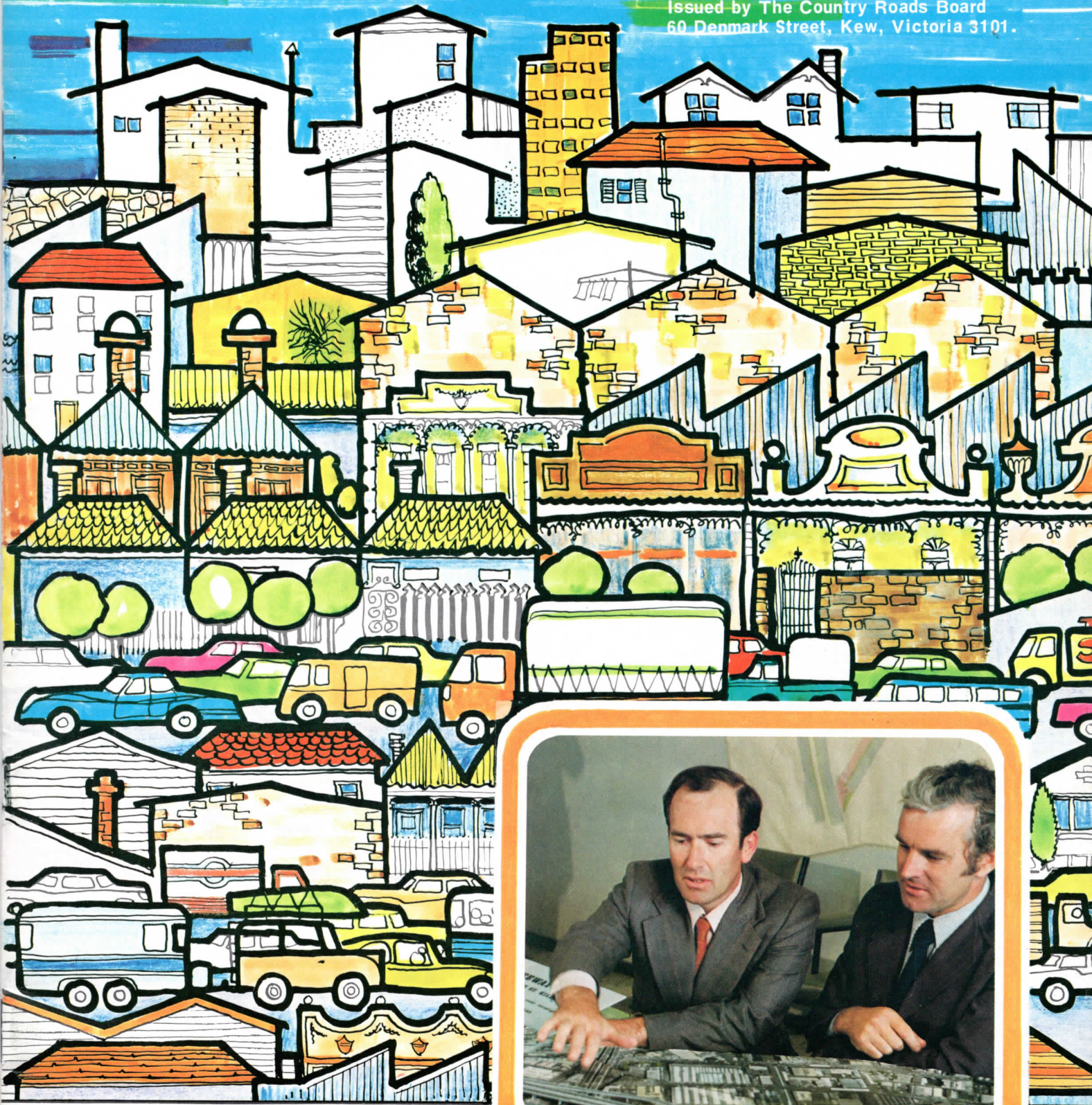


# CRB news

No. 35

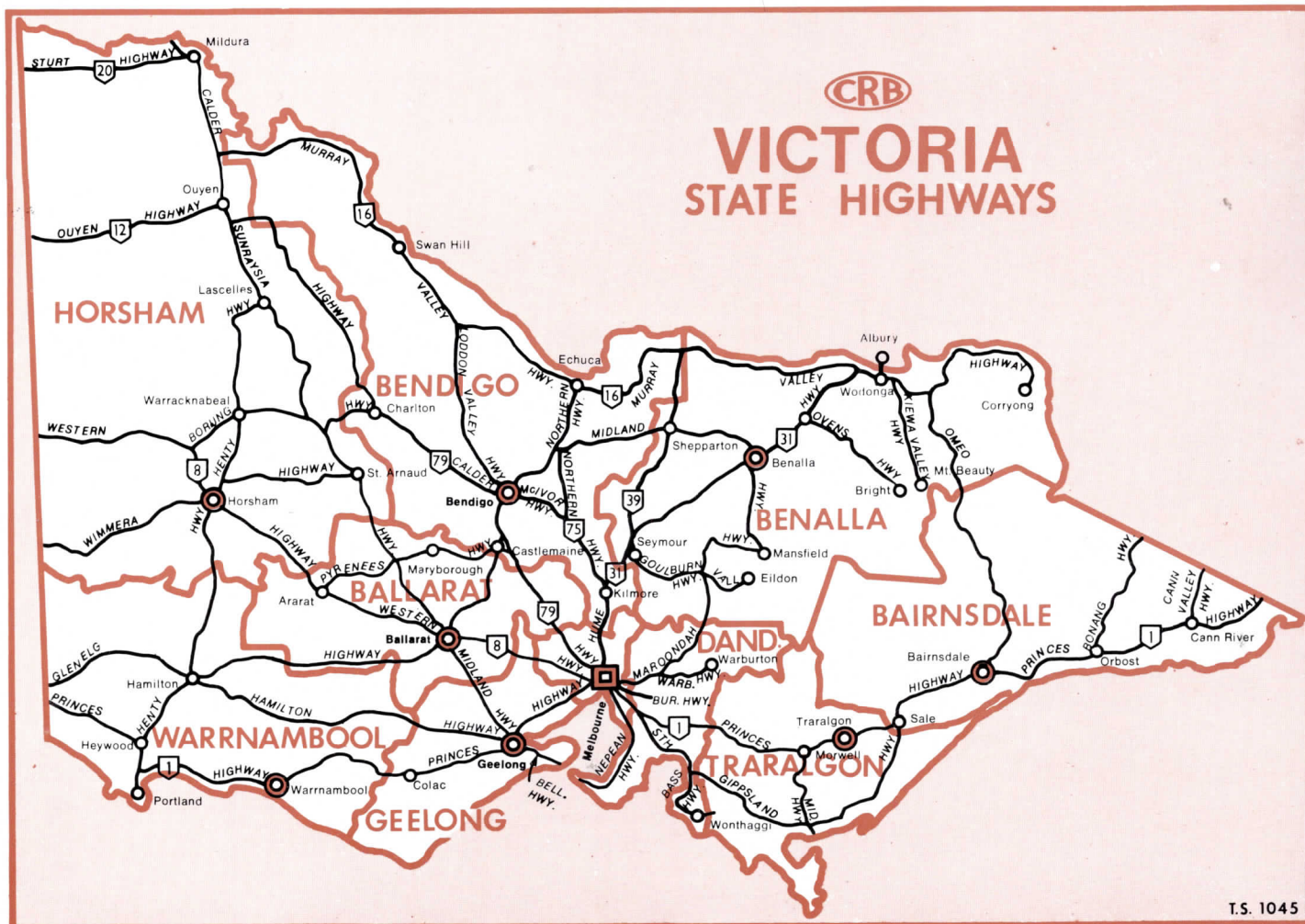
May 1977

Issued by The Country Roads Board  
60 Denmark Street, Kew, Victoria 3101.



