

The Honourable W R Baxter, MP Minister for Roads and Ports 60 Denmark Street Kew 3101

AUSTRALIAN ROAD RESEARCH SGARD - 1 DEC 1992

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Dear Minister,

I have pleasure in submitting to you for presentation to the Houses of Parliament the Annual Report, prepared in accordance with the Annual Reporting Act 1983, of the Roads Corporation (VIC ROADS) on its operations for the year 1 July 1991 to 30 June 1992.

The year has been very productive for VIC ROADS. It has seen many substantial road projects, of great significance to the Victorian economy, come into use or progress smoothly. These include the opening of the Bell-Banksia Link and the Euroa Bypass, and the major work on the Ballarat Bypass and Western Ring Road.

Considerable preparation was carried out to further develop our transport systems with projects such as the Western and Southern Bypasses and the Traffic in Melbourne Study.

Once again I am proud of the efforts of VIC ROADS people for their role in reducing death and trauma on our roads. The continuing decline in road deaths has been achieved only with a concerted effort by many organisations of which VIC ROADS plays a very important part.

This report contains many achievements which were obtained through the dedication and professionalism of all staff and I congratulate them all for their important contribution to the development of Victoria.

Yours Sincerely

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**Cover illustrations, left to right:** ■ Planning the movement by night of an overdimensional vehicle □ "Cycle On" training which operates throughout Victorian schools □ the Tullamarine interchange of the Western Ring Road nears completion.

<sup>■</sup> Produced by VIC ROADS Corporate Affairs Section, 60 Denmark Street, Kew, 3101.

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### **Highlights of the Year**

□ A world first touch screen hazard perception computer test has been developed for novice drivers and similar technology is being developed for licence testing.

The Euroa Bypass and Bell-Banksia Link were completed – the Ballarat Bypass and large projects on the Hume Highway progressed very well.

□ The VIC ROADS long-term record of hours lost through industrial disputes has been very commendable – this year it was negligible, being listed as less than .1 percent of a million hours worked.

□ One of Australia's most important road projects, the Western Ring Road from the Hume Highway to the West Gate Freeway, is progressing quickly.

The four lane arterial route is now expected to be completed to the Western Highway by 1995. The Broadmeadows section is well advanced (part will open late this year) and will be finished early in 1993. □ Preparation for private enterprise involvement in the Western Bypass and Southern Bypass projects led to registration of interest from the private sector for the financing, design and implementation of these projects of great importance to Victoria.

□ Substantial planning studies and community consultation investigations were carried out for a number of projects which in due course will bring enormous benefits to commerce and the people of Victoria. These include the Western and Southern Bypasses, Bendigo Transportation Study, the Western Highway, Ringwood Bypass and Traffic in Melbourne Study.

The Ring Road across the Moonee Ponds Creek Valley is shown below.



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□ Swanston Street, Melbourne, was successfully closed to private traffic between Flinders and Latrobe Streets for the creation of Swanston St. Walk. It required over 200 traffic management works by VIC ROADS and the City of Melbourne, a special signing system and a broad public information campaign to help motorists adjust to the changes.

□ The TRIMS Transport and Information Management Systems, a project with Telecom to improve technology for major advances in the efficiency of road transport, has made considerable progress.

□ Significant activities have been carried out to improve VIC ROADS understanding of our customers' needs.

□ In May 1991, a \$10.9m contract was awarded to Lend Lease Communications for the supply, configuration and installation of a data communications network, TRANSnet, which upgrades computer and network facilities at all VIC ROADS offices.

□ Several important improvements for the regulation of heavy vehicles will help the freight industry and increase road safety. □ A contract to monitor a Nova Span Bridge (one of the largest in the world) at Morwell won a Highly Commended award in the 1992 Engineering Excellence Awards.

☐ A centralised service was structured for registration and licensing and other specialised transactions by mail. Despite a reduction in staff, from 227 to 177, service levels have been maintained.

□ VIC ROADS has continued to play a leading role in saving death and injury on the roads.

The rising road toll reached a level of 776 in 1989. Since then the fall has been dramatic – reducing to 503 in 1991, a decline of 35 percent.



Road accident fatalities, Victoria

■ VIC ROADS' Corporate

Development Division provides strategic management of the road network through corporate planning, road planning investigations, legal services, strategic transport planning and environmental and community services, together with development of the organisation and its major projects.

■ Two Operations Divisions, comprising three metropolitan and five rural regions, provide day to day operational management of the principal road network: they assist municipalities, develop and implement detailed works programs, and are responsible for project management and construction maintenance activities, together with shop front services for registration and licensing through a decentralised network of offices.

These divisions also enforce commercial and passenger vehicle regulations and vehicle roadworthiness.

Very large construction projects are managed by Project Managers, with a Project Office at the site.

■ Road Safety Division conducts research, and develops and implements programs to reduce the road toll. It is active in formulating legislative changes, training and licensing, and vehicle, traffic and road environment safety.

■ Quality and Technical Resources Division designs major roads and bridges and conducts material investigations. It also oversees traffic engineering and develops technical standards and practices. It provides Regional and Project Managers with technical support services. It develops quality service as a culture throughout VIC ROADS and implements quality management systems.

■ Business Services Division provides commercial and other support services within VIC ROADS. Property acquisition and management, plant and stores, road and traffic information, office systems, corporate affairs and public information, libraries, catering, communication services to the Minister and Government and promotion of external marketing.

Human Resources Division develops VIC ROADS' human resources through workforce planning, training and development and occupational health and safety, and provides consultancy services to line managers throughout Victoria.

■ Finance Division is responsible for budget and account management and financial performance, financial strategies and reports, and the analysis of business operations.

■ Information Technology (IT) Division develops and transfers IT skills and systems throughout the organisation. It conducts strategic IT planning and provides integrated computer and communication systems.

### **Corporate Management Group**

#### CORPORATE MANAGEMENT GROUP AS AT 30 JUNE 1992

REG PATTERSON Chief Executive

COLIN JORDAN Deputy Chief Executive and Director, Corporate Development

DAVID ANDERSON Director, Road Safety

GEOFF CHAMBERS Director, Finance

SUE HARRIS Director, Human Resources

KERRY BURKE Director, Information Technology

DAVID BERRY Director, Metropolitan Operations

DAVID O'SULLIVAN Director, Business Services

ROB McQUILLEN Director, Rural Operations

MAX LAY Director, Quality and Technical Resources

TOM KARNATZ Employee Participant

CAROL RALEIGH Employee Participant

BILL WILSON Employee Participant

#### **ADVISORY BOARD MEMBERS**

REG PATTERSON Chief Executive

JOHN WISE A nominee of the Victorian Road Transport Association

GEORGE BENNETT A councillor of a municipality

VACANT A member of the Victoria Police

ROGER BANKS A nominee of the RACV

JIM HINTON A nominee of the Victorian Farmers Federation

JOHN PRICE A person with knowledge of and employment in the transport industry

GARRY BRADD A person with knowledge of and experience in the use of passenger cars

JOHN McMILLAN Nominee of the Minister for Transport

SUSAN LIGHTBODY Employee Representative

BILL McCORMACK Employee Representative

FERGUS McDONALD Employee Representative

# **VIC ROADS**

#### OUR PURPOSE

To serve the people of Victoria by managing the road network and its use as an integral part of the overall transport system.

VIC ROADS, in partnership with other transport agencies, local government, and the Victoria Police, contributes to the social and economic development of Victoria through its role in the management of the State's transport system.

Management of the road network includes planning, designing, constructing and maintaining roads, managing road use through registering vehicles, licensing drivers and traffic management, and providing information and road user services.

#### OUR AIMS

#### Road Safety

To achieve a safe road system for the people of Victoria.

#### Access and Mobility

To assist the efficient movement of people and freight and improve access to services for all users of the transport system

#### Economic Development

To assist economic growth by improving the effectiveness and efficiency of the transport system.

#### Environment

To be sensitive to the environment through responsible management of the transport network.

#### Commercial Services

To provide information, financial and technical services to clients on a commercial basis.

#### OUR VALUES

We are guided in all our actions by these values –

□ we exist to serve our customers – they are our first priority

we provide quality service to meet our customers' needs

we are outward-looking and forward thinking

we work with commitment and integrity

we are accountable for our actions

□ we care about our people, and we provide opportunities for their development

# **Planning & Development**

#### TRANSPORT PROJECTS

In 1991/92 VIC ROADS continued its strong advances in transport planning and policy through its customer oriented approach.

Among many of our notable planning achievements for the year were :

□ The Traffic in Melbourne Study is developing a framework and strategies to guide VIC ROADS in the management of traffic in Melbourne over the coming decade. Through an extensive consultative process, economic, social, environmental and access issues and their interaction with transport services were explored. A vision of Melbourne in the coming decades, principles by which VIC ROADS will work when developing its programs and strategies for the management of traffic were developed.

Work has started on developing specific strategies for the priority areas identified through the study. These will initially cover road network needs and management, travel demand management, freight, and on-road public transport.

Investigation of options and widespread community consultation for a bypass of Woodend.

Extensive community consultation has resulted in amendments to options initially proposed for evaluation. It has also resulted in additional bypass options further away from the township being added to the initial options for evaluation. Some of the studies being undertaken to assist in the selection of a final route are landscape evaluation, archaeologic, flora, fauna and heritage. □ Preparation for private enterprise involvement in the Western Bypass and Southern Bypass projects – leading to advertising for registration of interest from the private sector for the financing, design and implementation of these projects of great importance to Victoria.

The Western and Southern Bypasses will provide a road linking the Tullamarine Freeway and West Gate Freeway, and a tunnel connection between West Gate Freeway and the South Eastern Arterial.

□ Funding of an independent Western Bypass Health Impact Study. Consultants undertook a study under the direction of a locally based steering committee. It looked at the health effects of changes in noise, air quality and accidents expected if the Western Bypass is built. The study was the first of its kind in Australia. Among the recommendations was that further air quality studies be carried out in the area and these have been completed by the Environmental Protection Authority on behalf of VIC ROADS.



☐ The Bendigo 2020 Transportation Study has been undertaken in conjunction with municipalities in the greater Bendigo area in order to determine long term transport needs consistent with the Bendigo 2020 Land Use Strategy. Extensive transport surveys have been carried out in the area and computer modelling has been used to determine future needs. A strategic transport plan is being prepared.

□ Finalisation of reservation requirements for a relocated Escarpment Route, Tullamarine Freeway.

Development of a traffic access improvement plan for Laverton South.

The study is designed to integrate traffic operations in Laverton South/Altona Meadows in order to improve traffic access for the area. This has involved consideration of improvements needed to the arterial road network and points of access to the Princes Freeway, taking into account future land use development in the area.

□ Further advances in the Statewide Review of Road Classifications by implementation of recent agreements made with municipalities, and by implementation of all Federal classification changes.

□ Investigations are being carried out into the operation of of the Western Highway at Djerriwarrh Creek. The investigations include examining the possibilities of upgrading the existing route or relocating the highway. A number of short term safety improvements have been implemented. □ Urban planning strategies. Submissions to Department of Planning & Housing on the State's long-term urban development strategy, district centre review and growth corridor studies. By working closely with the DPH, transport and land use decisions are being better integrated so that more efficient transport services can be provided.

□ A planning study was undertaken in 1991 to review the need and timing for the Geelong Outer Ring Road and possible stage development.

The study found there is no immediate reason to proceed with the Outer Ring Road project for about 20 years.

Following release of the report in November 1991, widespread community consultation has resulted in general acceptance of the report's findings, and requests for detail investigations of other Geelong roads needs such as east-west traffic and truck traffic in North Geelong.

#### POLICY DEVELOPMENT

Within the policy area we have continued to work closely with industry and community groups to improve safety on the roads, efficiency and customer service. The emphasis has been on promoting self-regulation within industries, simplifying regulations and developing a national focus. Significant achievements have been:

#### Taxis

Development, with the taxi industry, of a code of practice and accreditation system.
 Establishment of the Victorian Taxi Consultative Council.

□ Extensive consultation with users and industry to improve taxi services for wheelchair users.

Introduction of reciprocal arrangements with South Australia to enable
 Victorians with disabilities to use subsidised taxi travel in South Australia.
 Improved electronic system for
 checking of police records to determine
 suitability of prospective taxi drivers.

□ Taxi ranks at Melbourne airport have been revamped in a large holding area to improve services (shown below).

A closed circuit TV will be used to monitor the system. Showers, toilets and a car wash will be installed for drivers. The new arrangements will stamp out abuses including picking up passengers without waiting in ranks and refusal of short trips. It will deliver a faster, cleaner taxi service.

#### Buses

□ Progressive implementation of recommendations from the June 1991 Review of Bus Safety (e.g. flashing lights on school buses, video on safety at the bus stop, video on bus inspections, improved bus stops, safer buses from improved vehicle maintenance schedules and increased random inspections, safer seating).

#### Strategic Business Planning

A Strategic Plan for the Registration and Licensing business was completed which highlights a number of key actions which will be undertaken.

#### National Road Transport

☐ The Special Premiers' Conference held in July 1991 agreed to establish a National Road Transport Commission with responsibility for development of national regulations and registration arrangements for heavy vehicles. The responsibilities of the Commission were extended to include national regulations for all road users by the Special Premiers' Conference held in May 1992.



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During 1991/92 VIC ROADS has played a leading role in the national association of road agencies AUS-TROADS, by coordinating the development of recommendations on a national system. These recommendations covered most aspects of heavy vehicle regulation, and business rules for a national registration scheme.

□ Nationally consistent road transport legislation is expected to be established during 1992/93, and new registration arrangements are expected to be phased in over the next three years. These will result in significant improvements in the efficiency of the road transport industry, and the administration practices of road transport agencies.

□ Fostering of freight efficiency improvements through more efficient vehicles such as B-Doubles (*shown below*), longer trailers and higher stock crates.

VIC ROADS has worked with local government to identify roads where B-Doubles can operate. These routes were selected so that efficiency can be gained by industry while maintaining local amenity.

#### Vehicle Security Register

In March 1992 a Steering Committee comprising state representatives met in Brisbane to discuss the establishment of a National Vehicle Securities Register data-base.

As part of the National system, VIC ROADS is re-developing the Vehicle Securities Register (VSR).

This will initially enable VSR checks to NSW, ACT, NT and Victoria.

Through further negotiation there may be an opportunity for Tasmania and South Australia to utilise the Victorian VSR data base.

This will provide increased customer service with interstate checking of vehicles for the public, car traders and financiers, with one phone call.



#### Management of Roads

During the past year VIC ROADS in conjunction with Local Government Associations undertook a comprehensive study which highlighted that congestion and travel delays were the principal concerns of urban road users whilst road width and roughness were the principal concerns of rural road users.

The surveys indicated that the community was not prepared to accept short sections of road rougher than 140 roughness counts per metre, or long lengths of road with more than 20 percent of the length rougher than 110 roughness counts per metre. At present, approximately seven percent of the arterial road network is rougher than 110, of which approximately one third is rougher than 140, and the proportion in both these categories has been increasing.

These investigations highlighted the very substantial community benefits that can be provided by maintaining road conditions at a standard appropriate to the type and volume of traffic. On busy roads with significant proportions of trucks, savings in vehicle operating costs can be 20 times the cost of maintenance treatments required to provide smoother road conditions, whereas on lightly trafficked roads maintenance costs may exceed savings in vehicle operating costs.

■ Travel Demand Management Initiatives designed to reduce the demand for unnecessary private car travel have been supported. These have included support for the formation of private car pools, legalisation of commercial car pool schemes, a trial of a transit lane for high occupancy vehicles on the Eastern Freeway, on-road priority for public transport and bicycle works. VIC ROADS has promoted car pooling among its staff.

#### Integrated Planning

VIC ROADS has worked closely with the Department of Planning and Housing and Public Transport Corporation to develop integrated urban development plans for Melbourne's growth corridors and for Victoria's long term urban development. These will provide an improved balance between the release of land and the delivery of public and private transport services.

#### TRIMS – Transport Information and Management Systems

In August 1990 VIC ROADS and Telecom Australia signed the TRIMS Agreement to "jointly investigate how new technology may be used to bring about major advances in the efficiency and effectiveness of road based transport." The TRIMS Project was soon also supported by AUSTROADS and RTA (NSW).

Applications of this technology range from vehicle identification and location, to driver navigation and guidance, and makes use of the latest communications and computing developments. Potential uses include road network management, fleet management, stolen vehicle recovery, and electronic tolling.

Since its inception the TRIMS Project has aroused interest and consequently a national body is being established to provide a forum for discussion and cooperation, to address issues of standards and licensing, and to provide the opportunity for the Australian road transport sector to achieve the benefits offered by the new technology. The TRIMS Project is also planning a national Conference to be held in October 1992 at which the national association will be launched.

VIC ROADS is also continuing to trial particular technologies with potential short term, low cost benefits.

#### These include:

□ A study of truck movements in the Western Ring Road Corridor using radio frequency tags that utilise the SCRAM traffic signal control infrastructure.

□ Traffic and road network condition advice to drivers via short range FM transmitters broadcasting to standard car radios.

□ An investigation of the benefits of traffic signal priority for public transport buses undertaken by Traffic Operations Department using the same equipment as the WRR Truck Study.

#### Bike Strategy

A ten-year strategy to promote and improve bicycle travel in Victoria as environmentally friendly transport and a draft bicycle network of existing and proposed major bicycle routes has been launched.

The Victorian Bicycle Strategy proposes action to encourage and educate cyclists, and to improve the bicycle network and cycling safety.

#### Pedal Pushing – Swanston to Dandenong

Funding has been announced to link the Yarra and Gardiners Creek bike paths. The \$2.5 million link would remove one of the main gaps in Melbourne's bike network. A survey of users was carried out to determine the best method of bridging the gap. Constructing a safe link between the paths will create one of Melbourne's longest continuous off-road paths.

#### National Improvements for Bicycles

Cycling issues across the country were discussed at the first national conference for many years, held in Melbourne in March.

AUSBIKE 92 brought together over 200 cyclists, engineers, police, politicians and others from all States and from overseas to share ideas to improve cycling.

Contentious issues included the rights of cyclists on busy roads, single use paths vs. shared pedestrian/cyclist paths, and law enforcement.

Other topics included the need for bikefriendly roads and paths and bicycle law enforcement. The benefits of bicycles and greenhouse together with community cyclist activism and bicycles for people with disabilities were investigated.

# **Road Safety**

# VIC ROADS has continued to play a leading role in saving death and injury on the roads.

In the late 1980's the rising road toll reached a level of 776 in 1989. Since then the fall has been dramatic – reducing to 503 deaths in 1991, a decline of 35 percent. This compares with a 25 percent decrease in the national road toll over the same period. The trend is continuing in 1992, with 208 fatalities to 30 June, a 16 percent improvement on 1991.

Road user groups which have benefited most significantly over the two year period are:

Drivers: from 336 deaths to 216 – down 36 percent.

□ Passengers: from 179 to 124 (31 percent).

Pedestrians: from 159 to 94 (41 percent).

□ Cyclists: from 34 to 12 (65 percent).

These impressive reductions have been brought about by well targeted and extensive accident reduction measures involving:

- Road engineering programs
- Vehicle safety initiatives
- Targeted enforcement
- Mass media promotions
- Community programs and Education
- □ Safety management and co-ordination

Benefits to the community since 1989 have been:

□ A saving of 500 lives and over 5,000 serious injuries.

□ A reduction in the cost of crashes of \$800 million in 1990 and 1991.

□ Fewer accident injury claims -- a reduction of 5,800 (26 percent) in TAC no-fault claims since 1988/89.

□ A reduction in vehicle damage crashes of more than 30 percent.

The co-ordination of road safety activities in Victoria under the State Road Safety Strategy has seen a strengthening of the role the key agencies in road safety play in reducing the road toll.

An integrated approach to tackling the problem has had the support of government bodies such as the Victoria Police, the Transport Accident Commission as well as the Monash University Accident Research Centre (MUARC), RACV, Royal Australasian College of Surgeons, MAV, VACC, Community Road Safety Council's and many other contributors.

Victoria – Persons killed in road accidents, per 10,000 vehicles



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Road Safety Programs have been developed to provide integrated action in five areas:

- □ Safer roads.
- □ Safer road use.
- □ Safer vehicles.
- □ Safety management.
- Better trauma management.

#### **ROAD SAFETY PROGRAMS**

#### Safer Roads

Improvement to the State's road system using proven safety treatments at known hazardous locations has continued at a high level. These safety treatments provide a very cost effective way of improving road safety. Each dollar invested in the accident Blackspot Program returns \$9 in reduction in road trauma.

The program is made up of 3 major components:

□ Accident Blackspots – these typically small, low cost, high benefit, projects are targeted at locations with a high accident record. Treatments include installing roundabouts, pedestrian facilities and traffic lights. \$13.7m was spent improving 219 sites including \$3.2m for Lynch's Bridge on Ballarat Road, Kensington.

 ☐ Mass Action Treatments are proven countermeasures applied to locations with accidents of specific types.
 Treatments included removing roadside hazards such as poles, culvert widening and improving street lighting. \$4.3m was spent on 178 sites across Victoria.

Railway Level Crossing Treatments – upgrading of safety protection for motorists and pedestrians include the installation of boom barriers, flashing lights, warning signs and pedestrian protection. Trials of reflectors on grain wagons, lights on locomotives, active advance warning signs and research into accidents at rural crossings continued through 1991/92. \$2.5m was allocated to level crossing treatments.

Other major activities included: Doubling the number of red light camera sites in active operation.

 Providing an Accident Investigation and Prevention Course for Police, Municipalities and VIC ROADS staff.

Preparing the Government
 Response to the Social Development
 Committee Recommendation into
 Speed Limits in Victoria.

□ Preparing a Safety Audit Manual for use by Municipalities and VIC ROADS.

Continued co-ordination of the Hazardous Poles Project.

The installation of guardrails at specific sites greatly improves safety.



#### Safe Road Use

Safe Road Use has been actively encouraged through a wide range of programs and has had substantial support of community networks at local levels.

□ In today's modern world, road safety education must start early in any child's life in order to develop appropriate attitudes leading to safer road use. An extensive range of road safety programs are available for all school children starting at preschool level. These develop the skills, attitudes and behaviours necessary for children to survive in traffic. During 1991/92 a number of new and exciting curriculum resources were produced to complement existing traffic safety education units. New initiatives included:

 A bus safety video to address the involvement of school children in bus accidents and promote safer behaviours.

• Pre School Storybooks were jointly developed and produced by VIC ROADS and the RTA NSW. The stories support and complement the early childhood program "Starting Out Safely" with each story focusing on a road safety issue relevant to the age group.

• A road safety unit "Surveys" was revised to help students in years 9 to VCE develop correct survey techniques whilst using a road safety theme.

