on time at destination, Yarra Trams 67.5 per cent on time at destination, *Track Record, September 2003*

Section 4

Support economic growth by improving the efficiency of freight and commercial traffic

1. Port of Melbourne, *Annual Report 2002-03*

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