**F9 SPEED UP: PAGE 3**

**YOUR PROPERTY... YOUR ROADS: PAGE 11**



T.S. 1045

## THE CRB

The CRB is the State Road Authority of Victoria. There are about 160,000 kilometres of public roads in Victoria, of which 23,893 km comprise the CRB's network of the State's principal roads.

The lengths of roads declared or proclaimed under the Country Roads Act are State Highways 7108 km,

freeways 220 km, main roads 14,680 km, tourists' roads 825 km, forest roads 1060 km.

The CRB's aim is to create an efficient road system within the context of the overall transportation needs of the community.

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## Personnel

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# F9 project is rushed



**Work on the \$80 million F9 freeway has been accelerated by the State Government.**

The Government has made it a top road priority, and with an accelerated works program, the F9 is scheduled for completion late in 1981.

The Transport Minister, Mr J A Rafferty said at an inspection of the project during March that the Government has increased CRB spending on the F9 Freeway from \$2.5 million this financial year to \$5.7 million in 1977-78.

The F9 Freeway runs from Graham Street, Port Melbourne, to Grant Street, South Melbourne, and will cater for traffic using the West Gate and Johnson Street bridges. It will also provide a southerly bypass of the city centre and improve the road connection between the western and south-eastern suburbs.

The West Gate and Johnson Street bridges are expected to be completed in mid-1978.

There are 118 commercial and industrial properties affected by the F9 project and acquisition of property will also be accelerated.

Demolition work will start almost immediately on properties already owned by the CRB.

Mr Rafferty said work this year would include:

- *Reconstruction of Grant Street between Sturt Street and St*

The Transport Minister, Mr J A Rafferty and CRB chairman, Mr R E V Donaldson inspect the site of the F9 Freeway in South Melbourne.

### Our Cover

Picture: F9 project engineers Ray Valentine (left) and Col Roy study the Freeway route on a model. Illustration by CRB artist Ian Anderson.

*Kilda Road to provide a divided roadway with a central median.*

- *Improvements to roads immediately east of the Lower Yarra Freeway at Graham Street so that traffic could be directed to and from the West Gate Bridge during construction of the F9.*

**FOR FURTHER information relating to articles in this publication, or other matters concerning the CRB, contact the Public Relations Section, tel. 860-2160 or 860-2584.**

**David Webb, Public Relations Officer.**

**Steve Parsons  
Peter Carey  
Danny Gocs**

# \$110 MILLION HUME

## An exercise in open planning



● Public meeting at Benalla... comments about the bypass made at the meeting will be considered by CRB engineers before final plans are adopted.

CRB proposals for the 67 km Hume Freeway Section bypassing Benalla and Wangaratta to the east represent the longest project ever undertaken by the CRB, and its most significant involvement in open planning and public participation.

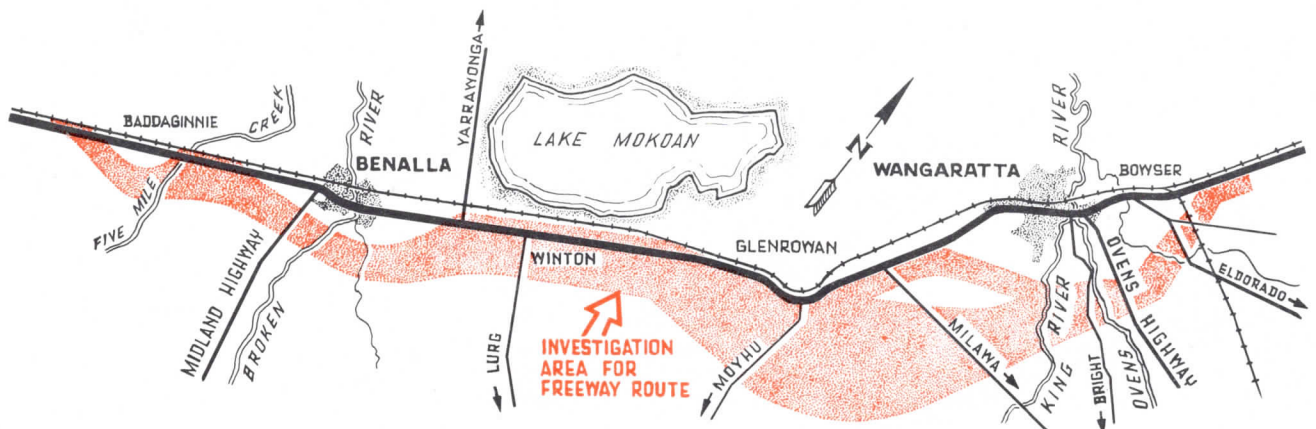
The new freeway from Baddaginnie to Bowser will remove through traffic from Benalla and Wangaratta and extensive investigations are being carried out to ensure that the route selected will be compatible with local environmental considerations.