• An enhanced Traffic Safety Education package is being developed jointly by VIC ROADS and TAC Insurance. A pilot project will incorporate computer touch-screen technology as a learning tool in years 9 and 10. Subjects covered include drink driving, cycling safety and restraint wearing.

#### Novice Drivers

A number of initiatives have been developed to improve the driving skills of novice drivers who in the first year of driving are three times more likely to be involved in a casualty accident than a more experienced driver.

• Hazard Perception Test - In a world first a touch screen computer technology test has been developed for novice drivers to improve their understanding of possible hazardous situations on the road. The test will be used as part of the screening process before the learner driver progresses to a probationary licence.

Road safety programs for pre-school children.



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• A computerised knowledge test is being developed for applicants for a drivers licence or learner permit. The computer system which uses touch screen technology selects questions and answers randomly which increases security. The tests are also presented aurally which assists applicants with literacy difficulties. The tests will also be presented in 15 languages.

• A Learner Driver's Guide has been developed and trialled to encourage learner permit holders to have a variety of driving experiences throughout the permit period under controlled conditions.

#### Drink Driving

A program to install Alcohol Ignition Interlocks to vehicles belonging to convicted high risk drink drivers is being developed. A Standards Association Approved interlock is expected to be available in early 1993.



#### Pedestrian Safety

• To combat the number of intoxicated pedestrians killed or injured by vehicles, VIC ROADS has developed a Responsible Serving of Alcohol Program for staff and management of licensed premises. From 1 January 1992 the training program was handed over to the Liquor Control Commission to co-ordinate the course.

• A number of pedestrian advocates situated in the metropolitan area are responsible to identify areas where the risk to pedestrians can be reduced. Their work is integrated to existing local programs.

• Safe Routes to School Program. An integrated education, engineering and advocacy program is being developed to reduce the risk of road accidents involving student pedestrians and cyclists.

• An older pedestrian education and advocacy program, Walk With Care, has been developed in conjunction with local government to link in with local traffic management programs and treatments.

#### Driver Fatigue

VIC ROADS and the Monash University Accident Research Centre are working on measures to prevent fatigue occurring to drivers. Publicity brochures outlining effective trip planning and the need for rest stops have been distributed to motorists.

#### Motorcycling

Following the Social Development Committee inquiry into motorcycle safety in Victoria, reports are being published which cover a wide range of safety issues such as engine capacity, training programs, and public education. A second report is expected in September 1992. Other initiatives include a major workshop with industry and motorcycle agencies examining novice rider safety. A power to weight ratio has been recommended for introduction for new riders in addition to the current 260cc legislation

Community Programs

• A train the trainer infant and child restraint training program for anti-natal nurse educators was launched on 16 September 1991. The training package consists of a manual, videos and restraints for demonstrations.

• A network of Child Restraint Fitting stations was established by the RACV and VIC ROADS in July 1990.

• VIC ROADS personnel have consulted with the training program for RACV approved repairers and promotional activities.

• Bassinet Loan Scheme. Over 17,000 infant restraints are available for Ioan from Victorian municipalities. VIC ROADS personnel continued with training sessions for new Ioan scheme coordinators and supporting existing coordinators.

A train the trainer infant and child restraint program for ante-natal nurse educators.



• Safe Living Program. Shire of Bulla -A three year demonstration project with the aim of reducing injury to residents of the Shire of Bulla is underway. The project builds on existing community networks to deliver programs consisting of information, education, supervision and change in the environment. The project is handled by the Victorian Health Promotion Foundation and VIC ROADS with support by local sponsors.

• Municipal Public Health Plans -Under the new Victorian Health Act councils must now prepare health plans that identify and assess actual and potential public health changes including road safety issues. A working party has been established to develop a resource for local government of a wide range of road safety strategies.

□ Community Road Safety Councils (CRSCs). A network of 19 CRSC (nine metro; ten country) have now been established across Victoria to harness local community expertise and support to address regional safety issues.

Training and support is supplied by VIC ROADS personnel. Examples of CRSC work includes:

• The North Eastern Community Road Safety Council conducted a Drink Driving Campaign throughout winter. The message was aimed at young male drivers and was centred around football clubs.

• Posters and coasters featuring Tony Shaw, Collingwood Football Club Captain, were distributed to the local clubs. Accompanied was a letter with suggestions for avoiding drink driving amongst players and supporters. • The North Western Community Road Safety Council, as part of its Bicycle Campaign aimed at secondary students, has produced a brochure entitled "On Your Bike."

The colourful brochure covers areas such as correct clothing, riding in traffic, skills and bicycle maintenance. Distributed amongst secondary schools, the brochure has proven a very popular and a valuable resource for students and teachers.

• The West Gate CRSC conducted a three day road safety promotion in an effort to heighten the awareness of the community to the need for individuals to be responsible for their own safe behaviour when using the road system.

#### Truck Safety

Improvements to heavy vehicle safety were investigated by an Austroads project team which produced a report titled "Heavy Vehicle Driver Safety." The report covered the issues of heavy vehicle driver work practices, driver training and health, the use of alcohol and drugs, and driver fatigue.

Publicity Campaigns

• The "Go With The .00 " campaign continued with the sponsorship of the Victorian Football Development Foundation and the Geelong Supercats Basketball team. The .00 campaign aims to get an anti-drink drive message to students and novice drivers by using sporting personalities.

• A publicity campaign to highlight the dangers of railway level crossings was conducted in June 1992. The campaign targeted country drivers and metropolitan pedestrians and cyclists.

 Zero Blood Alcohol Concentration was introduced for drivers of trucks exceeding 15 tonnes and buses with seating for more than 12 people on 1 January 1992. A publicity campaign was conducted to make bus and truck drivers aware of the law change.

#### Safer Vehicles

VIC ROADS actively supports and promotes the development of safer vehicles through research, consumer information, promotion of awareness of safety issues and active involvement in national standards.

Better protection of drivers and passengers in crash situations has a great potential to save lives and prevent serious injuries as two thirds of the road toll comprise occupants of vehicles.

Major Projects in 1991/92 were: ☐ The New Car Assessment Program which involves the full and off set frontal barrier testing of new Australianmade passenger cars. The testing which is carried out at 56 km/h allows potential injury measurements to be obtained from instrumented dummies. Each vehicle can be ranked as to how safe it is likely to be in a crash. The project is an Austroads project co-sponsored by VIC ROADS and other state organisations. First results from the testing program are expected in late 1992.

□ Research on an Advanced Seat Belt System is currently underway involving General Motors Holden, AutoLiv, RACV, Victoria Police and VIC ROADS. The trial is to demonstrate that advanced seat belt systems which improve occupant protection can be provided in cars if the market demands.

☐ An extensive study funded by VIC ROADS and conducted by MUARC revealed a number of problems related to truck/car collisions. The study especially highlighted the need for improved rear underrun protection on trucks. A promotional brochure was also distributed to the transport industry. A design for a rear underrun barrier has been developed and tested at Monash University. As a result, TNT Transport have installed the proto-type barrier on a number of their new trailers. A number of other manufacturers and fleet purchasers are proposing to fit barriers to all their new vehicles.

□ A brochure titled "How Does Your Car Rate in a Crash" has been distributed. The brochure details for the first time how well Australian cars and vans protect their drivers in a crash, with information derived by a study conducted by MUARC.

□ A technical guide to towing trailers has been produced and partly sponsored by interested industry groups. □ The facilitation of the establishment of an industry based LPG installer/repairer registration scheme.

#### Safety Management

Co-ordinating and consultative forums have continued their work during 1991/92 with active involvement of many organisations in the following forums:

Road Safety Co-ordinating Council.
 New Countermeasures and

Initiatives Consultative Committee.

Communications and Promotions Consultative Committee.

Community Road Safety Councils Network in urban and rural areas.

Close liaison is being established with local government.

A strong research base is essential to identify future strategies and programs. The Monash University Accident Research Centre has received continuing support for many research projects.



# Fatality rates (June 1991). (Deaths per 10,000 registered vehicles). National/International comparisons.

#### **OTHER ROAD SAFETY**

#### Trauma Management

A review of key issues in the road accident injury management system involving communications, emergency services, and medical assistance will bring integrated action involving all the key organisations involved in road trauma.

#### Part Time School Speed Zone

The trial at school crossings of manually operated folding speed limit signs with flashing yellow lights was completed in late 1991. Part- time school speed zones have been trialled in the lower speed environment of collector roads using red flags in lieu of flashing yellow lights. Solar powered lights and signs operated by remote radio control have also been developed by VIC ROADS and trialled. The remote radio control permits the signs and lights to be activated by the crossing supervisor without walking to the signs. Also, the

VIC ROADS accident data system provides information to fight blackspots.



signs and lights may be operated by the school principal for locations without a supervisor or even without a formal school crossing.

A comprehensive report has been prepared on the trials and the original interim guidelines are being revised to encourage greater use of these part time school speed zones.

#### New Parking Controls

VIC ROADS prepared guidelines to assist municipal councils and sign manufacturers in the introduction of new sign faces for parking, no standing and no parking signs to conform with the Australian Standard. A brochure was widely distributed to ensure public awareness of the new signs.

The signs are being introduced by many councils over a seven year period. Symbolic signs eliminate much of the worded information which has been difficult to read on the old signs. ■ Alerting Lights for Locomotives To improve road safety at railway level crossings, revolving quartz-halogen lights installed at both ends of three V/Line P Class locomotives were tested. The lights catch the car driver's eye to alert the driver to the presence of a train close to a sign protected (passive) crossing. The lights operate with the train whistle to give about 20 seconds of extra warning.

An expansion of the trial has installed a pair of low-mounted 'Ditch Lights' at walkway level on one V/Line locomotive. These operate with the headlight at all times while the locomotive is running to provide a large triangle of lights to give better judgement of the speed and better daytime visibility of the train.

■ Reflectors on Rail Grain Wagons Another example of 'lateral thinking' to improve road safety at railway crossings is the VIC ROADS program to install high-grade retro-reflective sheeting panels on the sides of V/Line rail grain wagons. Drivers in the country at night can have difficulty in recognising a train may be crossing an unlit railway crossing as the dark wagons do not show up adequately in car headlights and the locomotive with its headlight may have passed the crossing before the driver sees the crossings.

Three reflector panels have now been installed on each side of over two-thirds of the V/Line rail grain wagon fleet, with the remainder to be completed next year.

■ Active Advance Warning Sign VIC ROADS has developed dramatic train warning signs using fibre optics displays. The signs display alternately a white outline of a steam locomotive, then the words 'TRAIN AHEAD' in red letters. These signs provide warning to car drivers that railway flashing lights are operating at a crossing around a curve Three of the signs have been installed at two crossings this year, with at least one further installation planned next year.

#### ■ Wide-Angle Flashing Lights Additional xenon strobe lights with wide angle lenses in conventional railway flashing light hardware have been provided at some flashing light crossings where the road-rail geometry may be a problem.

Typical installations are where the railway line runs parallel with a high speed highway with only a few metres between them. A driver turning from the highway onto a side road with a crossing may not have adequate warning with conventional flashing lights aimed at the intersection.

#### Heavy Vehicle Roadworthiness

VIC ROADS is responsible for the standards for roadworthiness of vehicles and in conjunction with Victoria Police in the monitoring of vehicle roadworthiness. In particular, licensed passenger vehicles are inspected annually by VIC ROADS Transport Safety Officers. Throughout the year random inspections are conducted on buses, taxis, tow trucks and trucks which operate on Victorian roads. To assist this monitoring, a mobile inspection trailer, a new concept in heavy vehicle safety testing, has been added to the equipment available to Transport Safety Officers.

The trailer enables on-site testing of brakes, steering and suspension to be checked.

#### Low Beam Lights for Winter

A campaign was launched to increase vehicle conspicuity within Central Highlands during daytime periods by encouraging the use of low beam headlights.

■ Cyclist Conspicuity Study During the period April to June 1992 the Australian Road Research Board conducted an investigation into the effectiveness of various devices used to improve the conspicuity of cyclists at night. The study was initiated by the State Bicycle Committee and funded and managed by VIC ROADS.

The field measurements were complemented by laboratory tests.

A draft report concluded that, in general, all tail lights tested performed adequately in terms of detection distance; that the reflectors tested performed very poorly; and that reflective clothing is generally not visible until fairly close up and should be regarded as only a supplement to good bicycle lighting for night-time cycling.

A final report will be available in September 1992 and may be used as the basis for an education campaign or changes to standards or regulations.

#### Statewide Campaign to Attack Roadworker Deaths

"Be Alert When We're at Work" is the message of a campaign launched by VIC ROADS and the Australian Workers Union to reduce deaths and injuries caused by motorists speeding through works sites.

Over the last ten years more than 1500 accidents involved road workers with serious injury or death, and for every accident there were many near misses. Since 1979, 17 VIC ROADS field staff have been killed and many other deaths have been recorded amongst council workers and road crews working for service authorities such as the SEC and Gas and Fuel.

Enforcement of roadworks speed limits has been stepped up by Police and VIC ROADS Transport Safety Service officers and an extensive education campaign implemented.

To improve roadworker safety and assist traffic control a range of new products and equipment has been developed and is being used in the field. These items include portable trailer mounted variable message signs, speed actuated warning signs and increased use of high intensity fibre optic signs. All new traffic signal lanterns used in Victoria were of the low voltage quartz halogen type which give improved light output, low electricity use and reduced globe failure. A program to convert existing traffic signal lanterns is also underway.

Provision of bicycle paths and lanes has helped reduce cycling injuries and fatalities.



# **Road Environment**

Good information on the roadside vegetation and its management is required for the preparation of Roadside Management Plans.

A Pilot Vegetation Survey and Management Study was undertaken for the Western Highway, Beaufort to Horsham. This provided guidance on the extent of survey required. Roadside vegetation surveys have commenced on other roads in Western Victoria.

#### Environmental Studies

In planning new road projects, VIC ROADS undertakes environmental studies to protect environmental values and minimise impacts.

□ Archeological surveys were undertaken for Aboriginal sites of significance prior to duplication of the Calder Highway, Keilor - Gisborne. A survey of European archaeology for the old Gap Hill township site is being undertaken prior to duplication of the Calder Highway and construction of an interchange.

☐ Air quality studies were completed at the Flemington Monitoring Station, Debney's Park near the proposed Western Bypass. The results have shown no excessive air pollution from the existing road system including Tullamarine Freeway.

□ Flora, fauna and landscape studies are underway to broadly assess the bypass options for the Calder Highway at Woodend.

□ Traffic noise studies are undertaken before and after new road projects are opened to ensure predicted noise levels are not exceeded and that attenuation measures are effective – these were done for the Euroa Bypass and the Banksia - Bell St Link.

#### Community Consultation

□ Community consultation has been at the forefront of planning for many projects including Woodend Bypass, Ringwood Bypass and the Traffic in Melbourne Study. This community consultation involved public displays and community workshops (Woodend Bypass) establishing a Community Liaison Committee (Ringwood Bypass) and workshops and seminars on specific issues, such as freight for the Traffic in Melbourne Study.

Where particular issues arise, such as traffic noise, specialist committees are established with community representation; for instance, the Noise Assessment Steering Committee for the Western Ring Road under construction at Broadmeadows.

# Soil Nail Walls: Bell Banksia Street Link

VIC ROADS has researched, designed and monitored during construction a new type of retaining wall system for the Bell-Banksia Street Link project. The walling system, known as soil nailing, has been used overseas but not previously in Australia for support of deep excavations or cuttings.

Soil nailing is a method of in-situ reinforcing the ground using steel bars (nails) inserted into near-horizontal boreholes. For the Bell-Banksia Street Link bars up to seven metres long were encased in a polyethylene sheath and cement grouted to provide double corrosion protection. Shotcrete face support was applied during construction. Architecturally designed precast facia panels have been used to provide attractive wall finishes. Soil nailing was chosen for the Bell-Banksia Street Link because of the restricted right of way reserve and because it offered significant cost savings. Savings in excess of \$1.5m were achieved when compared to the conventional method of providing bored soldier pile wall support.

Monitoring of soil nail forces and ground movements at various critical wall sections during construction has verified the design approach adopted for the walls. It is planned to continue monitoring to determine any long term changes.



VIC ROADS has the patent on the design of the precast facia panels of the retaining walls used on the Bell-Banksia link. At right, how the soil nails are used.



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#### ■ Strategy for Service Facilities Princes Freeway/Highway West

A strategy has been adopted following input from relevant municipalities, government authorities, potential developers, road users and the general public.

A commercial service centre between Melbourne and Geelong has been proposed. Rest areas on the route will be refurnished or developed.

#### Wildlife Reflectors

The evaluation of wildlife reflectors is continuing at selected locations on rural highways. The reflectors have been in place in Maroondah Highway since 1990, and were recently installed on the South Gippsland Highway near Sale, the Western Highway near Horsham and the Warburton Highway near Launching Place.

The reflectors - placed on guideposts reflect vehicle headlights into roadside land where alerted animals will shy and defer crossing the road until an approaching vehicle has passed.

#### Ecologically Sustainable Development (ESD) and Greenhouse

VIC ROADS is involved in the development of State and National ESD and Greenhouse strategies. It was a cosponsor of the "Transport and Greenhouse" conference which brought together experts from Australia and overseas to explore what steps can be taken to reduce the greenhouse impacts of transport.

#### Swanston Street Walk

A bold plan to revitalise the heart of Melbourne with considerable emphasis on improvement to its environment led to the closure of Swanston Street to through traffic, in the early hours of 28 March 1992, – the biggest traffic change in central Melbourne's history. Over 200 traffic management treatments were implemented at a cost of \$4M to cope with the 28,000 vehicles per day which previously travelled along Swanston Street. In conjunction with these works VIC ROADS developed a comprehensive signing strategy to direct motorists to the appropriate "City Bypass" or "City Access" routes. "Tow-away" zones were also introduced on the main bypass routes to assist with traffic flow.

A public information campaign helped motorists adjust to the street closure.

The comprehensive traffic plan for the closure of Swanston Street is working extremely well with motorists adjusting quickly to the new routes into and around the city.

Preliminary surveys indicate that the volume of traffic entering and leaving the city has been maintained, demonstrating the success of the traffic management plan. Detailed 'after' surveys are planned for October and November.

A highlight of the project has been the very positive publicity received by VIC ROADS, as a result of the success of the traffic management plan.

Work has commenced by the City of Melbourne to transform Swanston Street into the Walk with wide footpaths, brick paving, street furniture, and Plane trees.

### **Quality Management**

During the year VIC ROADS significantly incorporated Quality Management into all of its programs and the establishment of clear linkages with initiatives such as Structural Efficiency, Work Redesign and Enterprise Bargaining. The primary focus has been on building a customer-driven culture, improving the organisation's processes.

All Business Areas within the organisation are incorporating quality standards into their operations and are starting to measure their performance against these standards. There has been a greater recognition by staff of the "Getting it Right the First Time" philosophy with the resultant reduction in rework and wastage contributing to a better work environment and greater productivity.

There was an ongoing major commitment to training and education in Quality Management during the year to support the programs of implementation which are broadly divided into Culture and Philosophy Change, Quality Improvement Projects and Quality Management Systems.

Nineteen Principles of Quality Management and Awareness workshops were held for all levels of staff totalling about 350. To date some 50 percent of staff have received some formal training and development in Quality Management. Seminars are being conducted on an ongoing basis throughout the state for industry both local government and private enterprise.

■ Quality and Service Improvement The Quality Improvement program has continued to expand with projects registered within the organisation totalling 390, an increase of 156 this year. A review of the Quality Improvement Facilitator network was carried out with 74 facilitators trained and operating at various levels throughout the organisation. Four Training and Work Focus Ideas Exchange programs were conducted with the Facilitators.

A data base to monitor improvements throughout VIC ROADS has been reviewed and improved to serve the needs of managers, facilitators and staff. Projects are spread across every part of the organisation. A number of cross functional pilot projects were run to develop a methodology for future projects. Substantial productivity, financial and service improvement gains have continued to be realised.

#### Quality Management Systems

The introduction of Quality Management Systems initially concentrated on three Business Areas, Bridge Department, Western Ring Road Project (Broadmeadows Section) and Ballarat Bypass Project. On completion of their development, the systems were successfully presented to the Commonwealth Department of Transport and Communications in October 1991 for assessment of their compliance with the requirements of the Australian Land Transport and Development Act.

The framework developed for these Systems has been applied as a basis for their wider implementation within VIC ROADS. By the end of June 1992 all new road and bridge contracts were awarded as Quality Management contracts.

Quality System training continued during the year and included the following:

□ Twenty two two-day workshops on Quality Assurance for VIC ROADS staff, local government, contractors and allied industries.

□ Seven one-day workshops on Field Surveillance of Quality Assurance Contracts for VIC ROADS staff involved in contract administration.

☐ Twenty two Quality System Auditors successfully completed five-day auditor training courses during the year, bringing the number of trained Quality System Auditors in VIC ROADS to 60. One of our Auditors, Mr Kelvin York of the Western Ring Road Project, achieved registration with the Institute of Quality Assurance (UK) as Lead Assessor.

□ Six formal briefing sessions on the development of systems, procedure writing and strategies, together with numerous consultant advice sessions were held during the year.

#### Quality Management in Materials

A requirement of a Quality System contract is that the customer must be sure that the work is performed in accordance with the specification. There is therefore a need for the customer. VIC ROADS, to conduct audit and surveillance of the contractor's quality system. During 1991/92 the role of VIC ROADS field and laboratory technical officers changed from one of carrying out quality control tests to one of conducting surveillance of the quality system. Two-day training courses are now being conducted to train technical officers in this new role. After completing the course and conducting a number of surveillance, officers are accredited as Surveillance Officers and are assessed annually by internal audit.

#### Road Design

The Road Design Department conducts quality audits on the road and land-scape design processes.

Three main areas of concern have been highlighted by the initial audits and are currently being addressed.

#### These are:

□ Generally in the past each designer held his or her own reference documents which could lead to out-of-date referencing and inconsistent standards and practices between designers. The auditors are facilitating the establishment of "Design Team" Libraries which can be kept current and checked via audit.

□ In order to track decisions an appropriate recording system needs to be in place. The audit process is ensuring that an appropriate system is established and maintained.

□ With much of the design process now undertaken on screen with the widespread use of the Intergraph CADD system it is particularly important to ensure that appropriate documentation is produced to support checking requirements. The audit process is helping to ensure that appropriate checking occurs and documentary evidence is available.

#### CORPORATE PLANNING

■ Strategic Corporate Planning □ The 1991 VIC ROADS Management Conference increased awareness of key issues in the external environment and their impacts on VIC ROADS and its business. □ The implementation of VIC ROADS Corporate Plan, 'Moving Ahead,' was reviewed at the Directors Strategic Planning workshop in August 1991. As a result, an extensive series of staff workshops was held to further develop action plans to implement 'Moving Ahead.'

□ In order to ensure that the VIC ROADS culture is fully aligned to support the implementation of our corporate strategy a revised "organisation values" statement was prepared taking into account feedback from staff and customers. Managers and staff are now beginning to use the statement as the benchmark for our organisational values.

☐ Major submissions on the issue of corporatisation were prepared for the Public Bodies Review Committee and the Government Commercial and Trading Enterprises Committee.

□ Strategic planning guidelines for the business planning process were prepared to improve organisational business focus.

#### Strategic Marketing

One of the major aims in 1991/92 was to increase organisational understanding of community needs, wants and expectations. Major activities to improve our understanding of our customers' needs included:

□ Survey of members of the public by senior managers, for the 1991/92 management conference.

□ Collating all market research undertaken for VIC ROADS over the last few years as input to a draft market research strategy.

□ Initial implementation of the VIC ROADS Strategic Marketing Plan

intended to increase our accountability to our customers and generally increase the public's understanding of VIC ROADS products and services. A number of 'branding' proposals are being implemented to better identify VIC ROADS on signs and emergency telephones and the like.

Piloting the Melbourne Area Personal Travel Survey and home interview surveys to provide information on travel behaviour and choices in Melbourne.

#### Performance Management

A major effort was put into the establishment of corporate productivity indicators. VIC ROADS also assisted with the development of network indicators for the AUSTROADS performance indicator project.

#### INFORMATION TECHNOLOGY

#### TRANSnet Project

□ In May 91, VIC ROADS awarded a \$10.9m contract to Lend Lease Communications for the supply, configuration and installation of a data communications network, TRANSnet, which involved the upgrade of computer and network facilities at all VIC ROADS offices.

A key feature was the use of Quality Systems procedures to configure, install and test all components of the network, including 280 kilometres of Token Ring cable, 1749 workstations, 1824 data connection points and 43 File and Print Servers at 64 VIC ROADS sites and 76 Local Area Networks. This network infrastructure replaced three existing networks to provide users with user-friendly interfaces which integrate local applications with corporate, financial, project management and office automation systems.

The project was completed in July 1992, within the scheduled plan and approximately \$1.5m under the contract sum.

During 1992/93, the full capabilities of the Data Network will be further exploited for greater efficiency and enhanced services to VIC ROADS users.

□ In late 1991, Information Technology Division (ITD) conducted a project within the Northern Region Business Area to enhance the use of ROADS, the Corporation's electronic mail and calendar system.

Members of the project team conducted training sessions for users. All staff received the Basic training while Medium and Advanced levels of training were conducted for specific groups requiring these functions.

As the project is taken to other Business Areas, more and more people will be given access to ROADS.

#### Matters of Importance Achieved

#### □ Strategic Issues

Benchmarking against industry standards is a key strategic issue which will determine if we are obtaining value for our investment in information technology. Information obtained to date indicates that VIC ROADS ITD ranks in the top 20 percent of comparable IT service deliverers.

#### Business Efficiency

Chargeout of services has enabled customers to identify their IT costs and to take action to ensure they are efficiently utilised. This has been a major factor in differentiating ITD from its peers.

Service Level Agreements have enabled suppliers and customers to identify their respective responsibilities and the format used has served as a model for other IT groups external to VIC ROADS.

□ The IT Business Solutions Department has been restructured into one project matrix focussed structure leading to a one stop shop for systems development and maintenance. Performance is measured by the number of projects delivered on time and within budget to an agreed level of quality.

#### Overall Performance

□ Systems Development has begun Joint Application Design workshops to scope and prepare design objectives for customers requirements for business cases which has led to savings in time and effort of approximating 50 percent.

□ Office Systems has begun a series of office project studies designed to maximise the use of electronic tools to increase efficiency and effect demonstrated cost savings.

#### **OVERSEAS ACTIVITIES**

The Overseas Projects Corporation of Victoria, established by the Victorian Government to transfer Victoria's technology and skills to overseas countries, works in partnership with VIC ROADS to contract for road transport projects.

OPCV has carried out a variety of projects in the transport, education, agriculture, health and water sectors in about 50 countries.

This financial year VIC ROADS staff participated in the following projects:

□ Bangladesh – "Road and Road Transport Development Project." To provide institutional strengthening of the Bangladesh Road Transport Authority including a review of organisational structures and legislation and development of computerised management systems for licensing, registration and enforcement.

□ Bhutan – Provision of institutional strengthening and technical assistance in the construction of roads in mountainous terrain.

□ Fiji – Road Maintenance. VIC ROADS long-term involvement with Fiji continues with this project to provide road maintenance expertise and extensive training to the Fijian workforce. Ted Goddard is project manager and Acting Director, Roads and Airports with the Public Works Department. Other VIC ROADS staff are Greg Chambers, Graham Foley, John Gavin and Rick Hattam.

□ Indonesia – "Bridge Management System Project." Glyn Jones is participating in this Australian aid funded project to establish and implement a bridge management system throughout Indonesia.

□ Malaysia – "SCATS Upgrading Kuala Lumpur" A SCATS System was installed by VIC ROADS in late 1991. This was the first stage of the SCATS project which involved implementation of 24 traffic signal controllers.

VIC ROADS provided the technical expertise to install and commission the computer system, traffic signals and also to train the local officials in SCATS traffic engineering techniques and computer operation.

Nepal – "Institutional Development of Road and Road Transport Project".

 Philippines – "Improvement of National Road Maintenance
 Management Project." To develop a road condition rating system and a pilot pavement management system for the Island of Luzon. Garth Stevens and Geoff Jameson are participating in this project in Manila.

□ Thailand – "The Rama IX Bridge Resurfacing Project." Involves the provision of project management and technical expertise for the resurfacing of a major cable stayed steel bridge for the Expressway and Rapid Transit Authority in Bangkok. Ken Russell, Max Arthur, Ian Rodgers and John Pedersen are participating.

### New Works in the Road System

#### "One Nation"

Major stimulus has been given to the economy by the Federal Government through additional spending on infrastructure over the next few years to assist industry to perform better in producing other goods and services.

Victoria is receiving an additional \$145.9m for road projects over 3 years for National Highways, National roads and black-spots. Features include:

Western Ring Road (Calder Highway to Princes Freeway), upgrading Princes Freeway West and duplication of Portarlington Road.

□ A portion of Commonwealth road funds to the States will be untied, and distributed as per general revenue assistance

□ Federal Accident Blackspot Program An extra \$5.7m. was allocated to blackspot works in April 1992 as part of the 'One Nation' statement. This took the total Federal Blackspot program to \$13.6m. A significant effort was required by VIC ROADS regions to identify a program of some 91 projects and to undertake this additional works within the timeframe allotted.

Of the 91 projects identified, 86 were commenced prior to 30 June 1992 with 68 being fully completed. Those remaining were to be completed by end of July, weather permitting. Given the short timeframe and the closing in of winter the final out turn was commendable.

#### Priority Victoria

As part of the Premier's 'Priority Victoria' statement, an additional \$5m. was directed to the resurfacing and rehabilitation of roads. The allocation of this money came very late in the year and a major effort was required to ensure that these works were completed during May and June.

It is evident that a significant effort was required to be applied to the task of delivering these special works within a very tight timeframe – VIC ROADS people met this demand and achieved a commendable level of targeted works.

#### IN THE CITY

#### Lynch's Bridge Duplication – Princes Highway West

The duplication of Lynch's Bridge and road approaches at Flemington was opened to traffic in April 1992 and has eliminated one of Melbourne's worst accident blackspots.

In accordance with a Coronial Inquiry recommendation to fast track the works, new technology for bridgeworks and roadworks construction was used. Road approaches over poor ground conditions utilised polystyrene as lightweight fill – a first for VIC ROADS and Australia. The method reduces road settlements to manageable levels and achieves cost savings over more conventional alternatives.

The project was completed in June 1992 at a cost of \$5.5m.

# West Gate Bridge Structural Maintenance

Maintenance inspections of West Gate Bridge revealed the presence of minor stress cracking within the concrete superstructure over a length of 25 metres either side of the steel spans. Structural Systems Limited were engaged under contract to increase the strength within these short sections during the 1991/92 financial year.

Although the works were of a structural nature, they did not represent a short term risk to the bridge or those using it.

#### Harp Junction Interchange

A new transport interchange is currently being constructed at Harp Junction, East Kew to allow passengers to change between various tram and bus services. In addition, there will be improved and safer loading facilities for passengers with the provision of safety zones. To enhance public transport use, a 50 space car park is to be constructed which will enable users to drive to the interchange and safely park nearby.

Bicycle paths have been constructed along the Outer Circle Rail reservation which will allow cyclists to travel offroad to the interchange where secure parking facilities will be provided.

Construction of the project will cost an estimated \$1.3m and is anticipated to be completed early in 1993.

#### ATV 10 Camera Contract

VIC ROADS has entered into a contract with ATV 10 for the use of the VIC ROADS Closed Circuit Television System. ATV 10 use the live images from VIC ROADS cameras during the traffic report segment on the evening news. Use of the network in this manner is enhancing traffic information to Melbourne motorists and public's awareness of VIC ROADS Traffic Management Services.

#### Damage to Overhead Structures

A truck height measuring station has been successfully trialled in Anderson Road, Footscray. It serves the Appleton and Swanson Dock Areas. To use this service, truck drivers need only drive along a marked lane at up to 15 km/hour, through an array of detectors. A height ticket is then printed out, showing the vertical clearance height for the vehicle. The height is accurate to the nearest 10 cm and covers a range from 3.5 to 4.5 metres.

#### Freeway Phone System

Fifty new freeway telephones were added to the statewide network bringing the total to nearly 500.

New PABX's have been installed on South Eastern Arterial, Tullamarine and Eastern Freeways using the latest technology to improve reliability and user service.

#### Bus Priority

A trial was carried out to examine the effects of active bus priority at four sets of intersection signals along Hotham Road, Prahran.

About 30 buses on the route were fitted with transponders to signal the presence of the bus over loops, located 100m in advance and at the stop-line of the intersections. The results of the study are expected to be released soon.

#### Installation of Traffic Signals

The Traffic Signals Department undertook traffic signal and other electrical works to the value of approximately \$23m in 1991/92:

- 75 New intersection signals
- 43 New pedestrian signals
- 206 Remodel of intersection signals
- 15 Remodels of pedestrian signals
- 200 Other minor site works

#### Western Ring Road

☐ Broadmeadows Section Total works to the value of approximately \$63m were carried out during the year. The project will be opened to traffic in two stages as follows:

Stage 1 : Tullamarine Freeway to Pascoe Vale Road and Hume Highway to Mahoneys Road – September 1992

Stage 2 : Pascoe Vale Road to Hume Highway – February 1993

The highlights of the year include:

• The use of Quality Systems contracts for all works on the Project.

• Community involvement in aspects of the project, such as landscaping, tree planting, the noise committee.

• Opened several bridges and some roadworks to traffic:

- Widford Street bridge, 27 June 1991.

- Langton Street bridge, 17 December 1991.

– Kathryn Street pedestrian overpass,
17 December 1991.

Katrina Drive pedestrian overpass, 20
 March 1992.

 Duplication of Melrose Drive, 16 June 1992.

• At Jacana, work is continuing on the largest tunnelling contract ever undertaken by VIC ROADS. The \$18.5m contract is progressing well and is anticipated to be completed by January 1993.

# The Tullamarine interchange of the Western Ring Road.


• A design and construct contract worth \$28.5m for 1.8 km of the Ring Road from east of the Hume Highway to Mahoneys Road has been completed.

#### Maribymong Section

A project team was established to prepare for construction of the next section of the road.

The Maribyrnong Section will extend eight kilometres from the Calder Freeway at Keilor to the Western Highway at Deer Park.

Detailed design is well advanced with the project on schedule for completion in early 1995. Highlights of the year include:

• Completion of a \$500,000 earthworks contract for the proposed Keilor Park Drive bridge over the Western Ring Road.

• Completion of a \$600,000 earthworks contract to place fill material on the former Sunshine tip site.

• Pre-registration of three tenderers for a design and construct contract for twin 600 metre long bridges over the Maribyrnong River.

#### Eastern Freeway Transit Lane

With the intention to decrease congestion and pollution, Melbourne's first transit lane, for vehicles with two or more people, came into operation on 24 February 1992 on the Eastern Freeway. Taxis, buses, and motorcyclists are able to use the lane as well.

The transit lane has been introduced as a six month trial during which time operational difficulties are being identified and addressed. The lane operates between 7:00 and 9:30 am every weekday morning from Bulleen Road to Wellington Street a distance of over 8 kilometres.

Currently over 2200 vehicles use the transit lane every weekday morning thus delivering almost 5000 people to their destination approximately 9 minutes earlier. However, there are delays to traffic using the other lanes.

Looking into the cutting from Bell Street.



#### Bell Street - Banksia Street Link, Heidelberg

A four-lane divided road with a climbing lane for westbound traffic between Studley Road and Bell Street has greatly improved traffic flow on this urban highway which is an important route for trucks.

The new road link extends from Cape Street to Bell Street, west of Upper Heidelberg Road, and includes a new bridge over the Hurstbridge line near the Heidelberg Railway.

This traffic improvement was identified in the Metropolitan Arterial Road Access Study (METRAS) as one of Melbourne's most cost effective transport projects.

Although the project comprises a large number of complex components, there are two features which are particularly special – the "soil nail" retaining walls and the precast fascia panels.

This is the first project in Australia where soil nailing, a method of reinforcing the ground, has been used for a permanent retaining wall.

Soil nailing is about half the cost of conventional concrete retaining structures.

The precast fascia panels have been architecturally designed to create movement and energy as motorists travel through the cutting.

The link was opened on 1 July 1992 at a total cost of \$40m.

#### West Gate Freeway

A third lane is being built in both directions on the West Gate Freeway between Princes Highway and Millers Road, a distance of 2.9 km, improving safety and access between inner Melbourne and Werribee. The section between Grieve Parade and Millers Road, a distance of approximately 1.9 km, included twin bridge widenings over Millers Road. The widening of the twin bridges to three lanes over the Kororoit Creek are under construction.

Completion of the project is expected in early 1993 at a cost of \$6.6m.

## Grieve Parade, Altona

The widening of Grieve Parade to four lanes over a length of 1.4 km from south of Dohertys Road to the Princes Highway West was completed in early 1992. A new concrete bridge was built to take traffic over Kororoit Creek and the Grieve Parade bridge over West Gate Freeway has been widened. The works will lower the road's high accident rate, and improve access to nearby suburbs, industries and freight depots. The cost of the works was \$8.3m.

#### Ringwood Bypass

The remaining properties required for the first one km section of the bypass – Mt Dandenong Rd to Ringwood St – are being purchased. Preliminary site works, such as survey and investigation are progressing well.

The 2.5 km \$80m project will be completed in five years, several years earlier than previously planned.

The preparation of a landscape concept plan for the bypass and the associated Linear Park development is being closely integrated with design work for the project.

This integrated design process is being aided by the work of a community liaison committee established at the outset of the project to provide a forum for the exchange of information and advice between the local community and the Project Team.

## South Dynon Rail Terminal Access Rd

A new road link opposite Swanson Dock between Footscray Rd and South Dynon Container Terminal will be built during 1993 and 1994 to cater for upgrading and expansion of port and public transport facilities. Estimated cost is \$5m.

#### Reservoir Rail Crossing

After two years construction, the Reservoir level crossing project has been completed at a cost of \$12m.

Many improvements have been made to the intersections of Broadway with High Street, Spring Street with Edwards Street and High Street with Cheddar Road and Spring Street.

Linking has been improved between the various public transport modes, with increased commuter car parking for public transport users. The intersection modifications to the four intersections has improved safety for pedestrians and vehicles. For some traffic movements there has been a reduction in delays, particularly during peak periods.

#### Blackspot Program

The treatments to 'accident blackspots' included :

- shoulder sealing
- construction of roundabouts
- installation or remodelling of traffic signals
- · erection of guard fencing
- improvements to street lighting
- improved road delineation by means of linemarking and raised pavement markers

• removal or relocation of roadside hazards such as light poles

## Springvale Bypass Stage 1, Centre Road to Princes Highway East

A new road link between Centre Road and Princes Highway East, forming part of the Springvale Bypass, will be opened to traffic in September 1992.

The link has been built using unreinforced concrete pavement at a cost of \$11.8m and has three lanes in each direction.

Federal funds have also been announced to enable construction of Stage 2, Springvale Road to Heatherton Road, to commence.

Also during 1992/93 it is proposed to construct the northern terminal of Stage 2 at the Westall Road/ Heatherton Road intersection – an accident black spot site.

# Princes Highway East – Narre Warren

Continuation of the provision of a third lane on the Princes Highway East between Hallam and the Berwick Bypass.

Work completed in 1991/92 includes the outbound provision of an extra 2.1 kilometres of a third lane as well as the upgrading and signalisation of the Tinks Road and Fitzgerald Road intersection.

In 1991/92 the project team completed its program \$100,000 under budget and six months ahead of program so the team switched to the Melbourne bound carriageway and completed a further 1.2 kilometres of its 1992/93 program.

The project will now be completed in September 1992.

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# Melba Highway Duplication through Yarra Glen

The redevelopment of Bell Street through the township of Yarra Glen (on the Melba Highway) began in February 1990. The project, jointly funded by VIC ROADS and the Shire of Healesville at a total cost of \$2m, will improve the environment and operation of the shopping centre through the planting of 42 large plane trees and approximately 1500 smaller trees and shrubs, brick paving and street furniture, construction of a service road and the undergrounding of power lines.

## South Gippsland Highway

The 2.8 km duplication of the South Gippsland Highway between Princes Highway East and Pound Road was completed. This now provides a full duplicated facility from the Princess Highway to the Bass Highway Junction, a distance of nearly 50 kms.

#### St Georges Road Duplication

The project, between Merri Parade and Miller Street, involves relocating tram tracks into the median strip, improving sections of the road surface and constructing some exclusive right turn lanes. Safety will be improved for all road users and bottlenecks reduced at several intersections. Tram track works are complete and landscaping plans have been agreed. The reconstruction, a joint VIC ROADS/MET project costing \$14m, will be completed by late 1992.

#### Fitzsimons Lane Duplication

A new bridge on Fitzsimons Lane over the Yarra River opened on 6 December 1991 – the first bridge across the Yarra since the West Gate Bridge was completed. It has eliminated long delays for motorists. The \$6.2m project included duplication of the road between Porter Street and Rosehill Road, installation of street lighting along the entire length and extensive tree planting.

■ Traffic Control and Signal Linking The number of signal sites in Victoria has been increased by 65 to reach 2500. A further 133 sites have been connected to the computer network to give a total of 1791, including 19 sites in Ballarat. The sites connected to the Geelong Regional Computer now number 63. This is the first time that the benefits of "dynamic" or "adaptive" signal linking has been available in Victoria outside the Melbourne metropolitan area.

#### Traffic Information on Teletext

The Traffic Control and Communication Centre provides media information on a daily basis to all Melbourne media services. To improve the efficiency and availability of this service, staff from Traffic Operations and Channel 7 Brisbane, developed a Traffic Information System on Austext.

This service has been widely accepted by media services and the general public. Traffic information can now be accessed by any television set with the Teletext/Austext option.

## IN THE COUNTRY

#### Ballarat Bypass

Expenditure of \$23.7m in 1991/92. Total expenditure to date- \$62.5m Current estimated cost of project -\$102m.

Achievements in 1991/92 include: Stage 1 - Woodmans Hill to Gillies Street

• The Midland Highway bridge and deviation has been completed and opened to traffic.

• The Lofven Street bridge and approaches have been completed and opened to traffic.

• Upgrading of Daylesford Road in the vicinity of the bypass is completed.

## The Bypass, looking west from the Freeway.



• The two flood retardation basins to form part of the freeway embankment are nearing completion.

• Significant progress has been made with earthworks for the bypass from Woodmans Hill to Raynor Road, realignment of the existing highway from Brewery Tap Road to Woodmans Hill and lower pavement layers over the full length.

Stage 2 - Gillies Street to Burrumbeet

• Significant progress has been made with land acquisition and service alterations.

• It is expected that works will commence in October 1992.

The Project is on schedule for Stage 1 to be opened in late Autumn 1993 and Stage 2 to be opened in late Autumn 1994.

## Hume Freeway

#### 🗇 Euroa

On 3 April 1992 the \$43m Euroa Bypass was opened, completing the final 8 km section of the divided carriageway construction for the Hume Freeway between Broadmeadows and just south of Wangaratta.

The Freeway Project was completed on programme and \$2m under budget.

Major challenges of the Project included the excavation of 110,000 cubic metres of rock cut requiring blasting in close proximity to the township of Euroa. This required very tight specification controls on air and ground vibration and the monitoring of all blasts to ensure compliance.

During the paving stage outputs were generally in the order of 50 percent

higher than past contracts and peaked at 8700 tonne per day.

Landscape planting involved the planting of 36,000 trees and shrubs with plants propagated from locally collected seed. Approximately 6,000 of these trees and shrubs were propagated by students of the Euroa High School.

The Opening Ceremony also saw the hand-over of an area of land surplus to freeway requirements to the local community to be used for the purpose of developing an arboretum and passive recreation area.

#### Wangaratta Bypass

Completion has been re-programmed from 1996 to late 1994 due to the funding under the 'One Nation' package.

Earthworks contracts are now underway or complete along the full 20 km length. Contracts for a further 11 of the 26 bridges were awarded during 1991/92. Most of the balance will be tendered during the first half of 1992/93.

Tenders for the major paving contract, which includes the supply of all materials, were called in June 1992.

Estimated total cost is \$90m.

#### Springhurst Bypass

Additional funding for the Hume will allow the bypass to get underway in 1992/93. Documents for single contracts for the earthworks, paving and bridge construction are being prepared.

 Duplication North of Springhurst
 3.3 km duplication opened to traffic in November 1991.

□ Glenrowan Service Centre To relieve motorist fatigue the \$7m BP-McDonald's Service Centre was opened for business.

The VIC ROADS service centre strategy to cut driver fatigue on the Hume Freeway paved the way for its construction.

The Glenrowan Travelstop *(shown below)* is a world-class facility in the style of those found on the motorways and autobahns of Europe, it includes tourist information centres, shaded rest areas, electric BBQ's, showers and toilets.

The extensive public facilities and access and exit ramps were built at the developers' cost as a condition of VIC ROADS terms for a 20 year lease on the sites.



#### Calder Freeway

□ Diggers Rest Bypass A contract for the construction of 6.5 km of four-lane divided carriageway around Diggers Rest was let in October 1991 and is progressing satisfactorily. Works are expected to be completed in mid 1993.

The works connect to the recently completed Keilor to Diggers Rest section of the Calder Freeway and include twin bridges over the Northern Railway Line. Major drainage improvement works in the township of Diggers Rest to eliminate flooding of the Calder Highway were completed. Works involved rock tunnelling under the Diggers Rest level crossing.

A grade separated interchange will be provided at Vineyard Road under a separate contract commencing in October 1992 and this is expected to be open to traffic in mid 1993.

The bypass forms part of an on-going program to upgrade the Calder Highway to a high-standard four-lane divided road between Melbourne and Bendigo.

Benefits of the project include safer conditions for traffic and elimination of delays at the existing Diggers Rest railway crossing. A number of local road improvements are included in the works.

Approximately 20,000 native trees and shrubs will be planted along the route.

Total estimated cost of the Bypass is \$34m.

#### □ Gap Hill Section

Planning for duplication of the eight km section of Calder Highway between Diggers Rest and Millett Road (Gap Hill) is well advanced and land is currently being acquired. Construction is programmed to commence in September 1993, subject to the availability of funds. Total estimated cost of this section is \$28m.

□ Gap Hill to Gisborne duplication This project is expected to commence in late 1994 and be opened to traffic in Autumn 1996.

□ Kyneton Bypass commenced in February 1992 with construction of access roads. Design of the freeway was completed and a major construction contract for completion of all works will be let by the end of 1992. The anticipated opening date for the \$40m bypass is Autumn 1995.

#### Calder-Ravenswood

A further two km of road duplication was completed during 1991/92 on the Calder Highway at Ravenswood, south of Bendigo at a cost of \$1.3m. In addition, a total of 6 km of passing lanes on the Calder Highway between Woodend and Elphinstone were completed at a cost of \$1.2m.

#### Planning Studies

A strategy plan for the Calder Highway development between Melbourne and Bendigo will be completed by the end of 1992. The strategy will address traffic volumes and growth, accidents, costs/benefits and priorities of construction, as well as examining traffic management issues such as roadside facilities, vehicle counting, mass control and emergency telephone requirements.

Detailed planning studies for the Black Forest, Woodend to Kyneton and Kyneton to Elphinstone sections of the Calder Highway will be commenced in late 1992 and be completed over the next four years.

#### Swan Hill Roundabout

In Swan Hill, a new roundabout was installed at the intersection of Murray Valley Highway and McCallum Street as part of a State/Federally funded black spot treatment.

## City of Ballaarat Traffic Signal Co-ordination

VIC ROADS has introduced to Ballarat the traffic signal linking system used to co-ordinate the traffic signals in the greater Melbourne Metropolitan area.

The traffic signal linking system in Melbourne called 'SCRAM' (Signal Coordination of Regional Areas of Melbourne) is adapted from the system used in Sydney called 'SCATS' (Sydney Co-ordinated Traffic Control System).

There are 35 traffic signal sites located in the Greater Ballarat Area and the linking of these 19 sites has seen a significant improvement in the operations of the traffic signals in Ballarat. The system presently installed in Ballarat has a capacity to link 26 traffic signal sites.

The principle of 'SCRAM' in Ballarat is that traffic signal controllers located at each intersection are connected by Telecom lines to a regional computer located at Footscray. From information transmitted from the traffic signal controllers, the computer masterminds the co-ordination of the traffic signal sites.

The Footscray computer is connected by a Telecom data line to the Central Monitoring System at Camberwell. The Control Room has the facilities to monitor each signal site with a high resolution colour monitor graphic display of real-time signal operations and performance. VIC ROADS office at Ballarat can also monitor each linked site. The introduction of 'SCRAM' to Ballarat has had positive benefits in lessening congestion and delays to all road users.

#### Morwell Bypass

The four km long second stage of the Morwell Bypass between Monash Way and Princes Highway was opened on 8 April 1992 at a cost of \$27m. Total cost of the 10.4 km project was \$64m. The works included a unique steel Nova Span arch which carried the Melbourne bound traffic over the eastern rail line.

#### Duplication in Traralgon

The two km duplication of the Princes Highway East from Grey Street to McNairn Road, Traralgon was opened on 12 June 1992. Works included a new bridge over Traralgon Creek and two major intersection upgrades. Cost of work was \$3.8m. This completed the upgrading of a four km section of the highway from the Central Business District of Traralgon to the Strzelecki monument

## Completion of Timber Bridge Replacement Program

Opening of the \$2.2m bridge over the Toorloo Arm just east of Lakes Entrance on 22 August 1991 marked completion of a \$17.9m program to replace timber bridges on the Princes Highway East between Lakes Entrance and New South Wales. This program commenced in 1983 and was jointly funded by the Federal and State Governments.

#### Patrol Rationalisation

Integration of the Walwa, Myrtleford, Euroa and Chiltern patrols into larger works depots has given better efficiency with a new works depot opened in Wodonga in June.

# ■ Shepparton Alternative Heavy Vehicle Route

The upgrading and connecting of 19 km of roads around the east of Shepparton at a cost of \$6m was opened 18 months ahead of schedule (although all finishing works will not be completed until end 1993).

## Goulburn Valley Highway

This 1.2 km duplication in North Shepparton from Balaclava Rd to north of Brauman St will ease congestion on this heavily trafficked section past the Hospital and up to the sporting complex and International Village. Cost \$1.5m.

## Surfcoast Highway – Duplication Grovedale to Torquay

Work commenced November 1990 for duplicated carriageways between Grovedale and Torquay, a distance 12.5 kilometres. In 1990/91, 4.6 lane kilometres were completed between the Grovedale rail crossing and the Geelong Airport.

Work accelerated in 1991/92 with 9.2 lane kilometres completed and partial construction on a further 6.2 lane kilometres.

Total expenditure for 1991/92 was \$4.96m. The project will be completed in May 1993.

## Princes Highway – Overtaking Lane Warncoort

Construction has been completed on an overtaking lane on the Princes Highway at Warncoort, distance 136.5 kilometres to 137.9 kilometres.

Expenditure amounted to \$288,000 and employed eight men. Work was State Government funded.

#### Bellarine Highway – Grubb Road Roundabout

Improvement to the Bellarine Highway/Grubb Road intersection east of Wallington commenced April 1992 with the construction of a roundabout.

The intersection was a designated 'blackspot'.

Work was carried out by the Rural City of Bellarine for VIC ROADS at an expenditure of \$600,000 in 1991/92. The total estimated expenditure is \$690,000.

#### ROAD MAINTENANCE MANAGEMENT

■ Asphalt Research & Development With changes in pavement design technologies it has become important to obtain more precise knowledge about the structural properties of various pavement materials, particularly asphalt.

AUSTROADS has established the Australian Pavement Research Group (APRG) which provides a forum for general pavement research, but because asphalt research is quite complex a National Asphalt Research Committee (NARC) was set up to coordinate research between all State Road Authorities, Australian Asphalt Pavement Association (APPA) and the Australian Road Research Board (ARRB).

The initial aims of the asphalt R&D program are to develop:

- standard test equipment and methods
- improved mix design procedures
- · accurate design parameters for use

in mechanistic pavement design procedures.

The asphalt R&D program has been divided into six projects shared between various research groups as follows:

- Field trials AAPA
- Sample preparation Road & Traffic Authority NSW
- Stiffness modules Department of Transport, Queensland
- Creep/deformation Department of Roads and Transport, S.A.
- Fatigue VIC ROADS
- Database and analysis CERTS INT P/L

VIC ROADS has commissioned a new dynamic load testing apparatus called

MATTA (Materials Testing Apparatus) which has sophisticated hydraulic loading and computerised measuring devices to measure the fundamental properties of pavement materials needed for accurate mechanistic pavement design or pavement strength evaluation which was not possible with existing equipment.

The NARC research program will eventually extend to asphalts containing polymer-modified binders, split mastic asphalts, fibre reinforced asphalts etc which are all designed to considerably enhance the performance of asphalt pavements.

Pavement Condition Survey

During October 1991 to February 1992 VIC ROADS contracted RST Systems Australia to undertake an automated survey of the surface conditions of 15,000 km of highways and main roads to assist us and municipalities in managing road pavements more efficiently.

#### RMMS

A Routine Maintenance Management System (RMMS) was developed and installed throughout VIC ROADS in 1990. The system comprises a computer disk, a field guide and an Administration Manual; and incorporates maintenance standards, maintenance practices, planning and scheduling and Reports Modules.

Additional bridge maintenance activities will be added to RMMS to increase systematic inspection and maintenance of bridges. RMMS field guide which includes maintenance procedures and practices is being converted into a Quality Management System. ■ AUSTROADS Sprayed Seal VIC ROADS is participating in an AUS-TROADS research project to study the design and performance of sprayed seals.

The aims of the project are:

• to increase the knowledge and understanding of the mechanics of seal behaviour over a wide range of environments, traffic volumes and types, and aggregate sizes and types.

• to collect all relevant data and measurements towards the development of an improved uniform and rational seal design method.

- to examine in parallel three different seal design methods in each trial:
- a) VIC ROADS method (All State Road Authorities to use their own method),
- b) AUSTROADS method
- c) NITRR method (National Institute for Transport Road Research, South Africa, as modified by RTA-NSW)

VIC ROADS has conducted one trial on the Western Highway at Dimboola and two trials on the Calder Freeway at Gisborne. All State Road Authorities are to complete between 5 and 10 trials in each State. It is expected that results will be available during 1994.



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## **BITUMINOUS SURFACING**

Bituminous surfacing plays an important role in the establishment, rehabilitation and preservation of the road network.

The three types of bituminous surfacing used are:

- Sprayed Sealing
- Hotmix Asphalt
- Bituminous Slurry Surfacing

#### Sprayed Sealing

This year VIC ROADS ten direct labour sealing units sealed 3089 lane kilometres of declared roads at a cost of \$18.7 m and 2285 lane kilometres of unclassified roads for various Municipalities at a cost of \$14.1m.

Contractors working for VIC ROADS sealed a further 158 lane kilometres of declared roads at a cost of \$2.8m and 101 lane kilometres of unclassified roads at a cost of \$1.0m.

#### Hotmix Asphalt

This year contractors working for VIC ROADS supplied and placed a total of 204,658 tonnes of hotmix asphalt at a cost of \$17m. Approximately 50% of this was placed on the Western Ring Road at Broadmeadows. Excluding the Western Ring Road, which is not opened to traffic, a total of 148 lane kilometres of declared roads under the direct management of VIC ROADS were surfaced with hotmix asphalt.

□ Bituminous Slurry Surfacing This year Contractors working for VIC ROADS placed a total of 11 lane kilometres of bituminous slurry surfacing on declared roads under the direct management of VIC ROADS at a cost of \$0.15m. The table below summarises bituminous surfacing completed on declared roads under the direct management of VIC ROADS in the following categories:

• Extensions – a section of road which was either unsealed or a completely new road where no road previously existed thus extending the total area of sealed pavement available.

- Rehabilitation reconstructed pavement which was previously sealed.
- Resurfacing maintenance resurfacing of an existing sealed pavement to help prevent surface deterioration.
- Ancillary off-road works such as carparks, bike paths etc.

□ Bituminous surfacing work completed and opened on various road categories.

Road Type		1991/9	2
and Category of Work			
	Sprayed	Hotmix	Slurry
	Sealing	Asphalt	Surfacing
	Lane km	Lane km	Lane km
Freeways		е 	
Extension	24	-	-
Rehabilitation	11	6	-
Resurfacing	286	24	4
Highways			
Extension	72	28	-
Rehabilitation	53	14	-
Resurfacing	1032	70	7
Tourist/Forest	Rds		
Extension	11	a 🗕	-
Rehabilitation	1	-	-
Resurfacing	76	1	-
Totals			
Extension	107	28	
Rehabilitation	65	20	-
Resurfacing	1394	95	11
Ancillary	15	5	
Grand Total	1581	148	11

## **Customer Services**

At 30 June 1992 there were 2.82m driver licences on issue in Victoria, and 3.32m motor vehicle registrations.

#### **REGISTRATION & LICENSING**

A Central Customer Services group was created as a result of the devolution of the Registration and Licensing Division. The group consists of four business units – Registration, Licensing, Multi Purpose Taxis and Business Services.

It's function is to provide a centralised service for processing business transactions directed to VIC ROADS by mail. The group also provides specialist functions including driver licence assessment, commercial driver licences, the recording of demerit points and the administration of the Multi Purpose Taxi Program.

After commencing the year with 227 people the staffing level has been reduced to 177. Despite this reduction service levels have been maintained and achieved through internal business efficiencies and the devolution of functions.

#### Learner Permit Testing

Following a trial in 1990/91 learner permit testing has now been made available in the school to all 38 eligible Secondary Colleges in Eastern Victoria. In 1991/92 13 schools have used the program with about 300 students undertaking the test. The pass rate is about 90 percent.

A further 14 colleges will join this program by the end of 1992. In normal circumstances students would have to absent themselves during school hours for their test, but according to teachers, "in school" testing by VIC ROADS will eliminate this problem.

Students commented favourably on the trial, suggesting it was much more convenient and also helped because they found support amongst each other when preparing for the knowledge test.

### VIC ROADS Agency Services

With the co-operation of the Shire of Orbost and Borough of Wonthaggi, Registration & Licensing agencies have been opened at Orbost and Wonthaggi. Services are provided on visiting basis at Phillip Island and Yarram.

□ VIC ROADS and the Shire of Tullaroop entered into an Agency arrangement for Tullaroop Shire to provide a comprehensive range of Registration and Licensing functions from the Shire Office in Neil Street Maryborough on a three day week basis as from 4th May 1992.

The new arrangements expanded the range of services available locally in Maryborough for which in the past Maryborough and district people have had to travel to Ballarat. The new service covers an estimated population of 14,000 people.

To enhance and facilitate customer service VIC ROADS installed computer equipment at the Shire Office and an online link to the VIC ROADS mainframe computer and cash management system.

☐ Access to R & L Services The Victoria Police have indicated an intention to withdraw, wherever possible, from the delivery of VIC ROADS vehicle registration and driver licencing services. This has necessitated a thorough review of delivery mechanisms for VIC ROADS services.

A Municipal Association of Victoria initiative to establish agencies at municipals offices, for the delivery of government services, gives an opportunity to replace, at least in part, the loss of VIC ROADS services through the Police with services delivered by Councils.

In co-operation with Local Government VIC ROADS entered into separate Agency agreements with 13 municipalities for Council staff to provide a "Get You Going" Registration & Licensing service consisting of issues of Learner Permits, Unregistered Vehicle Permits, Log Books and the collection of cancelled number plates.

An overall strategy has been developed for delivery of VIC ROADS registration and licencing services. The strategy concentrates on service delivery through a network of strategically placed municipal offices which will offer basic "getting you going" services. The criteria for selection of proposed service delivery locations are complex but are designed such that individuals should not have to travel more than approximately half an hour to obtain basic services and not more than about an hour to receive more specialised services which are infrequently needed.

An important element of the Strategy was that motor car licence applicants living up to 1 hour's travel time of the VIC ROADS Offices at Ararat, Ballarat and Horsham should travel to one of those centres for testing. It was considered that because traffic densities in these centres were greater than in smaller centres and that they provided a better range of physical roads conditions, these locations provided a more appropriate testing environment.

However, to reduce inconvenience for residents of areas who would have to travel in excess of 1 hour's travel to a VIC ROADS Office, VIC ROADS provides a visiting licence testing and vehicle registration service from the local municipal office on a regular basis.

The new Agency arrangements have received wide acceptance and steps are currently being put in place in the Wimmera/Mallee areas of the Region to expand the services available at the Agencies to include such functions as light trailer registration, issue of tractor packs, etc.

#### Driver Licence Fraud

Investigations by VIC ROADS led to a distribution network for the sale of forged interstate drivers licences being broken. A number of persons who attempted to use these fake licences to obtain Victorian drivers licences have been prosecuted.

Joint VIC ROADS/Police investigations into the fraudulent issue of Victorian Drivers Licences led to criminal charges being laid against three VIC ROADS staff, six driving instructors and 18 members of the public. One of the VIC ROADS employees was dismissed following a disciplinary hearing and one other resigned before a disciplinary hearing.

Multi Purpose Taxi Program
These vehicles give improved personal
mobility to people with disabilities who
are not able to use public transport.

Members of the program are entitled to a discount of half the metered taxi fare up to a maximum of \$25 per trip. As at 30 June 1992 there were 111,874 members in the program (over 83,000 in the metropolitan area) including approximately 7,400 members who use wheelchairs. Fare subsidies totalled \$15.5m representing 3.1 million trips.

Following a meeting between officers from South Australia and Victoria, principles for a bilateral agreement were confirmed. Reciprocal rights became operative as from 1 July 1992. Members travelling to S.A. are afforded the subsidy/trip limit benefits applying to the scheme but local fares would apply.

#### Office Services

On 9 December 1991 Registration & Licensing functions previously performed on the Ground Floor of the South Building at Carlton were transferred to the Carlton Registration & Licensing Office.

The Carlton Registration & Licensing has been extended and refurbished to enable the integrated service to be realised. The integration has led to productivity savings in excess of 20 percent.

□ A new Registration and Licensing Office was opened at Glen Waverley on 1 July 1991.

□ The refurbishment of the Benalla Office was completed in February 1992. Integration of Registration and Licensing and Transport Safety Services into the extended office has allowed superior customer interface with improved amenities.

#### Interactive Voice Response

An interactive voice response (IVR) unit has been installed in the Central Telephone Enquiry area of Central Metropolitan Region to process some of the 5000 calls received daily.

The IVR unit has been designed to make learner permit and licence test bookings based on information provided by the customer over the phone, without the need of going to an operator. The unit prompts the customer to provide information by dialling numbers on their phone to select the preferred office for the test, appointment date and appointment time.

If the customers needs cannot be met for any reason, such as no appointment available on the preferred date, the customer always has the option of transferring to an operator.

It is envisaged that the IVR unit will be used to process the more repetitive type enquires, thus freeing operators for the more difficult enquires.

#### Call Queuing

A Call Queuing Display System has been developed for the Telephone Information Services group.

Operators are now able to provide an improved service as they now know how many calls are waiting and can vary the resource allocation to suit the immediate requirements of waiting customers.

## Developments and Achievements in Licence Review 1991-1992

Licence Review

In collaboration with the Epilepsy Foundation of Victoria a pamphlet on Epilepsy and Driving has been produced to provide information to interested people in the community.

In collaboration with the Victorian College of Optometry and their specialists, formal standards/guidelines have been developed with respect to Vision and Driving. An eyesight report form incorporating these standards has been developed. Feedback from eyesight specialists is that this form is of value for its ease of use and information provided.

In collaboration with Occupational Therapists who conduct driving assessments on disabled/elderly drivers, a form to allow reporting of assessments has been developed to simplify and add consistency to reporting.

Approximately 1,000 licences have been cancelled/suspended due to medical unfitness. Approximately 200 licences have been cancelled/suspended due to interstate driving offences.

#### Driver's Certificates

All Driver's Certificate records have now been recorded on the mainframe computer system. Ongoing improvements will allow on-line production of certificates (expected late August 92).

A direct computer link to I.B.R. (Police Records) has been established allowing immediate issue of Driver's Certificates. Interim certificates (issued until results of I.B.R. check were known) have now been abolished. During the year the following new certificates were issued:

Private Omnibus	1,116
Tow Trucks	305
	505

During the year the Corporation refused 60 applicants, revoked 23 certificates and 14 certificates were suspended.

Twenty-one charges were brought in relation to fraud detected in the Cab Charge or Multi Purpose Taxi program, eight for other criminal/traffic offences, six because they became medically unfit, two due to fraud/false statements made.

#### Demerit Points

Approximately 7,400 licence holders have accumulated Demerit Points resulting in: 3,100 have been suspended. 2,350 licence holders have opted for a conditional licence. In 2,030 cases the matter was withdrawn or VIC ROADS was unable to contact the licence holder.

## Vehicle Licensing

The Transport Act 1983 requires vehicles operating as commercial passenger vehicles and tow trucks to be licensed. Provision is made for notice of licence applications, excluding taxi licences, to be published in the Government Gazette and for objections to be lodged. Where no objections are received or the objections are resolved, the applications are determined by VIC ROADS. Other applicants are referred to the Road Transport Licensing Tribunal.

During the year, VIC ROADS referred 210 applicants to the Tribunal for issue or variation of commercial passenger vehicle and tow truck licences.

□ Taxi Cab Licensing Applications were approved for the issue of taxi cab licences at Ballan, Garfield, Gisborne, Horsham, Mt Beauty, Yarrawonga, Melton/Bacchus Marsh, St Arnaud/ Donald/Warracknabeal.

Licences	Number of Licences issued in 1991/92	Number of Licences issued in total
Metropolitan Taxi	12	3089
Metropolitan Hire Car Urban Taxi	26	320
Ballarat	4	53
Bendigo		59
Geelong		120
Urban Hire Car		
Geelong	3	10
Ballarat		2
Country Taxi	10	508
Country Hire Car	5	75
Special Purpose Vehicle	48	446

#### Bus Licences

Licences	Number of Licences issued in 1991/92	Number of Licences issued in total
Metropolitan Route	15	1288
Metropolitan Charter	33	569
Urban Route	1	125
Urban Charter	5	55
Country Route	9	545
Country Charter	8	205
School	71	2179
Touring	5	211
Special Purpose	14	381
Private Bus	15	982
Goods and Passenger		2

## OFFENCES AND PROSECUTIONS

Offence reports submitted by the Corporation's Transport Safety Officers totalled 2,230.

In court proceedings for breaches of the Acts and Regulations enforced by the Corporation, 2,447 proven cases resulted for which the Magistrates' Court of Victoria imposed fines totalling \$1,339,778.

In addition a total of 9,699 Penalty Notices were issued, the penalties for which totalled \$1,848,380.

Combined financial penalties from Court fines and Penalty Notices were \$3,188,158.

□ Major safety offences within total count convictions.

à	Convictions	Fines \$
Overdimensional Vehicles	115	40,485
Overweight Vehicles	1,139	991,664
Speed Offences	34	7,985
Log Book Breaches	24	3,655
Lighting Offences	5	605
Insecure Loading	10	2,700
Vehicle/Mechanical Defects	48	13,050
Traffic Breaches	71	16,220
Unregistered Vehicle/Trailer	387	124,039
Unlicensed Unendorsed Licence	90	40,875
TOTAL	1,923	1,241,278

TOTAL	3,801
Reports from Police	3
No Provable Offence	273
No Further Action Warranted	362
Summons Not Served	10
Warning Letter Issued	65
Penalty Notice with Warning Letter	486
Cases Withdrawn	130
Cases Dismissed	10
Convicted and Discharged	15
Case Proved (incl. 158 bonds)	2,447
Finalised Offence Reports:	

Summary of total count convictions and fines by legislation:

	Convictions	Fines \$
Road Safety Act	666	230,109
Road Safety (Procedures) Regulations	37	5,110
Safety (Traffic) Regulations	102	22,940
Road Safety (Vehicles) Regulations	1,107	881,929
Summary Offences Act	2	300
Transport Act	98	20,160
Transport (Passenge Vehicles) Regulations	r 29 s	5,850
Transport (Tow Truck) Regulations	4	450
Interstate Road Transport Regulation (Commonwealth)	243 s	172,630
Litter Act	1	300
TOTAL	2,289	1,339,778

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## Summary of Penalty Notices

	No. Issued	Penalties \$
□ Speeding Exceed speed limit by up to 15 km/h Exceed speed limit by 15 to 29 km/h Exceed speed limit by 30 km/h or more (licence suspension)	674 1,063 54	81,865 183,835 13,670
Traffic Offences Signs and signals	365	49,285
Other	61	8,485
Lighting Offences	62	7,835
Safety Procedures Fail to wear seat belt	274	36,015
Other	39	5,205
Licensing and Reg'n Offences	1,641	145,365
Miscellaneous Offences     Unsafe Vehicle	195	31,005
Other	41	4,605
Commercial Vehicle Offences Log Book Offences	620	98,030
Hours of Driving	44	7,140
Overweight Vehicles	2,728	935,135
Overdimensional	804	130,980
Insecure Load	251	33,060
Other	291	27,495
Tow Truck Offences	41	5,785
Taxi Offences	92	4,730
Parking Infringements	266	12,020
Various	85	26,595
Litter	8	240
TOTAL	9,699	1,848,380

## MAIN REGISTRATION & LICENSING TRANSACTIONS

## Vehicle Registrations

Private	2,239,666
Commercial	186,932
Primary Producer	109,971
Hire	1,041
Taxi	4,928
Municipal	24,684
Miscellaneous	13,360
Pensioner	242,807
Recreation	1,798
Motor Vehicle Total	2,825,187
Motor Cycle	72,078
Trailer	363,558
Articulated Trailers	13,976
Trailer Total	377,534
Motor Boats	115,021
Registration Totals	3,389,820

## Other Registration Functions

Unregistered Permits	45,289
Club Permits	2,031
Total Permits	47,320
Transfers	661,810
Record Searches	33,716

## Driver Licensing Learner Permits

Learner Permits	
Car	86,160
Cycle	15,324
Tractor	532
Total Permits	102,016

Driver Licence Renewals Vehicle Cycle Dual	424,886 785 14,962
Total Licences	440,633
Instructor Licences Record Searches Duplicates	565 2,583 56,262
Licence Testing     Permit Tests     Licence Tests     Endorsements     Cycle Training	123,914 118,586 13,757 6,374
Number Plate Functions     General Issue     Personalised Plates     Custom Plates     Commemorative/Historic     Dealers     Duplicate Plates	264,398 2,402 5,708 41 6,347 13,265
Regulation Functions Examiner Licence Mass Limit Permits Taxi Licences Mass and Dimension Roadworthy Books Log Books Goods & Passenger Driver Certificates	2,283 9,590 4,722 1,788 5,585 23,717 942 21,198
On the Database Licences on issue Vehicles registered Motor boats registered Enquiries to the Vehicle Securities Register Prime movers registered Articulated trailers	2.82m 3.32m 124,530 584,840 10,830 13,890

## Plant and Supply

This year costs were assigned to all plant and supply services for the first time and most major services and Business Groups performed better than originally budgeted for.

A strong increase was returned on investment to VIC ROADS from the Department of \$4.266m (ten percent return on assets) compared to \$3.4m last year.

The Department is now in a position where the new financial performance structuring is well understood and used as a management tool in all businesses and this gives us a strong foundation on which to shape and face our future.

## **Technical Achievements**

VIC ROADS has a sound history in delivering technical services of a very high quality, by encouraging innovative approaches to solve problems and modify standard approaches to improve efficiency. In the process, it creates new products and techniques which are then available to other Australian Road Authorities and overseas.

Many of the techniques and products improved during the year are in the process of being marketed to generate a return on the investment of VIC ROADS' funds and expertise which has gone into their production.

## STRUCTURES

#### Bridge

□ VIC ROADS Bridge Department has designed the first Australian constructed stress laminated timber bridge superstructure for the Shire of Eltham. The bridge construction was completed in November 1991.

The design carried out by VIC ROADS' staff was based on information provided by the U.S. Forest Services.

The Eltham bridge has 6 spans and used seasoned Douglas Fir laminations, with staggered butt joints over the bridge length. The load compresses the laminations so tightly that the deck behaves as one large, solid plate of wood.

The superstructure was constructed as a continuous member over the total length of the bridge. This provided the additional advantage over other construction methods of transverse horizontal load distribution to piers and a near waterproof barrier for protection of the substructure.

VIC ROADS has undertaken an ongoing monitoring program for the bridge. Initial results indicate that the bridge is behaving as predicted.

The stiffness and riding characteristics of the bridge have exceeded expectations and VIC ROADS' Bridge Department will continue to propose this construction method for appropriate sites.

□ VIC ROADS Bridge Department in conjunction with Monash University has undertaken research to further develop the concept of minimum energy culvert structures.

The throat or barrel of the waterway is a minimum width thus reducing culvert width, construction costs and impact on the stream environment;

The flow through the structure is streamlined and therefore has reduced turbulence which, in turn, reduces the erosion potential of the flow and minimises the need for surface protection, also reducing costs.

The results to date have been positive. Further research work into providing design guidelines is being supported by the Road and Traffic Authority of NSW and will contribute to the 'AUS-TROADS' design specification.

## Mechanical Joints for Precast Reinforced Concrete Piles

The length of reinforced concrete pile segments for bridge foundations is limited to around 15 m for handling and transport and joining these is necessary at sites requiring longer piles. There are several alternative methods for joining the segments but the most efficient (cheaper and faster) is through the use of mechanical joints.

There are several types of imported and locally manufactured mechanical joints available in Australia with different capacities offering a range of technical and economical advantages. The performance requirements of the joints vary with their proposed use, particularly in bridgeworks. Presently there is no Australian Standard setting out the design and performance requirements for the joints.

The Bridge Development Section has developed interim guidelines and performance specifications for the joints, based on Swedish standards and experience.

It is expected that this initiative will promote the development of innovative joints in Australia which can be marketed overseas.

## Guardrail Upgrading of Existing Bridge Barriers

Most bridge barriers built before 1970 do not meet modern requirements for safety. Some of these could pose potential hazards to motorists.

The Bridge Development Section undertook the task of improving many aspects of safety of the barriers and produced a report detailing upgrading proposals for the various types of barriers in use.

A number of bridge barriers have been successfully upgraded to date and many more will be treated.

## Engineering Excellence Award for Nova Span Bridge Report

Bridge Department and Materials Technology Department were commissioned to instrument and monitor the behaviour of a Nova Span Bridge at Morwell, Victoria.

The report included a comprehensive coverage of the field investigation and comparison with finite element computer model results. This report received a "Highly Commended" award in the 1992 Institution of Engineers, Victorian Division, Engineering Excellence Awards.

#### Performance

The key design production areas are Road and Bridge design. Their costs are closely monitored and compared with industry bench marks to monitor the efficiency of our in-house resources.

### Bridge Beam Analysis

VIC ROADS has developed many computer programs to assist engineers design bridges. The mainframe computer continuous beam program, BEA-MAN, has been used in this way for many years, and has recently been further developed to run on personal computers.

Running on a PC enables interactive input of data and continuous checking by the program for inconsistencies.

The program can analyse continuous beams with any span configuration, including varying depths and with any arrangement of support types. The various construction stages of a multistage bridge can be analysed and the loads from each stage combined.

The program calculates, at specified points along the structure, bending moments, shear force, deflections, slopes and reactions. It can also calculate bending, axial and shear stresses at specified points through the crosssection of the structure.

Graphical presentation of results from the program enables the designer to quickly obtain maximum effects and to assess the effects of various loads. Efficient use of the program can considerably reduce design time and also enable various alternatives to be quickly compared.

The program has been distributed to Bridge Departments in other State Road Authorities in Australia, through the AUSTROADS Computer Aided Bridge Design Liaison Group, and is currently being used to reduce design costs and shorten design time.

## **COUNTRY DIRECTORY**

On 1 April 1992 the VIC ROADS Country Directory was launched.

The directory covers rural Victoria with comprehensive road detail similar to directories servicing capital cities around Australia. There are 104 maps covering the State at 1:250,000 showing 17,000 named and indexed roads and 2,700 cultural place names which are also indexed; 256 maps of provincial cities and towns at 1:25,000 with another 17,000 indexed roads and 12 sketch maps detailing places of interest for the tourist. The book has been printed in Australia using five colours for the map sections and two colours for the indexes and there are over 400 pages.

The principal aim for creating the directory was to provide Government agencies, and the public, with comprehensive information about country roads and localities. Being a commonly available reference, it will be an aid in communicating locality information between the public, Police, Ambulance and other agencies. The directory also serves as a management tool for VIC ROADS.

The publication is the result of a joint venture between VIC ROADS and Hitech Marketing and Publishing Pty Ltd. VIC ROADS provided the cartographic mapping and road safety input, while Hitech Marketing, managed the pictorial graphics, publishing, printing and marketing.

#### BICYCLES

#### Guidelines on Bicycles

Planning and design guidelines for bicycle facilities are being upgraded for the AUSTROADS "Guide To Traffic Engineering Practice" series of publications. These will provide a comprehensive guide to planning and designing for the increased use of bicycles as a form of transport and recreation throughout the community.

A draft has been circulated to State Road Authorities, municipalities, bicycle institutes and other interested parties throughout Australia and the resulting comment is being used to review the draft. It is expected that the guide will be available for sale in October 1992.

■ Venture to Produce Bicycle Maps A consortium was established with private consultants to complete a pilot project of five Bicycle Maps from the Central Business District to Mordialloc. The project involved, sponsorship funding, collection and verification of routes, and the production of maps utilising CADD and new software packages.

## **TRAFFIC ENGINEERING**

The Western Ring Road has been the focus of much traffic engineering effort in recent years.

Extensive use has been made of the newly acquired "TRIPS" traffic assignment model in order to estimate future traffic use in the corridor. These estimates have been used to determine the necessary road cross-sections, intersection and interchange layout designs. They are also used for other purposes such as determining the need for noise attenuation and in clarifying traffic issues with municipalities and the community.

The Ring Road will involve complex interchange layouts where it meets existing major routes such as Tullamarine Freeway, Calder Freeway and West Gate Freeway whilst at other important arterials diamond interchanges are proposed. An innovative layout for the diamond interchange has been constructed at the Hume Highway. It involves only one intersection of the four ramps with the existing Hume Highway carriageways rather than two closely spaced intersections used on a conventional diamond interchange layout. The intersection is located directly over the freeway and involves unusual bridge flaring for the right turn movements from the Hume Highway.

## MATERIALS TECHNOLOGY

## VIC ROADS SCRIM

VIC ROADS recently recommissioned its skid resistance vehicle, SCRIM (Sideways force Coefficient Routine Investigation Machine) as a joint project between Asphalt and Pavements Group and Plant and Supply. The cost of the project was kept to \$200,000 by using as many components as possible from the old vehicle.

Technical improvements to SCRIM include:

□ an on-board PC-based control system

incorporation of a Global Positioning System

an upgrade reporting format, and
 interaction with the VIC ROADS

Pavement Management System.

SCRIM is used to measure the skid resistance of the road system and the effectiveness of various surfacing treatments.

### Repeated Load Triaxial Test

Materials Technology Department has purchased two repeated load triaxial testing units in order to collect data which will result in more efficient use of available pavement materials, in an ability to enhance the properties of marginal materials so that they can be used in lieu of more expensive materials and in a more accurate assessment of subgrade strength since this controls the final pavement thickness. The units *(shown below)* are being used currently to assess the properties of recycled concrete.



## **Human Resources**

VIC ROADS leads and influences its people by incorporating Human Resource Management as an integral part of the organisation's business to improve organisational effectiveness and the care and development of people.

We achieve this by:

Developing a strategic business focus. Forming working partnerships with line areas.

□ Assisting managers find creative and innovative business solutions.

Providing effective education and development for our people.

Providing expert consultancy and assistance.

Developing appropriate HR policies, procedures and standards.

■ Occupational Health and Safety Our objectives for the year were to assist line management reduce the number and severity of work related illnesses and injuries.

The following table indicates the safety performance achieved in 1991/92 measured against the targets for 1991/92; and establishes new targets for 1992/93.

WorkCare premium payments during 1991/92 decreased by 23 percent from \$5.7m to \$4.4m. The reduction in premiums can be partly attributed to reducing payroll/staff reductions (approximately \$420,000 levy reduction) coupled with improved claims management and a program of reclassifying VIC ROADS WorkCare Establishments into industry categories which accurately reflect the type of activities being undertaken at particular sites.

The two-day "Managing Safety" training program, commenced in 1990, has continued with a total of 600 managers/supervisors having been trained.

A suite of OH&S policies have been developed and are being progressively implemented throughout the organisation. These policies have been incorporated into a detailed Quality Management Manual titled "Safety Management Systems" and will assist line managers to take full accountability for Occupational Health and Safety within their area and implement systems aimed at improving the organisations' safety performance.

Performance Criteria 198	1000/00	1990/91	1991/92		1992/93
	1989/90		Target	Actual	Target
Total No. of WorkCare Claims (Minor & standard claims)	825	783	725	720	650
% Lost Time (Work related injuries/illnesses	2.35%	2.0%	1.75%	2.04%	1.95%
Lost time injury frequency rate	44	39	<35	35	<30
WorkCare premium	\$5.9m	\$5.7m	\$5.2m	\$4.6m	\$4.5m

Health promotion/education and health screening (ie blood pressure) has been provided to our field workforce. Just over 50 percent of our field workforce was covered during 1991/92 with the balance to be completed in 1992/93.

The network of trained First Aid Officers throughout the organisation has been strengthened. We are now able to conduct Level II First Aid training (four days) in addition to our accredited Level I First Aid training (one day).

The provision of Welfare Counselling services continues to provide a valuable service to our staff who experience personal difficulties. Our service contract with the Inter-Church Trade and Industry Mission (ITIM) was increased significantly during 1991/92 from 145 hrs/wk to 176 hrs/wk to accommodate the increased demands for chaplaincy counselling services particularly in rural areas.

#### Structural Efficiency

On 7 November 1991, a new Roads Corporation Employees' Award was introduced which covers all professional, technical, administrative, field supervisory and trades employees. The new Award provides new salary structures and classification structures, and revised Award clauses regarding progression and performance review.

VIC ROADS' Award coverage by the Industrial Relations Commission of Victoria (the RTA Award) has been vacated, and with this a significant step has been taken towards uniform conditions consistent with the structural efficiency principle.

Agreement in principle has been obtained for a single Enterprise Award with, as far as possible, common conditions of employment, so that, very shortly, the one remaining group yet to benefit from Award restructuring, the field employees, will be covered.

#### Redeployment

A new Redeployment Agreement to provide greater flexibility in relation to alternative job offers was negotiated.

Other achievements:

□ 124 staff were placed in alternative positions within or external to VIC ROADS;

□ Thirteen redeployees from other government agencies have been recruited to base grade positions;

□ Administration of the Enhanced Resignation Package assisted 390 people accept their offers and leave the organisation.

#### Training and Development

We responded to needs identified in business area plans to increase our productivity in training by 50 percent and by 15 percent for corporate courses. We also wanted to ensure equity in training, so special emphasis was placed on developing a Field Training Strategy.

□ The following tables indicate our increased productivity achievements.

	1990/1991	1991/92
Internal Training (West Gate)	2,437 person training days	3,566 person training days
Internal Training (Line areas)	Not available but very little	1,365 person training days
Corporate Training	1,548 person training days	1,842 person training days

	Revenue		
	1990/1991	1991/1992	
Training & Development	100,000	110,000	
	Inc	ome	
	1990/1991	1991/1992	
Training &	463,000	794,515	

• 10 percent increase in revenue.

• 62 percent increase in income.

• 49 percent increase in number of person training days (General).

- 16 percent increase in number of person training days (Corporate).
- The development of a Field Training Strategy.
- Developed two self placed learning packages
- The Strategy of Business
- Performance Management
- Implemented the Executive Development Program.
- Adopted the TAS (Training)

Administration System) to allow simpler more effective training nomination procedures.

• Achieved private provider status with the State Training Board and recognition of the Advanced Management Course.

• Introduced a "Discipline for Field Supervisors" course.

## EEO

The Corporation is taking significant steps to comply with the new Public Authorities (EEO) Act 1990.

A full EEO report has been provided to the Public Authorities (EEO) Branch, Department of Labour and a copy is available from VIC ROADS' EEO Officer, 60 Denmark Street, Kew 3101. Three courses were conducted to address the issue of communication skills for staff from non-english speaking background. the courses were aimed at three levels, basic, intermediate and advanced. Staff in those courses made measurable improvements in writing, reading and speaking skills.

A pilot Holiday Childcare program for the children of staff was conducted for one week of the April school holidays. The program provided on-site childcare for children aged between five and 13.

A total of 159 contacts were made with the EEO Office. A resolution rate of 72.5 percent was achieved.

# **Performance Indicators**

Category/Indicator	1991/92 Targets	1991/92 Actual
Financial (cash)	\$ mil	\$mil
Total Recurrent Expenditure Total Capital Expenditure	357.8 290.6	365.4 306.4
	648.4	671.8
Financial (by program)		
Road Safety	77.9	82.9
Road Network Access Services	288.0	275.5
Road System Development Services	214.1	230.4
Road System Environment Enhancements	18.1	18.1
Customer Services	41.4	56.0
Corporate Services	0.9	6.9
	648.4	671.8
Employees		
Total Employment (all classes 30 June)	4873	4863
Hours Lost Through Sickness/Million worked hours	-	22100
Lost I me injuries/Willion Worked Hours	35	35
Hours Lost I hrough industrial Disputes/Million Worked Hours	80	nii
Road Safety	4 7	4 7
Road Fatalities per 10,000 registered vehicles	1.7	1./
Motorovalists killed per 10,000 population	2.0	7.0
Serious Casualties per 10,000 vehicles registered	17.3	12.9
Road Network Access Services		
Freeway and State Highways – Surface Betreatment	6.2%	67%
Freeway and State Highway - Pavement Rehabilitation	0.8%	1.0%
New Structures Commenced Under VIC ROADS Supervision	39	25
Additional Lane Kilometres opened to Traffic	67	112.9
Traffic Signal Sites Maintained	2433	2433
Percent of Time for On-road Presence of Enforcement Officers	5 78%	71%
Customer Services		
Working Days to Process Vehicle Registration	14	
	1	1
□ renewals	1	1
	1	1
Working Days to Process Driver Licence Issue		
Country	12	13
Metropolitan	10	11

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## **Financial Management**

## Funding

VIC ROADS commenced 1991/92 with an operating budget of \$648m. This was a decline of \$75m compared with the previous year. However, \$67.4m can be attributed to transferring responsibility to the Victorian Grants Commission for distributing Federal Local Roads Grants.

During the year the budget increased to \$672m and the budget for 1992/93 has continued to increase to \$769.3m.

The main source of these improvements has been the following initiatives:-

	1991/92 \$m	1992/93 \$m
One Nation Program	5.7	75.1
Priority Victoria Program	5.0	14.0
TAC Funding – Accident Blackspot – Road Safety		34.5 1.4
Southern & Western Bypasses	8 <del></del> 8	2.8
Dandenong District Centre	0.3	6.0

Table 1 below compares the funding sources of VIC ROADS over the last four years with the Budget for 1992/93. The increasing influence of Federal funding on VIC ROADS budget continues. It represents 41 percent of the total budget in 1991/92 and has marginally increased to 43 percent in 1992/93. These funds are specifically tied to the National highways and National arterials network, or to Road Safety (Accident Blackspot) Program and Provincial Cities and Rural Highways Projects specifically agreed with the Federal Government. The Transport Accident Commission has made a significant contribution to the 1992/93 Budget Plan.



### **Composition of VIC ROADS Funding Sources**

## Commercial approach to Management

The emphasis on commercial financial business standards has continued during 1991/92. Balance sheet fund sourcing has continued to decline in significance. End of year creditors as a proportion of future budgets has been stabilised and improved over the last year, and the time to pay creditors has reduced.

Table 2 indicates the trends since VIC ROADS was formed.

## Significant Events

At the end of the 1991/92 financial year the VIC ROADS depot at Coleman Parade Glen Waverley was sold by the Ministry of Finance to Melbourne Water for \$6.8m. VIC ROADS did not receive payment although the asset was valued in the books of VIC ROADS at \$15.5m (June '89 valuation). Consequently the asset has been removed from the Balance Sheet by reducing the value of Assets held by VIC ROADS, and the value of Capital contributed by Government.

VIC ROADS will continue to operate from Coleman Parade while evaluating alternatives for rationalising its operations.



#### **Commercial Approach to Management**

## Revenue Collected for other Agencies

VIC ROADS acts as the collection agent for the Transport Accident Commission, Consolidated Fund, State Boating Council and for Federal Interstate registrations, as well as collecting revenue from its own operations.

It collected \$1,105m on behalf of these agencies in 1991/92. Table 3 indicates the collection trends over the last four years.

There were several key amendments to registration charges in 1991/92. A flat fee of \$70 per private registration was introduced as well as a \$40 levy on four wheel drive registrations. Registration concessions for health benefit card holders were introduced from 1 September 1991 which resulted in foregone revenue of \$9.4m in 1991/92. These changes contributed a net \$101m to registration collections in 1991/92.

In addition new registrations fell from 146,000 in 1990/91 to 137,000 in 1991/92.

The total value of motor vehicle registration collections increased from \$111.0m in 1990/91 to \$217.8m in 1991/92.



### **Revenue Collected for other Agencies**

The method of calculating boat registrations was changed from power mass units (PMU) of the motor to length of the vessel. The total movement in boat registration collections was from \$3.1m in 1990/91 to \$4.4m in 1991/92.

The average value of stamp duty transactions rose 9 percent in the first quarter of 1991/92 compared with the last quarter of 1990/91. This coincided with an advertising campaign to remind people of the penalty of understating the value of second hand vehicles.

However, the average value of stamp duty transactions declined in 1991/92 at a trend rate of 4 percent throughout the year which reflects a trend towards lower priced vehicles due to smaller size or older age. The net effect on stamp duty collections was a decrease from \$122.2m in 1990/91 to \$118.5m in 1991/92.

Drivers Licence collections in 1991/92 were affected by a cyclical increase in renewals, a reduction in first issue licences and a full year effect of the new ten year and three year licence options introduced on 1 January 1991. These factors resulted in a net increase of \$11.8m to total collections of \$46.3m in 1991/92.

The above explanations summarise the main movement in collections between 1990/91 and 1991/92.

#### Continuous Improvement

During the year several improvements were made to the financial management systems.

The general ledger was integrated with the decentralised financial systems, reducing the time and effort involved in transferring charges between business units, and markedly improved financial reports. A consolidated debtors ledger was introduced to improve cash flow performance.

The Finance Division is being re-organised to give specific focus to internal and external customers, and at the end of the financial year was progressing well with the introduction of work redesign and quality management processes. As a quality management initiative, the Division conducted the Corporation's first cross functional review of financial processes. The review set process standards for originating accounting transactions, system processing etc, and identified several areas where process improvements could be made.

However, the distributed nature of data, the lack of system reliability, and limited ability to provide management information to all users, cannot be overcome with the existing systems.

### Program and Resource Management System

In December 1991, VIC ROADS contracted IBM Australia Pty Ltd to design, install and train VIC ROADS personnel in the use of a Program and Resource Management System. It is expected to be fully operational by December 1993.

The system will become a core business system encompassing financial, human resource, construction, maintenance, and service management processes. It will replace over 50 existing systems.

The purpose of the system is to improve business processes, eliminating costly re-entry and duplication of data, improve financial position control, and improve the "whole of life" management of assets, by providing better controls over construction and maintenance programming. All features of the system will be trialed, in two metropolitan regions during 1992/93, and the first stages of the human resource and financial systems are expected to be operational across the Corporation in the same period. The remaining financial and task management modules are planned to be fully operational in the first half of 1993/94.

#### Internal Audit Committee

VIC ROADS operates an internal Audit Committee which reports directly to the Chief Executive.

The role of the Committee is to oversee the Internal Audit program, and review management responses to internal and external Audit findings and initiate action to remedy internal control or system weaknesses disclosed by Audit Review.

Committee Membership consists of:

R Patterson	Chief Executive
C Jordan	Deputy Chief Executive
G Chambers	Director Finance
D O'Sullivan	Director Business
	Services
R Banks	Advisory Board Member
S Stanko	Deputy Director General
	Ministry of Transport
J O'Driscoll	Manager Internal Audit
	(Secretary to Committee)

While the Audit Programs of both the internal and external Auditor have contributed to improved business systems and procedures, the Committee has also requested the Director Human Resources to develop a Ethical Business Practices Training Program to complement both VIC ROADS' Customer Service philosophy and internal business systems and procedures.

## Accounting for Infrastructure Assets

VIC ROADS introduced a supplementary financial statement (unaudited) which incorporated the current replacement value of road, bridge and signalling assets for the first time in its 1989/90 Annual Report and has continued to produce the statement in this report.

VIC ROADS participated in a project to define the policies and procedures for accounting for assets with the Office of Local Government in 1991/92. The purpose of the project was to define a methodology for municipalities to implement Financial Reporting by Local Government requirements set out in Accounting Standard AAS 27.

VIC ROADS is also participating in a project sponsored by Austroads to prepare and recommend National Accounting Standards for road infrastructure assets.

The purpose of the VIC ROADS supplementary statements is to inform readers of the remaining current value of assets built and partially consumed by past and present road users. The values do not represent an estimated sales value, as the road network as a whole, is public right of way. However, the net current replacement value of road assets shows the amount of public resources devoted to the road network and the remaining life provides an indication of the state of maturity of the network.

A review of road classifications in 1990/91 resulted in a change in control of some declared roads being transferred to Local Government control. Accordingly, during 1991/92, approximately 500 lane kilometres of declared roads were transferred to Local Government control which reflected a decrease of 1.0 percent.

Also, approximately 1,270 hectares of land under roads and on road reservations was transferred to Local Government control which reflected a decrease of 1.24 percent of land under VIC ROADS' control. The downturn in the property market also resulted in a decrease of 11.6 percent in the value of land under roads and on road reservations based on updated Valuer -General's information.

During 1991/92 machine surveys were conducted to assess the condition of all main roads throughout the State of Victoria as well as all roads in the three urban regions. These surveys accounted for 63 percent of the road network under VIC ROADS' control. The remaining declared roads in the rural regions (37 percent) will be subjected to machine survey assessments in 1992/93.

In order to maintain current road conditions across the network, an estimated pavement preservation budget of \$57 million was required for 1991/92. The final allocation for the year for maintenance was \$44.0 million which represented 77.0 percent of budget requirements.
# **Financial Statements**

# **ROADS CORPORATION**

■ Revenue and Expense Statement for the year ended 30 June 1992

OPERATING DEFICIT FOR THE YEAR		(19,279)	(69,951)
OPERATING SURPLUS (DEFICIT) ATTRIBUTO NON-FUND ITEMS	TABLE	(15,385)	(60,671)
		14,734	61,309
Properties incorporated into roadworks	5.4	18,690	11,867
Decrease in Other Provisions	0.0	(88)	(628)
Employee Entitlements Fixed Assets written off	5.2	(17,705) 771	33,656 2,858
Less Operating Expenses Not Requiring Fund Depreciation and amortisation Increase (Decrease) in Provisions for	Outflows 5.1	13,066	13,556
Add Operating Revenue From Disposal of Ass Profit/(Loss) on disposal of Non-Current Assets	ets 4.3(i)	(651)	638
OPERATING SURPLUS (DEFICIT) ATTRIBUTABLE TO FUND ITEMS		(3,894)	(9,280)
		669,638	743,423
Multi purpose taxi program		16,645	12,053
Less Operating Expenses Requiring Fund Outf Road network management programs Management and operating expenses School crossing supervision	iows 4.1 4.2	543,775 101,123 8,095	590,426 134,941
		665,744	734,143
Operating fees and other funding Regulatory, licence and other revenue	3.1 3.2 3.3	26,297 76,268	16,799 73,764
Operating Revenue Providing Fund Inflows		500 (70	
nems	Notes	\$000	\$000

THE YEAR	6.2	(998,705)	(979,426)
Operating Deficit for the year		(19,279)	<b>(</b> 69,951)
ACCUMULATED DEFICIT AT THE BEGINNIN THE YEAR	IG OF 6.2	(979,426)	(909,475)
Summary of Accumulated Deficit			
Items	Notes	1992 \$000	1991 \$000
14	Malas	1000	1001

Balance Sheet as at 30 June 1992

Items	Notes	1992 \$000	1991 \$000
EQUITY Contributed Capital Asset Revaluation Reserve Accumulated Deficit	6.1 6.2	720,925 386,539 (998,705)	704,980 443,701 (979,426)
Total Equity		108,759	169,255
LIABILITIES			
CURRENT LIABILITIES Creditors and Accruals Government of Victoria and Agencies Liabilities – Property Planning and Environment Act Liabilities Provisions for Employee Entitlements Other Provisions	7.1 7.2 7.3 7.4 7.5	103,711 4,770 11,233 7,189 39,773 166	101,256 5,541 9,910 10,766 40,932 231
Total Current Liabilities		166,842	168,636
NON-CURRENT LIABILITIES Deferred Creditors Provisions for Employee Entitlements Other Provisions	7.4 7.5	1,508 594,213 532	4,677 610,759 555
Total Non-Current Liabilities		596,253	615,991
Total Liabilities		763,095	784,627
TOTAL EQUITY AND LIABILITIES		871,854	953,882

Items	Notes	1992	1991
		\$000	\$000
ASSETS			
CURRENT ASSETS			
Cash at Bank, in Hand and Deposits	8.1	15,225	9,652
Debtors and Prepayments	8.2	10,845	14,619
Inventories	8.3	16,490	21,628
Repayable Advances – Municipalities	8.4	79	80
Property Loans	8.5		237
Total Current Assets		42,639	46,216
NON-CURRENT ASSETS			
Repayable Advances - Municipalities	8.4	533	614
Property Loans	8.5		249
Land and Buildings in Service	8.6	92,318	109,141
Properties Acquired for Roadworks	8.7	658,335	728,651
Leased Assets Acquired for Roadworks	8.8	128	144
Fixed Assets	8.9	77,901	68,867
Total Non-Current Assets		829,215	907,666
TOTAL ASSETS		871,854	953,882

■ Balance Sheet as at 30 June 1992 (Continued)

■ Consolidated Statement of Changes in Equity for the Year ended 30 June 1992

BALANCE AT 30 JUNE		720,925	386,539	(998,705)	108,759	169,255
Asset revaluation	6.1		(57,162)		(57,162)	(4,985)
of fixed assets	4.3(ii)	(8,863)			(8,863)	(3,568)
fixed assets paid to Consolidated Fund	2.13	(13,108)			(13,108)	(9,665)
Capital funding Proceeds from sale of	3.1	37,916		(19,279)	(19,279) 37,916	(69,951) 19,675
BALANCE AT 1 JULY		704,980	443,701	(979,426)	169,255	237,749
		\$000	Reserve \$000	\$000	\$000	\$000
Items	Notes	Contributed Capital	Asset Revaluation	Accumulated Deficit	1992 Total	1991 Total

■ Statement of Cash Flows for the Year ended 30 June 1992

Items	Notes	1992 \$000	1992 \$000
Cash Flows from Government			
Receipts from Appropriation	3.1		
Recurrent		294,744	
Works and Services		268,435	
Contributed Capital		37,916	
Total Inflows from Government		601,095	
Payments to Consolidated Fund			
Asset Sale Proceeds		(13,108)	
Net Cash Flow from Government			587 987
			001,001
Cash Flows from Agency Operations	7.1		
Collections on behalf of Government			
and Agencies		1,104,542	
Disbursements of Collections		(1,105,313)	
Net Cash Flows from Agency Operations			(771)
Cash Flows from Operating Activities			
Receipts	0.0	00.007	
Operating Fees and Other Funding	3.2	26,297	
Interest		964	
User Charges		79,646	
Total Receipts from Operating Activities		106,907	
Payments			
Wages and Salaries		(188.879)	
Interest	4.2	(571)	
Goods and Services		(478,019)	
Total Payments from Operating Activities		(667,469)	
Net Cash Flows used in Operating Activities	9(b)		(560,562)
Cash Flows from Investing Activities	10	10.005	
Receipts from sale of assets	4.3	16,835	
Payments for purchases of	2.1	(27.016)	
non-current assets	5.1	(37,910)	
Net Cash Flow from Investment Activities			(21,081)
NET INCREASE (DECREASE) IN CASH HELD			5,573
CASH AT BEGINNING OF YEAR			9,652
CASH AT END OF YEAR	8.1		15,225

# NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS

Of the Roads Corporation for the financial year ended 30 June 1992.

# ■ 1. FORM AND CONTENT OF FINANCIAL STATEMENTS

The financial statements of the Roads Corporation have been prepared as required by the Transport Act 1983, and in accordance with the Annual Reporting Act 1983 and the Annual Reporting (Contributed Income Sector) Regulations 1988, and Australian Accounting Standards where applicable. The Statement of Cash Flows has been prepared in accordance with the new Australian Accounting Standard AAS28 however, for practical reasons, no comparative figures for the previous financial year have been included.

The Corporation has rounded off amounts in these statements to the nearest one thousand dollars.

A supplementary set of financial statements has been prepared on the basis of the Statement of Accounting Practice SAP1 (Current Cost Accounting) including the capitalisation of the road infrastructure. These financial statements have not been audited and are included elsewhere in the Annual Report.

#### ■ 2. STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

#### □ 2.1 General

These financial statements have been drawn up on the going concern basis and the accrual basis in accordance with the historical cost convention except where otherwise stated.

2.2 Road Network Management Programs

(a) Except for property acquisition, expenditure on roads, bridges, and traffic facilities is expensed in the year in which it is incurred.

(b) Expenditure on the acquisition of properties acquired for roadworks is capitalised until such time as formal possession of the properties takes place for the purpose of commencing construction of the roadway.

#### 2.3 Properties Acquired for Roadworks

(a) Property Liabilities and Commitments. In circumstances where:

- properties are the subject of compulsory acquisition,

- final settlement has not been achieved at balance date, and

 the Corporation has taken possession of the properties for the purpose of commencement of roadworks,

the acquisition is recognised as an expense of the year and included as a liability based, wherever practicable, on a full independent valuation which includes acquisition costs (Refer Note 7.2). Where formal possession has not occurred at balance date, appropriate commitments have been disclosed in Note 10(ii)(a).

Included also is compensation payable to property owners in respect of financial loss on properties affected by planning reservations where the amount payable has been recognised as an expense, and included as a liability in the accounts. Refer Note 7.3.

(b) Properties not incorporated into roadworks.

It is the Corporation's policy to revalue all its properties every three years using the following methodology:-

 for properties with an estimated value in excess of \$200,000, valuations are performed by independent valuers; and

- for properties with an estimated value less than \$200,000, valuations are undertaken by experienced Corporation staff.

A complete kerbside valuation was carried out in 1988/89 and accordingly the next valuation was due during 1991/92 but was deferred because of a major update of all properties onto a new set of base plans, and the likely future impact of proposed changes to the accounting standards on the recording and reporting on non-current physical assets including infrastructure assets.

However, as required under Accounting Standard AAS10, the value of properties included in the 1992 Balance Sheet have been updated to 30 June 1992 values based on advice from the Valuer-General of movements in property values since the last valuation carried out in 1988/89. At any point in time, the Corporation holds a large number of properties acquired from owners affected by planning scheme reservations. Bearing in mind the long holding periods, revisions to planning reservations and limited funding, the majority of these properties are unlikely to be incorporated into roadworks in the near future, and therefore the Corporation considers that the financial statements should reflect a current valuation of these properties.

(c) Residual Land - Isolated Fragments Following the completion of roadworks, the Corporation retains many small and isolated fragments of land representing residual property adjoining the road reservations.

The fragments, although not part of the road reservation, have no apparent market value and have not been included as assets in the financial statements of the Corporation.

If at some future date an adjoining property owner desires to purchase any such fragment of land, the revenue from the sale of the property will be brought to account at that time.

#### □ 2.4 Land and Buildings in Service

The Corporation's policy is to revalue all of its properties every three years but a full valuation of land and buildings in service due during 1991/92 was deferred in line with the decision taken in respect of properties acquired for roadworks. Refer Note 2.3(b).

Land and buildings in service were last revalued as at 30 June 1989 on the basis of kerbside valuations by independent valuers and these have been updated to 30 June 1992 values on advice from the Valuer-General of movements in property values during the last three years.

#### □ 2.5 Fixed Assets

Fixed Assets have been included at cost except for various items of equipment included at current market value at 30 June 1990.

It is the Corporation's policy that all fixed assets are subject to an annual physical stocktake and fixed assets acquired at a value less than \$1,000 per item are expensed. External computer software purchases costing in excess of \$100,000 are now capitalised whilst in-house developed computer software is expensed.

#### □ 2.6 Disposal of Surplus Assets

In accordance with Section 66(4)(b) of the Transport Act 1983 the net proceeds arising from the disposal of certain assets of the Corporation are paid into the Consolidated Fund.

#### □ 2.7 Depreciation and Amortisation

(a) Depreciation is charged on all fixed assets, excluding land, used in day to day operations in order to write off the cost of these assets over their useful lives.

All fixed assets are depreciated using the straight line method with due allowance for residual values.

A full year's depreciation is charged against the value of assets except for current year additions, improvements and disposals, where depreciation commences or ceases in the month in which the asset is purchased or sold.

(b) Depreciation is not charged on buildings on land acquired for roadworks. This policy will be changed at the time of the next full valuation when separate values for both land and buildings will be obtained. However the resultant depreciation charges are unlikely to be material in value. Refer Note 2.3(b).

(c) Expenditure on improvements to leasehold properties has been amortised over the unexpired period of each lease.

#### □ 2.8 Inventories

(a) Inventories of stores and other materials have been valued at average cost. Traffic facilities hardware has been valued at weighted average cost.

(b) Stockpiles of construction and maintenance materials "on site" with a value in excess of \$2,000 have been taken into account at cost.

(c) Inventories of saleable items and consumable stores have been valued at the lower of cost or net realisable value.

#### 2.9 Doubtful Debts

Estimated doubtful debts are based on the examination and assessment of each individual debt.

#### □ 2.10 Provisions for Employee Entitlements

The Corporation has recognised and brought to account employee entitlements accruing for annual leave, long service leave, and superannuation as follows:-

#### (a) Annual Leave

The liability for accrued annual leave has been calculated using the actual leave outstanding for each employee at 30 June 1992 and pay rates applicable at that date (including leave loadings).

#### (b) Long Service Leave

The provision for long service leave has been calculated for employees with a continuous length of service in excess of four years. The provision has been valued using the calculated entitlements for each employee at 30 June 1992 and pay rates applicable at that date. The amount estimated to be payable in the next 12 months is shown as a current liability.

#### (c) Superannuation

Roads Corporation employees contribute to one of the following superannuation schemes; the State Superannuation Scheme, the State Employees Retirement Benefits (SERB) Scheme, the Transport Superannuation Scheme or the Melbourne and Metropolitan Board of Works (MMBW) Superannuation Scheme.

In respect of the State Superannuation Scheme, the Corporation contributes to the cost of entitlements paid on the retirement, death or incapacity of the contributor. The Corporation maintains a provision for the estimated employer portion of the unfunded superannuation entitlements payable to contributors, which has been provided by the State Superannuation Board. Likewise the unfunded superannuation entitlement in respect of the employment service of the Transport Scheme members arising from their prior membership of this SERB Scheme, and the existing contributors and pensions of the SERB Scheme, has been provided by the Transport Superannuation Board, and has been taken up as a provision in the accounts.

Superannuation entitlements estimated to be payable in the next 12 months are shown as a current liability.

In so far as the Transport Superannuation Scheme and the MMBW scheme are concerned, the Corporation meets its ongoing liabilities under each scheme by making progressive payments to each scheme in accordance with agreed contribution rates. Refer Notes 5.2 and 7.4.

### 2.11 Other Provisions

Other provisions covering quarry restoration and precast formwork are calculated on the basis of costs applicable at 30 June each year.

□ 2.12 Collections on behalf of the Government of Victoria

The Corporation collects revenue as an agent for the Government of Victoria and other Government Agencies which does not constitute revenue of the Corporation.

Collections not remitted to the Government of Victoria and other Government Agencies at balance date are included in the balance sheet as both assets and liabilities. Refer Note 7.1.

#### 2.13 Contributed Capital

Except where otherwise stated Contributed Capital includes the book value of all loans centralised in accordance with the Transport (Amendment) Act 1986, plus the proportion of Works and Services Appropriations from the State Government used to acquire fixed assets, less the net proceeds from the sale of assets paid into the Consolidated Fund, and any resultant profit or loss. Refer Notes 2.6, 3.1 and 4.3(ii).

#### □ 2.14 *Revenue Recognition*

Revenue in respect of services or works provided by the Corporation is recognised at the point of service delivery.

# ■ 3. OPERATING REVENUE PROVIDING FUND INFLOWS

#### □ 3.1 Government Appropriations

	1992 \$000	1991 \$000
Recurrent appropriations Works and services	294,744	315,205
appropriations	306,351	348,050
	601,095	663,255
Less transfer to Contributed Capital	37,916	19,675
Government appropriations deemed to be revenue of the Corporation	563,179	643,580

The \$601.095 million appropriation exceeded the original budget by \$20.4 million due to a combination of:-

(a) increased recurrent appropriations of \$4.7 million received during the year;

(b) increased works and services appropriations of \$15.7 million received during the year as a result of additional Federal and State funding.

The overall reduction in works and services appropriations essentially reflects the Federal Government's new financial arrangements associated with the untying of Federal Local Roads funding, which commenced in 1991/92. Funding was previously made available to the Corporation under the Australian Land Transport and Development program and passed onto Local Government. In 1991/92, \$67.4m was provided as part of the Federal Government's General Purpose assistance directly to Local Government.

#### 3.2 Operating Fees and Other Funding

During the year, the Corporation received operating fees and other funding as follows:-

Total	26,297	16,799
Other Fees	4,795	3,700
Prevention Funding	7,643	-
Commission Fees	13,859	13,099
Transport Accident	1992 \$000	1991 \$000

During the year, the Transport Accident Commission and the Corporation entered into an agreement for funding of road safety accident prevention initiatives to be implemented in 1991/92. A trust account framework was established to receive and disperse the funds.

#### □ 3.3 Regulatory, licence and other revenue

	1992 \$000	199 <b>1</b> \$000
Regulatory, licence and other fees External works Rental revenue Municipal contributions Interest Property enquiry fees Other	25,505 31,952 9,026 331 964 1,530 6,960	25,989 25,120 11,141 7,189 1,077 1,045 2,203
Total	76,268	73,764

#### ■ 4. OPERATING EXPENSES REQUIRING FUND OUTFLOWS

#### □ 4.1 Road Network Management Programs

The Roads Corporation delivers its road network services through 6 major programs. The services include physical works on the network, as well as operational or traffic management measures, education and liaison activities, registration and enforcement activities, and associated corporate services.

Total	543,775	590,4 <b>2</b> 6
Corporate Services	3,041	1,058
Customer Services	46,359	36,863
Environment Enhancement	2,010	2,338
Economic Development	190,210	167,971
Access and Mobility	254,645	326,601
Road Safety	47,510	55,595
	1992 \$000	1991 \$000

Included in the program expenditure for Access and Mobility is an amount of \$10 million directed to be paid to the Public Transport Corporation under Section 31(1) of the Transport Act 1983.

#### 4.2 Management and Operating Expenses

1992	1991
\$000	\$000
145,132	146,850
11,828	11,816
571	169
21,840	20,354
309	1,919
279	230
252	262
(370)	260
570	657
(79, 288)	(47,576)
101,123	134,941
	1992 \$000 145,132 11,828 571 21,840 309 279 252 (370) 570 (79,288) 101,123

# □ 4.3 Profit/Loss on disposal of Non-Current Assets

(i) Included in the Operating Surplus (Deficit) Attributable to Non-Fund Items is the profit (loss) on disposal of Non-Current Assets. The proceeds from these disposals are retained by the Corporation.

Profit∕(Loss) on disposal	(651)	638
Proceeds from sale Book value of assets sold	4,490 5,141	3,051 2,413
	1992 \$000	1991 \$000

(ii) Included in the Consolidated Statement of Changes in Equity is the profit (loss) on disposal of Non-Current Assets. The proceeds from these disposals are paid to the Consolidated Fund. Refer Note 2.13.

Profit/(Loss) on disposal	(8,863)	(3,568)
sold	21,208	15,662
Proceeds from sale	12,345	12,094
	1992 \$000	1991 \$000

Included in the above figures is a loss on sale of \$8.718 million for the Corporation's Plant and Supply Depot at Glen Waverley sold to Melbourne Water in June 1992, the proceeds from which, \$6.830 million, were paid directly by Melbourne Water to the Ministry of Finance.

#### ■ 5. OPERATING EXPENSES NOT REQUIRING FUND OUTFLOWS

5.1 Depreciation and Amortisation

Total	13,066	13,556
Equipment	4,983	5,122
Plant and Motor Vehicles	5,758	5,717
Leased Assets	16	16
Buildings in Service	2,309	2,701
	1992 \$000	199 <b>1</b> \$000

#### □ 5.2 Increase (Decrease) in Provisions for Employee Entitlements

	1992	1991
	\$000	\$000
Increase (Decrease) in provision for superannuation		
(Refer below*)	(18,580)	31,350
employee entitlements	875	2,306
Total	(17,705)	33,656

\* The current actuarial valuation at 30 June identified the following in respect of superannuation:-

	1992 \$000	1991 \$000
Increase in provision for		
– Normal	30,720	48,350
- Abnormal (i) Change in the actuarial		
<ul> <li>valuation basis of the State Superannuation Scheme</li> <li>(ii) Change in the actuarial valuation basis of the</li> </ul>	(41,000)	-
Transport Superannuation Fund (iii) More accurate	(8,300)	(11,000)
assessment of the Transport Super- annuation Fund assets for this relatively new fund (iv) Abnormal 'profit' in State Superannuation Scheme resulting from extremely favourable investment	-	(3,000)
experience		(3,000)
Total	(18,580)	31,350

## □ 5.3 Fixed Assets Written Off

As a result of the annual fixed assets stocktake (Refer Note 2.5) an amount of \$771,000 (\$2.858 million for 1990/91) was written off during the year.

□ 5.4 Properties incorporated into roadworks

Properties, capitalised in accordance with the policy outlined in Note 2.2(b), are expensed upon the commencement of construction works. During 1991/92, \$18.690 million (1990/91, \$11.867 million) was expensed.

#### 6. EQUITY

#### G 6,1 Asset Revaluation Reserve

	19	992		1991
	\$000	\$000	\$000	\$000
Balance at 1 July Movements for the year		443,701		448,686
<ul> <li>Properties acquired for roadworks (Refer Note 8.7)</li> <li>Land and buildings in service</li> <li>Fixed Assets</li> </ul>	(55,384) (1,778)		(6,129)	
– Equipment	-	(57,162)	1,144	(4,985)
Balance at 30 June		386,539		443,701

#### □ 6.2 Accumulated Deficit

Major items contributing to the accumulated deficit include:-

 unfunded items such as provisions for employee entitlements and depreciation; and

- properties purchased for future roadworks and capitalised in the year of purchase in accordance with the policy outlined in Note 2.2(b), are expensed in the year in which the roadworks commence.

## ■ 7. LIABILITIES

#### 7.1 Government of Victoria

The Corporation collects revenue such as stamp duty, vehicle registration fees, drivers licence fees and the Transport Accident Charge, on behalf of the Government of Victoria and other Government Agencies.

Collections and payments during the year were as follows:-

Balance at 30 June	4,770	5,541
Less total amount paid	1,110,083 1,105,313	957,593 952,052
Balance at 1 July Plus total revenue collections (see below*)	<b>5,541</b> <u>1,104,542</u>	<b>5,999</b> 951,594
	1992 \$000	1991 \$000

\*Revenue collections on behalf of Government and Other Agencies comprise:-

Total	1,104,542	951,594
Four Wheel Drive Levy	1,034	
Motor boat registrations	4,379	3,040
permits etc.	20,068	19,215
registrations Other licence fees	7,279	6,073
Federal interstate		
Drivers' licences	46,287	34,435
Registration fees	217,742	111,054
Stamp duty	118,511	122,231
Charge	689,242	655,546
Transport Accident		
	\$000	\$000
	1992	1991

#### 7.2 Liabilities - Property

This amount represents the value of properties acquired for road purposes (including acquisition costs) where a Notice of Acquisition has been formally served on the property owner, and the Corporation has taken formal possession, although final settlement had not been achieved at 30 June. Refer Note 2.3(a).

Amounts have been based on valuation data prepared by external and internal valuers.

Total	11,233	9,910
Current Not later than one year	11,233	9,910
	1992 \$000	1991 \$000

# □ 7.3 Planning and Environment Act Liabilities

This amount represents compensation payable in respect of financial loss by owners of properties affected by planning reservations. Refer Note 2.3(a).

#### □ 7.4 Provisions for Employee Entitlements

	Current	1992 Non Current	Total	Current	1991 Non Current	Total
	\$000	\$000	\$000	\$000	\$000	\$000
Superannuation Annual Leave &	24,200	552,220	576,420	25,000	570,000	595,000
Leave Loading	11,966	_	11,966	12,410		12,410
Long Service Leave	3,607	41,993	45,600	3,522	40,759	44,281
Total	39,773	594,213	633,986	40,932	610,759	651,691

The above provision for superannuation covers three schemes as follows:-

Total	576,420	595,000
Scheme	20,741	21,000
State Employees Retireme Benefits (SERB)	nt	
Fund	16,679	29,000
State Superannuation Scheme	539,000	545,000
	1992 \$000	199 <b>1</b> \$000

In accordance with Note 2.10(c) the Corporation made payments during 1991/92 to the State Superannuation Scheme (\$20.215 million), Transport Superannuation Fund (\$10.739 million), and to SERB (\$0.126 million).

These amounts are included as management and operating expenses in the revenue and expense statement. Refer Note 4.2.

Contributions paid were in accordance with the rates set by the relevant fund and no payments were outstanding at 30 June 1992.

### 7.5 Other Provisions

This item represents amounts provided for precast formwork and future site works, including access roads, and environmental restoration works at the Quarries and Pits operated by the Corporation following completion of quarrying operations.

	1992 \$000	1991 \$000
Current Non-Current	166 532	231 555
Total	698	786

#### 8. ASSETS

Cash at Bank

Cash in Hand

Total

#### □ 8.4 Repayable Advances - Municipalities

This item represents the value of principal outstanding for loans made to municipalities for specified permanent works carried out during the period 1950 to 1965. These loans are repayable over periods up to 35 years in equal annual instalments as defined in clause 8, Schedule 5 of the Transport Act 1983.

Total	612	694
Current Non-Current	79 533	80 
	1992 \$000	1991 \$000

#### □ 8.5 Property Loans

Represents outstanding principal due under terms contracts relating to the sale of land and associated improvements.

Total	NIL	486
Current Non-Current		237 249
	1992 \$000	1991 \$000

## □ 8.2 Debtors and Prepayments

□ 8.1 Cash at Bank, in Hand and Deposits

1992

\$000

116

15,109

15,225

1991

\$000

9,542

9,652

110

	1992 \$000	1991 \$000
Debtors	12,236	16,454
doubtful debts	3,310	3,684
	8,926	12,770
Prepayments	1,919	1,849
Total	10,845	14,619
□ 8.3 Inventories		
	1992	1991

\$000	\$000
7,867	12,747
2,784	2,786
2,329	3,738
3,510	2,357
16,490	21,628
	\$000 7,867 2,784 2,329 3,510 <b>16,490</b>

#### □ 8.6 Land and Buildings in Service

This item refers to those assets which are in service e.g. offices and laboratories, regional residential properties, storage sites, depots and patrol garages and includes freehold buildings, buildings on Crown Land, buildings on leased land, leasehold improvements and others. It is not practical for the valuations to be split, in dollar terms, between those conducted by independent valuers and experienced Corporation staff.

As mentioned in Note 2.4, land and buildings in service were last revalued as at 30 June 1989 on the basis of kerbside valuations by independent valuers and these have been updated to 30 June 1992 values on advice from the Valuer-General of movements in property values during the last three years.

	1992 \$000	1991 \$000
Land		
At Cost	-	2,176
At 1989 Valuation	_	46,933
At 1992 Valuation	30,713	-
Buildings		
At Cost	-	15,523
At 1989 Valuation	—	49,694
At 1992 Valuation	61,605	
Total Land and Buildings	92,318	114,326
Less Accumulated		
Depreciation		5,185
Total	92,318	109,141

#### □ 8.7 Properties Acquired for Roadworks

At 30 June 1992 the Corporation owned properties which are required for future roadworks, situated in a planning scheme for future roadworks, surplus to requirements and awaiting final survey after roadworks, or land-locked awaiting plans of consolidation and restoration of access before being sold. Refer Note 2.3.

Where possible, these properties are rented or leased until required for roadworks or sold after being deemed surplus to requirements.

As mentioned in Note 2.3(b) the value of all properties acquired for roadworks have been updated to 30 June 1992 values based on advice from the Valuer-General of movements in property values since the last full valuation carried out in 1989.

	1	992	1	991
	\$000	\$000	\$000	\$000
Balance at 1 July – At Cost – At 1989 Valuation	12,789 715,862	728,651	9,256 749,087	758,343
Add				
- Acquisitions		11,486		3,533
		740,137		761,876
Less				
<ul> <li>Incorporated into roadworks</li> </ul>				
(Refer Note 5.4)	18,690		11,867	
<ul> <li>Revaluation decrement</li> </ul>				
(Refer Note 6.1)	55,384		6,129	
– Disposals	7,728	81,802	15,229	33,225
Balance at 30 June				
- At Cost			12,789	
- At 1989 Valuation			715,862	
- At 1992 Valuation	658,335	658,335	-	728,651

#### □ 8.8 Leased Assets Acquired for Road works

	1992 \$000	1991 \$000
Leasehold building	224	224
Less Accumulated amortisation	96	80
Total	128	144

In the course of acquiring properties for future roadworks the Corporation purchased a leasehold building which is secured until the year 2000. The capitalized lease value is amortized over the lease period commencing 1986/87. The property is let providing income to offset the amortisation charges until such times as it is required for roadworks.

#### □ 8.9 Fixed Assets

	1992 \$000	1991 \$000
Plant and Motor Vehicles	77,317	74,938
Less Accumulated Depreciation	35,632	33,444
Total Plant and Motor Vehicles	41,685	41,494
Equipment – At Cost – At Corporation	22,812	6,184
Valuation 1990	22,002	25,954
	44,814	32,138
Less Accumulated Depreciation	8,598	4,765
Total Equipment	36,216	27,373
Total	77,901	68,867

Acquisitions of equipment since 1 July 1990 are included at cost.

#### 9. STATEMENT OF CASH FLOWS

(a) Reconciliation of Cash

For the purpose of the statement of cash flows, the Corporation considers cash to include cash in hand, in banks and investments at call. Cash at the end of the reporting period as shown in the statement of cash flows is reconciled to the related items in the balance sheet as follows:-

	15,225
Cash at Bank Cash in Hand	15,109 116
	1992 \$000

(b) Reconciliation of net cash used in operating activities to the operating result is as follows:-

1000

.....

	\$000	\$000
Operating Deficit (Reven & Expense Statement)	ue	(19,279)
Add Back		
Depreciation and		
Amortisation	13,066	
Employee Entitlements -		
decrease in provision	(17,705)	
Fixed Assets written off	771	
Decrease in other		
provisions	(88)	
Properties Incorporated		
into Roadworks	18,690	
Government Revenues	(563,179)	
Loss on Disposal of		
Non Current Assets	651	
Decrease in Inventories	5,138	
Decrease in Trade	(0.000)	
Creditors	(2,969)	
Decrease in Debtors	4,342	(541,283)
Net Cash used in		
<b>Operating Activities</b>		(560,562)

#### ■ 10. OTHER MATTERS

(i) Contingent Liabitities - Legal

The Roads Corporation has examined current legal records to provide an estimate of possible material payments resulting from various legal actions. The estimate of such contingent liabilities as at 30 June 1992 was \$1.6 million (1991 - \$0.4 million).

#### (ii) Commitments

(a) Forward Contracts
 The outstanding liability on Capital
 Expenditure contracts as at 30 June is:

	1992 \$000	1991 \$000
Road, Bridge and Ancillary Works	44,031	101,609
Land Acquisition – formal possession not taken as at 30 June (Refer Notes 2.3(a) and 7.2)	43,695	49,807
	87,726	151,416

. . . .

During 1991/92 a number of large contracts were completed.

#### (b) Operating Leases

For non-cancellable leases with a lease term in excess of one year, lease commitments aggregated as at 30 June are as follows:

Total Commitments	113,600	185,229
	25,874	33,813
Later than five years	1,006	710
Later than two years and not later than five years	5,206	5,580
Later than one year and not later than two years	4,745	8,800
Not later than one year	14,917	18,723
	\$000	\$000
	1992	1991

#### STATUTORY STATEMENT BY CHIEF EXECUTIVE OFFICER AND PRINCIPAL ACCOUNTING OFFICER

In our opinion-

(a) the accompanying financial statements of the Roads Corporation present fairly the financial transactions of the Corporation for the year ended 30 June 1992 and the financial position of the Corporation as at the date,

(b) the financial statements of the Corporation have been prepared in accordance with the Annual Reporting Act 1983 and the Annual Reporting (Contributed Income Sector) Regulations 1988, and

(c) at the date of signing these statements we are not aware of any circumstances which would render any particulars included in these financial statements to be misleading or inaccurate.

Reg Passimon

Reg Patterson Chief Executive Officer

Hang

Terry Carrigg Principal Accounting Officer

Dated at Melbourne on 30 September 1992

# AUDITOR - GENERAL'S REPORT

#### Audit Scope

The accompanying financial statements of the Roads Corporation for the year ended 30 June 1992 comprising revenue and expense statement, balance sheet, statement of cash flows, consolidated statement of changes in equity and notes to the financial statements, have been audited. The Chief Executive Officer of the Roads Corporation is responsible for the preparation and presentation of the financial statements and the information they contain. An independent audit of the financial statements has been carried out in order to express an opinion on them as required by the *Annual Reporting Act 1983*.

The audit has been conducted in accordance with Australian Auditing Standards to provide reasonable assurance as to whether the financial statements are free of material mis-statement. The audit procedures included an examination, on a test basis, of evidence supporting the amounts and other disclosures in the financial statements, and the evaluation of accounting policies and significant accounting estimates. These procedures have been undertaken to form an opinion as to whether, in all material respects, the financial statements are presented fairly in accordance with Statements of Accounting Concepts and Australian Accounting Standards and comply with the requirements of Annual Report Act 1983, so as to present a view which is consistent with my Understanding of the financial position of the Corporation and the results of its operations.

The audit opinion expressed on the financial statements has been formed on the above basis.

As indicated in note 1 to the financial statements, the Corporation has included supplementary current cost financial statements in its annual report. The Treasurer of Victoria has not requested that these statements be submitted for audit. Accordingly, an audit opinion is not expressed in respect of these financial statements.

#### **Audit Qualification**

As indicated in notes 2.6, 2.13 and 4.3 (ii) where the proceeds from asset sales are required to be remitted to the Victorian Government, the losses resulting from the sales are not brought to account in the revenue and expense statement but are shown as a decrement to contributed capital in the balance sheet. During 1991-92 an amount of \$8.863 million relating to losses from asset sales has been disclosed in the above manner. This practice is a departure from Australian Accounting Standard AAS1 *Profit and Loss or other Operating Statements*, which requires that all items of revenue and expenses be brought to account in the revenue and expense statement. Accordingly, the operating deficit for the year and contributed capital are both understated by \$8.863 million.

#### Audit Opinion

In my opinion, except for the effect on the financial statements of the matter referred to above, the financial statements present fairly the financial position of the Roads Corporation as at 30 June 1992 and the result of its operations for the year ended on that date in accordance with Statements of Accounting Concepts and Australian Accounting Standards and comply with the requirements of the *Annual Reporting Act* 1983.

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C.A. BARAGWANATH Auditor - General

MELBOURNE 30/9/1992

# Supplementary Financial Statements Incorporating – Infrastructure Assets Current Replacement Cost (Unaudited)

# INTRODUCTION

The purpose of the following supplementary current cost financial statements is to disclose information useful in evaluating the task of managing the declared road network which is controlled by VIC ROADS. These statements will enable readers to make informed judgements about VIC ROADS performance in relation to the size and condition of the road assets. They will also ensure that the activities, resources and results of the corporation are measured in comparable terms and are of maximum value to users.

For the 1991/92 financial year, Current Cost Reporting supplements the historical cost financial statements and should be read in conjunction with them.

# BACKGROUND

The Victorian Government policy on reporting asset values, has for some years, been expressed through the Annual Reporting Act, and Rate of Return Reporting requirements for commercial utilities.

Recently, the Australian Accounting Research Foundation released a new Australian Accounting Standard (AAS27), "Financial Reporting by Local Governments" which states that these bodies must value and record their infrastructure assets in their financial statements.

The Australian Accounting Research Foundation also issued a proposed Accounting Standard ED55 "Financial Reporting by Government Departments" in January 1992 which proposes that Government Departments value and depreciate infrastructure assets under their control and include them in their prime financial statements at a yet to be determined date.

AUSTROADS also support and encourage the valuation of infrastructure assets and their inclusion in the financial statements of statutory bodies.

The Victorian Department of the Treasury issued Accounting Policy Statement No. 4 "Recording and Reporting of Non-Current Physical Assets" which requires all Victorian administrative units to disclose infrastructure asset values commencing with the 1991/92 financial year, in supplementary financial statements. VIC ROADS has used Accounting

Policy Statement No. 4 as a guide in the preparation of these supplementary Statements.

## VIC ROADS INFRASTRUCTURE ASSETS

VIC ROADS infrastructure assets include:

(i) Land under roads and on road reservations.

(ii) Roads, the constructed pavement and ancillary works.

(iii) Bridges and major culverts.

(iv) Traffic control devices.

For each of the above VIC ROADS has a data base recording technical specifications and in some instances current asset conditions.

In terms of identifying the assets VIC ROADS can place a high level of confidence in the recognition of their existence. For instance:

Land area recognition and road specifications have high confidence levels as historical information has been collected and is available on a database system in the required form.

All necessary information on the number and type of bridges is also collected and stored on a database as is all information relating to the traffic signal network.

## VALUATION OF INFRASTRUCTURE ASSETS

The reliability of applying current cost values to infrastructure assets is dependent upon the availability of relevant current costs or appropriate indices. *In addition, these figures should not be interpreted as representing a realisable value.* They attempt to reflect the balance of tangible value to the community remaining in the assets.

In relation to roads the unit current replacement costs can be obtained from existing road projects which provide a reliable reference. Unit replacement costs for bridges can be estimated by expert bridge engineers. Traffic control device replacement costs are presently recorded in a management data base at current replacement costs.

The valuation of road reservations can be obtained by reference to the land compensation principles set out in the Land Compensation Act 1986. In essence VIC ROADS is required to pay compensation equivalent to the unaffected value of the land. The principle used in applying the Valuer General's average municipal value per hectare of road reservation, is based on the lowest site value.

# DEPRECIATION AND REFURBISHMENT OF ASSETS

The road network assets are in a used condition i.e. some of their service potential is expired. Depreciation attempts to measure this loss and make an annual distribution. However, a road asset is seldom retired from use and disposed of at the end of its service life. It is usually rehabilitated by a capital expenditure which restores the pavement to yield a further service life similar to the original construction.

Provision for rehabilitation recognises the liability for reconstruction that is accumulating as the pavement surface deteriorates over and above periodic maintenance activity.

Schedules showing the age of infrastructure assets provide an insight into the timing of the need to replace or rehabilitate assets or to face an increase in maintenance costs.

# ASSESSMENT OF THE STRUCTURAL LIFE OF BRIDGES

Current evidence suggests that the average useful life for a bridge is approximately 80 years based on the assumption that at least one major rehabilitation or upgrade is required during that time.

The age profile for bridges in the declared road system shows that the average age for major rehabilitation or upgrade is approximately 40 years. Available information also shows that the average age of bridges in the declared road system at 30/6/92 is 31.0 years.

Unaudited Supplementary Financial Statements

# ASSESSMENT OF HIGHWAY PAVEMENT STRUCTURAL LIFE

The structural life expectancy of "highway" and "freeway" standard pavements has been based on the assumption that adequate and appropriate pavement management activities have been initiated and performed over the life of the network. Such pavement management activities include routine pavement maintenance, major patching, resheeting and resealing.

Based on "road condition" data the Victorian State Highway/Freeway network has a remaining life expectancy of between 25 and 35 years. Currently data reflects an overall pavement condition of approximately 70% i.e. equivalent to an age profile averaging approximately 15 years (Note: whilst the networks age may be greater than 15 years the networks condition reflects this age profile based on road condition prediction tables).

In making useful predictions about the remaining life other factors need to be taken into consideration, these include;

- the estimated useful life may be affected by climate
- geographic location
- the level of routine maintenance
- traffic density and type
- is the service standard appropriate
- the rate of technological development

These factors may lead to revisions of the estimated life expectancy and to the time when rehabilitation is required.

Expert opinions from VIC ROADS engineers have been used to determine standard life expectancy rates. In addition, the Pavement Management Information Systems, used to assist road asset management decisions, contains predictive models for deterioration of road conditions. It also provides an estimation of the expected remaining life of the roads and bridges. The Traffic Control Device network also includes age information for control devices.

Creating a provision for depreciation and refurbishment does not provide funds for asset replacement unless it were permitted to influence revenue decisions. This is not the case.

Reconstructing the Annual Accounts to record infrastructure assets at current replacement cost provides a useful aid in turning the emphasis to asset management and to questions of how much infrastructure we can afford; what is an appropriate infrastructure service level and how can scarce maintenance and development resources be efficiently distributed to avoid a deterioration in service levels.

■ Revenue and Expense Statement for the year ended 30 June 1992

	Notes 1992	1992 \$000	1991 \$000
OPERATING DEFICIT AS PER HISTORICAL ACCOUNTS		(19,279)	(69,951)
Less Depreciation Expense on Road Infrastructure – Roads – Bridges – Traffic Control Devices	68,376 13,404 9,247		300,794 12,792 4,049
		91,027	317,635
Less Infrastructure Maintenance Provision Operating Deficit for the year as per Current Cost Accounts (excluding		13,110	19,500
monetary holdings (gains/losses))		(123,416)	(407,086)
Add Gains on holding monetary items	1(d)	15,691	29,524
as per Current Cost Accounts		(107,725)	(377,562)
Accumulated Deficit at beginning of year as per Current Cost Accounts		(6,620,297)	(6,242,735)
Accumulated Deficit 30 June 1992		(6,728,022)	(6,620,297)

# ■ Balance Sheet as at 30 June 1992

	Notes 1992	1992 \$000	1991 \$000
CURRENT ASSETS			
Cash at Bank, in hand and Deposits		15,225	9,652
Debtors and Prepayments		10,845	14,619
Inventories	1(b)	16,762	22,920
Repayable Advances	. ,		
- Municipalities		79	80
Property – Loans		-	237
Total Current Assets		42,911	47,508
NON CURRENT ASSETS			
Repayment Advances			
<ul> <li>Municipalities</li> </ul>		533	614
Property – Loans		—	249
Fixed Assets	1(b)(c) 2.1	145,200	124,496
Properties Acquired for			
Roadworks	1(b) 2.2	658,335	801,195
Land (Right of Way)	1(b)(c) 3.1	1,711,534	1,960,355
Roads	1(b)(c) 3.2	4,519,132	4,684,945
Bridges	1(b)(c) 3.3	1,144,147	989,160
Traffic Control Devices	1(b)(c) 3.4	64,268	72,588
Land & Buildings			
in Service	1(b)(c) 2.3	92,318	120,095
Leaseholds	1(b)(c) 2.4	180	200
Work-In-Progress	1(b)(v)	378,572	194,932
Total Non-Current Assets		8,714,219	8,948,829
TOTAL ASSETS		8,757,130	8,996,337

# ■ Balance Sheet as at 30 June 1992

	N1 1	1000	1001
	Notes	1992	1991
	1992	\$000	\$000
CURRENT LIABILITIES			
Creditors and Accruals		103,711	101,256
Govt. of Victoria and Agencies		4,770	5,541
Liabilities – Property		11,233	9,910
Planning and Environment Act Liabilities		7,189	10,766
Provision for Employee Entitlements		39,773	40,932
Other Provisions		166	· 231
Total Current Liabilities		166,842	168,636
NON CURRENT LIABILITIES			
Deferred Creditors		1.508	4.677
Provisions for Employee Entitlements		594,213	610,759
Other Provisions		532	555
Total Non-Current Liabilities		596 253	615 001
FOURTY			
Contributed Capital	$4(\Delta)$	14 662 177	14 744 761
Current Cost Account	4(R)	59 880	87 246
Accumulated Deficit	4(C)	(6 728 022)	(6 6 20 297)
	(0)	(0,720,022)	(0,020,207)
Total Equity		7,994,035	8,211,710
TOTAL LIABILITIES AND FOULTY		8 757 130	8 996 337

# **Summary of Significant Accounting Policies**

## NOTES TO THE ACCOUNTS

# NOTE 1

#### (a) Basis of Preparation

These supplementary financial statements have been prepared in accordance with Statement of Accounting Practice Number One (SAP1) and APS4, "Recording and Reporting of Non-Current Physical Assets", using principles of the Current Cost Accounting Convention.

# (b) Valuation of Non-Monetary Assets

Non-current non-Monetary asset (principally Land and Buildings in service, Properties Acquired for Roadworks, Fixed Assets, Right of Way Land, Leaseholds, Roads, Bridges and Traffic Control Devices) have been valued at written-down current cost after allowing for total capitalised funding costs, current cost depreciation in respect to depreciable assets and current cost rehabilitation requirements in respect to certain infrastructure assets.

Current non-monetary assets (principally inventories) have been valued at the lower of current cost and net realisable value. Current cost has been determined on the basis of average current market buying price using the consumer price index applied to past carrying values as appropriate.

The valuation methods used for infrastructure assets are:

(i) Right of Way Land – land under roads and on road reserves has been valued at the average current market buying price per hectare for each municipality, based on the lowest 'site value'.

Unaudited Supplementary Financial Statements

(ii) Roads – the constructed portion of the road has been valued at Current Replacement Cost. Construction costs have been determined as the current dollar rate per lane kilometre for each classification of declared road under the Transport Act 1983.

(iii) Bridges – bridges and major culverts have been valued at Current Replacement Cost. Unit construction costs have been determined as the current dollar rate per square metre for each type of structure on the declared road network.

(iv) Traffic Control Devices – the traffic control device network has been valued at Current Replacement Cost. Unit replacement costs have been determined as the current dollar rate per intersection or pedestrian signal.

All infrastructure assets will be revalued each five years on a rolling basis using expert valuations. Appropriate indices will be used in the intervening years.

(v) Work-In-Progress of infrastructure assets was included without depreciation for the first time in 1990/91.

(c) Depreciation and Amortisation All non-monetary assets have been depreciated using the straight-line depreciation method.

Land (right of way) and Work in Progress are not subject to depreciation.

## (d) Gains and Losses on Holding Monetary Items

Holding gains on monetary liabilities reflect the amount of cost saving achieved as a result of changes in prices during the period. The amount has been calculated by reference to average movements in the Consumer Price Index.

Holding losses on monetary assets reflect the amount of additional finance needed for monetary assets as a result of changes in specific prices during the period. The amount has been calculated on the same basis as holding gains on monetary liabilities.

## (e) Other Accounting Policies

Except as set out above, the accounting policies and methods used in Current Cost Accounting are the same as those used in the historical cost financial statements.

# NOTE 2 Non Current Assets

ASSET TYPE			1991/92			
		GROSS CURRENT REPLACEMENT COSTS \$000	ACCUMULATED DEPRECIATION \$000	WRITTEN DOWN CURRENT COSTS \$000	WRITTEN DOWN CURRENT COSTS \$000	
2.1 Fiv	od Assots					
- E	Equipment	96,424	18,500	77,924	57,739	
– P Vel	Plant & Motor hicles	124,783	57,507	67,276	66,757	
2.2 Pro for	operties Acquired Roadworks	658,335	_	658,335	801,195	
2.3 Lar in S	nd & Buildings Service	92,318	_	92,318	120,095	
2.4 Lea	aseholds	316	136	180	200	
Totals		972,176	76,143	896,033	1,045,986	

# ■ NOTE 3 Physical Non-Current Assets

ASSET TYPE	1991/92				1990/91
	GROSS CURRENT REPLACEMENT COSTS \$000	ACCUMULATED DEPRECIATION	DEFERRED MAINTE- NANCE COSTS \$000	WRITTEN DOWN CURRENT COSTS \$000	WRITTEN DOWN CURRENT COSTS \$000
	4000	<b>\$000</b>	0000	0000	
3.1 Land (ROW)	1,711,534	-	-	1,711,534	1,960,355
3.2 Roads	9,854,922	5,303,180	32,610	4,519,132	4,684,945
3.3 Bridges	1,867,017	722,870	-	1,144,147	989,160
3.4 Traffic Control Signals	167,233	102,965	_	64,268	72,589
Totals	13,600,706	6,129,015	32,610	7,439,081	7,707,049

# ■ NOTE 4

Statement of Changes in Equity for the year ended 30 June 1992

	(A) CONTRIBUTED CAPITAL	1991/92 (B) CURRENT COST ACCOUNT	(C) ACCUMULATE DEFICIT ACCOUNT	1991/92 ED TOTAL	1990/91 TOTAL
	2000	2000	2000	2000	\$000
Balance at 1 July	14,744,761	87,246	(6,620,297)	8,211,710	7,301,773
* Restatement of Non					
Monetary Assets					
- Inventories		(8,442)		(8,442)	(1,877)
<ul> <li>Fixed Assets</li> </ul>		32,917		32,917	1,306
<ul> <li>Properties Acquired</li> </ul>					
for Roadworks		(142,860)		(142,860)	(16,626)
Land & Buildings					
in Service		(33,482)		(33,482)	4,638
Leaseholds		6		6	6
Land	(248,821)			(248,821)	687,797
Roads	(181,228)			(181,228)	821,490
Bridges	161,568			161,568	(297)
Traffic Signals	2,257			2,257	26,287
<ul> <li>Adjustments involved in the determination of Current Cost Net Deficit</li> </ul>					
(Gain)/Loss on holding					
monetary assets		(15,691)		(15,691)	(29,524)
* Restatement of Accumula	ated				
Bridges		6.823		6 823	123
Boads		96 901		96 901	(423 581)
Traffic Signals		(1,331)		(1.331)	(14,372)
Fixed Assets		12,213		12,213	4.832
I and & Improvements		12,210		12,210	1,002
in Service					(2.970)
Leaseholds		(23)		(23)	(23)
* Work-In-Progress	183,640			183,640	194,932
* Current Cost Net Deficit			(107,725)	(107,725)	(377,562)
* Historical Cost Adjustmer	nt				
to Accounts for year to da	ate	25,603		25,603	35,358
Net Change for the period	d (82,584)	(27,366)	(107,725)	(217,675)	909,937
Balance at 30 June 1992	14,662,177	59,880	(6,728,022)	7,994,035	8,211,710

# **Appendices**

# LEGISLATION

### The Transport Act 1983

This Act establishes the Corporation as a body corporate and confers on it powers and duties in relation to road users, the road transport industry and the construction and maintenance of roads. Specific areas of responsibility conferred on the Corporation include:

 maintenance and upgrading of the State's declared road network

 registration and licensing procedures and assistance in connection with transport

- road safety
- traffic management

• licensing and enforcement of laws relating to the operation of various classes of commercial vehicles

Regulations made under the Act include:

Roads Corporation Regulations 1983.

These regulations set out powers of the Roads Corporation in relation to the use of declared roads, obstructions, excavations and other works on such roads.

□ Transport (Tow Truck) Regulations 1983

These regulate tow trucks and, in particular, deal with the control of accident towing within controlled areas.

 Transport (Passenger Vehicles)
 Regulations 1984
 These regulate the operations of licensed passenger vehicles.

 Transport (Commercial Goods Vehicles) Regulations 1984
 These regulate the operation of commercial goods vehicles.

#### Road Safety Act 1986 This Act covers:

• the registration of motor vehicles and trailers for use on highways

• the licensing of drivers

• the registration of recreation vehicles for use in public places (other than highways)

• driving-related offences involving alcohol and other drugs

- general motoring-related offences
- traffic and parking infringements

Regulations made under the Act are:

Road Safety (Traffic) Regulations
 1988

These establish traffic rules to be observed by all road users

Road Safety (Vehicles) Regulations 1988

These establish a registration and permit system for motor vehicles and trailers used on highways and a registration system for recreation vehicles used in public places (other than highways) which ensure that these vehicles comply with certain safety standards and that their owners are recorded.

Road Safety (Procedures)
 Regulations 1988
 These establish procedures which relate to:

- driver licences and permits
- breath and blood tests
- detection devices

hours of driving of heavy commercial vehicles

infringements

• extension of the Act to land of public authorities

## Transport Accident Act 1986

This Act establishes a scheme of compensation in respect of persons who die or are injured as a result of transport accidents

The Corporation acts as agent for the Transport Accident Commission to collect transport accident charges payable under the Act

### Chattel Securities Act 1987

Under the Act the Corporation maintains a register of security interests on motor vehicles and trailers and issues certificates as to whether any such interests are registered in respect of a particular vehicle

#### Legislative Changes

The Corporation was involved in the development and passage by Parliament of amendments to the Road Safety Act:

## Road Safety (Further Amendment) Act 1991

This Act was enacted to:

• require drivers of large vehicles to carry their licences and to have a zero blood alcohol concentration at all times while driving or in charge of a large vehicle

 increase the period of notice required for the attendance at court of a breathalyser operator

• clarify the meaning of subsequent offence

• allow a court to reduce the period in which an assessment report must be obtained prior to a licence restoration application

• remove the offence of failing to undergo a preliminary breath test

• avoid certain provisions in contracts of insurance in relation to blood alcohol concentration of not more than .05% Road Safety (Licence Cancellation) Act 1992

This Act was enacted to:

• require a court, on finding a person guilty of a drink-driving offence without recording a conviction, to cancel his or her driver licence and disqualify him or her from obtaining one for the same period as it would have been required to if it had recorded a conviction.

## REGULATIONS

The following regulations under the Acts administered by the Roads Corporation were made during the year:

Road Safety (Traffic) (Parking Control) Regulations 1991 SR No.137/91

These regulations improved signs and symbols which control, regulate and prohibit vehicular parking on highways.

☐ Road Safety (Procedures) (Traffic Infringement Penalties) Regulations 1991 SR No. 138/91 These regulations clarified the range of offences for which traffic infringement notices may be issued.

 Road Safety (Traffic) (Disabled Parking Conditions) Regulations 1991 No. 161/91

These regulations provided greater certainty as to the conditions of disabled persons parking permits by removing them from the Code for Disabled Persons Parking Scheme and including them in Regulations.

 Road Safety (Vehicles) (Spouse Concessions) Regulations 1991 No.162/91

These regulations extended registration

fee concessions to spouses of pensioners eligible for such concessions.

Road Safety (Traffic) (Child Restraints) Regulations 1991 No.169/91

These regulations provided that in certain circumstances, disabled children are not required to wear seat belts and child harnesses.

□ Road Safety (Procedures) (Single Licence) Regulations 1991 No.326/91 These regulations supported the national agreement that a driver have only one licence issued in Australia.

 Road Safety (Traffic) (Transit Lane) Regulations 1991 No.327/91
 These regulations extend for a trial 12 month period, the range of vehicles which may legally use Transit Lanes.

□ Road Safety (Procedures) (TAFE Parking) Regulations 1992 No.10/92 These regulations ensured that officers of Institutions provided for under the Vocational Education and Training Act 1990 were able to prosecute parking offenders.

□ Road Safety (Vehicles) (Registration Fees) Regulations 1991 No.147/91

Chattel Securities (Fees) Regulations 1991 No.233/91

Road Safety (Procedures) (Fees) Regulations 1991 No.234/91

Road Safety (Vehicles) (Fees) Regulations 1991 No.235/91

Transport (Passenger Vehicles) (Fees) Regulations 1991 No.236/91

Transport (Commercial Goods Vehicles) (Fees) Regulations 1991 No.237/91 Transport (Tow Truck) (Fees and Allocation Centre) Regulations 1991 No.238/91

Transport (Fees for Property Enquiries) (Amendment) Regulations 1991 No.239/91

The above regulations made adjustments in the fees for various services.

## FREEDOM OF INFORMATION

During the year VIC ROADS received 222 requests for information under the Freedom of Information Act. In summarv:

Requests made 2	22
Requests denied	12
Full details of access	104
Requests granted in part	35
Still in process	8
Lapsed or withdrawn by	
the applicant	15
Transferred to another agency	4
Information granted outside	
FOI requirements	44
	222

## DECLARATION OF PECUNIARY INTERESTS

Declarations of pecuniary interests have been completed by Directors, senior officers and officers exercising designated levels of financial delegation.

# **OVERSEAS MISSION**

## David T Anderson, Director – Road Safety

Attended a meeting in March 1992 of a Technical Committee established by the United States Transportation Research Board to organise an International Conference on Pavement Management.

All costs of travel, accommodation and expenses were met by the Transportation Research Board including the costs for two days prior, and one day following the meeting.

Mr Anderson also had meetings with Mr Bill Patterson, Senior Highways Engineer, Policy Planning Division, World Bank, and Mr George Reagle, Director of the National Transportation Safety Board, Washington DC.

## 7th Road Engineering Association of Asia & Australasia (REAAA) Conference – Singapore 1992

The current posting of a number of VIC ROADS staff on revenue earning projects overseas, in association with Overseas Projects Corporation of Victoria Ltd, is evidence of the growing recognition of VIC ROADS expertise in road engineering matters.

This involvement in overseas projects provides significant benefits including broadening the experience and outlook of its staff in terms of international best practice in a competitive market place, and promoting the Corporation internationally as a centre of excellence.

There is a need to maintain and build upon this base and attendance at the Conference was important in this regard.
Each of the Conference papers presented, covered an area in which VIC ROADS has particular expertise and experience; all relevant to the major issues facing traffic managers in Asian and Pacific countries.

The following VIC ROADS officers attended the Conference:

# • Robert Evans – Manager, Planning Investigation.

Bob presented a paper entitled "Environmental Impact Assessment (EIA) for Major Road Proposals."

Management of the environment and road safety are the two major issues facing Asian cities in the 1990's.

## • Anthony Snell – Senior Electronics and Communications Engineer.

Anthony presented a paper, which he co-authored with Francis Sin, entitled "Implementation of Automatic Incident Detection Systems on Inner Metropolitan Freeways in Melbourne."

Automatic Incident Detection Systems on Freeways is particular interest to Singapore and other Asian cities.

## • Geoff Anson – Manager, Strategic Transport Planning.

Geoff presented a paper entitled "Planning with Vision."

Growing interest is being expressed in strategic transport planning, and community consultation. VIC ROADS has significant experience in this area.

• Kevin Hadingham – Manager, Asset Management Study. Kevin presented a paper entitled "Developing a Road Asset Management Strategy for Victoria" co-authored with Jim Webber.

Asset preservation is an important issue to all road managers, as evi-

denced by the overseas interest in VIC ROADS pavement and bridge management systems. VIC ROADS staff are currently participating in related projects in Indonesia and the Philippines.

### • Reg Patterson – Chief Executive.

Reg was one of a number of senior personnel from Australian State Road Authorities to attend the Conference and participate in the post conference technical tour. Reg is also one of two Deputy Chairmen of the Australian Chapter of REAAA.

During the visit the Chief Executive was involved in chairing a number of technical sessions at the Conference and conducted discussions with the Singapore Public Works Department on current projects of mutual interest.

## • Jill Earnshaw – Co-ordinator, Research and Development.

Jill is Secretary of the Australian Chapter of REAAA. During the Conference she was involved in coordinating the activities of Australian delegates, overseeing a display of Australian Technology and meetings with REAAA office bearers.

The post conference technical tour to Indonesia involved visits to Bandung, with the Indonesian National Road Authority, the Indonesian Road Research Laboratory, discussions with representatives of PT Jasa Marga, a state owned corporation dealing in toll roads in Indonesia and a tour of national and local highways.

All staff were involved in technical visits to major works or road safety projects in Singapore. Relevant material obtained at the Conference and in discussions have been circulated within VIC ROADS and to other interested bodies.

## OTHER ROAD ORGANISATIONS

VIC ROADS involves itself with various national and international road organisations. These include AUSTROADS, the Australian Road Research Board (ARRB), and the Australian Transport Advisory Council (ATAC). VIC ROADS also convenes, in association with the Local Government Engineers Association, an annual conference of Municipal Engineers.

## AUSTROADS

AUSTROADS is the national association of road and road traffic authorities established in 1989 to replace NAAS-RA (National Association of State Road Authorities). It is governed by a Council consisting of the Chief Executives of the nine Member Authorities – six States, two Territories and the Federal Department of Transport and Communications.

AUSTROADS' mission is to pursue the effective management and use of the nation's roads as part of the Australian transport system by the development and promotion of national policies and practices.

## Australian Road Research Board (ARRB)

The Australian Road Research Board (ARRB) is a focal point for road and related transport research in Australia. It was founded in 1960 as a non-profit company sponsored jointly by all three levels of government and is available to assist the private sector as well. Its Board consists of four Directors elected from the ten members, two external Directors and the Executive Director.

Through its comprehensive research programs and its emphasis on knowledge and technology transfer, it is a significant contributor to the development of efficient, effective, safe and environmentally responsible land transport.

## Australian Transport Advisory Council (ATAC)

The Australian Transport Advisory Council is made up of all the Commonwealth and State and Territory Ministers responsible for transport, roads, marine and ports matters.

AUSTROADS has assumed the role of the ATAC Road Group. AUSTROADS advises ATAC on such matters as road safety, construction and maintenance of roads, vehicle limits, road funding, national highway strategy plans and all road transport policy issues.

ATAC was set up in 1946 to initiate discussions on transport matters and to report to the Federal Government. It is supported and advised by a Standing Committee on Transport (SCOT), and by a number of boards, committees and groups encompassing motor vehicle, motor transport, railway, road and general transport interests.

### FUNCTIONS AND OBJECTIVES

The Roads Corporation functions, as prescribed by the Transport Act 1983 are:

□ To maintain, upgrade, vary and extend the State's declared road network.

□ In conjunction with municipalities, to assist in the maintenance, upgrading and construction of other roads.

□ To purchase, design, construct, erect, install, maintain and operate traffic signals and other traffic facilities for traffic management and control.

□ To determine load limits and advisory speed limits for any road, bridge or culvert and to determine maximum speed limits for travel on those under construction or repair.

□ To provide and maintain roadside reserves adjacent to any road for the use or enjoyment of people using that road.

□ To establish guidelines and requirements for the issue of vehicle mass and dimensions permits.

□ To provide registration and licensing procedures and systems in connection with transport.

□ To develop and implement road safety strategies, and to develop, promote, and administer road safety education and training programs.

To develop and implement traffic management strategies and practices.
To specify road accident prevention practices and to promote their adoption within the community.

□ To develop and supervise regulations applicable to road traffic.

□ To compete for work on the open market.

□ To investigate, promote and undertake research into any matter related to the performance of its functions, powers or duties.

The Act requires the Roads Corporation to have regard to the following objectives in exercising its functions:

□ Make use of available transport resources in ways that are most beneficial to the community and with due regard to the enhancement of the environment.

Operate within government policy and other parameters determined by the Victorian Transport Directorate.

Achieve the efficient and safe movement of road traffic.

Improve the community's awareness of road safety strategies and practices.

Improve and simplify registration and licensing procedures.

Improve the State's principal road network to facilitate the efficient vehicular movement of people and goods.

Improve productivity.

Establish and maintain a satisfying work environment which ensures the broadest range of opportunities for career development and job enrichment.

Achieve an efficient and dynamic organisation by implementing appropriate technological and other changes through a process of consultation beginning at the contemplative stage.
Maintain an effective decentralised organisation and delegate decision making to appropriate levels in the Corporation.

□ Maintain harmonious relations between management, staff and employee organisations through the processes of effective consultation and participation in decision making. Develop and train all personnel to carry out their duties and responsibilities effectively and efficiently, and to interact with the public in a helpful and courteous manner and to enhance their work skills.

□ Maintain a high level of motivation, performance, teamwork and safe working practices and develop a sense of commitment to the organisation, with employment conditions in keeping with community standards.

□ Facilitate accountability at all levels within the Corporation by maintaining suitable information and reporting systems.

Effectively manage its assets, including real estate, to protect future options, and provide for the planning, design, construction and management of new infrastructure and facilities as required.

Minimise interference to the community arising from construction, and maintenance activities of the Corporation.

Provide mechanisms and full information to enable effective and timely participation by the community in decision making about facilities, services and roadworks.

The Transport Act 1983 also provides that the Roads Corporation has additional powers, duties and functions conferred in it by the Chattel Securities Act 1987, the Road Safety Act 1986 and any other Act.

#### **VIC ROADS OFFICES**

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