As an essential part of these investigations, CRB officers explained the various freeway alignment proposals at public meetings held during February in Glenrowan, Benalla and Wangaratta.

The public meetings were arranged by Benalla and Wangaratta City Councils and Benalla, Oxley, Violet Town and Wangaratta Shire Councils. About 500 people attended the meetings.

The input from the public meetings and individual discussions with people and councils will assist planners in providing interchanges at suitable points to meet the needs of the local communities and the travelling public.

The construction of this section of freeway, estimated to cost \$110 million, will have a significant effect on the future development of Benalla, Winton, Glenrowan and Wangaratta.



### Left

The main street of Glenrowan. After the bypass has been completed, motorists will still have easy access to the historic town.

### Right

At Benalla, cyclists and local residents have to share the highway through the city centre with interstate transports, trucks and cars.

# FREEWAY...

The community's and the motorists' needs are being carefully balanced. Investigations carried out by the CRB have shown that of the 6000 vehicles that travel the highway daily, more than 95% can be classified as through traffic.

The new freeway will remove the through traffic from the towns.

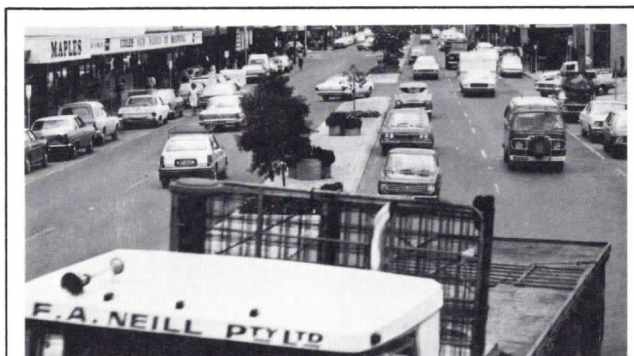
Signs along the freeway will indicate to the motorist what services are available in each of the towns. Glenrowan township, because of its historical significance, will remain easily accessible to tourists.

The Warby Ranges, between Benalla and Wangaratta, will create engineering difficulties in the construction of the freeway. Alternative routes under investigation make use of various "gaps" or saddles in the ranges.

The new freeway will need to cross a number of water courses, such as the Ovens and King Rivers, Fifteen Mile Creek, and the Laceby Flood Plain.

In general the freeway will be above "the 100 year flood" level or the highest recorded level, whichever is the greater.

The Hume Freeway from Baddaginnie to Bowser will provide two lanes for traffic in each direction, and forms part of the CRB's program to construct a freeway from Melbourne to Wodonga.



● Wangaratta's main street... The bypass will remove the through traffic.

## HUME WORK

Work costing \$52 million and covering 55.6 km is under way on the Hume Highway north of Seymour on four freeway projects.

### ● Bypass of Seymour and Avenel

Work has begun on the 27 km Hume Freeway bypass of Seymour and Avenel which is estimated to cost \$35 million at 1976 prices.

The first section between the Goulburn Valley Highway at Seymour, and Avenel, a distance of 20 km, is expected to be completed in 1981 at an estimated cost of \$16 million.

Construction between the Goulburn Valley Highway and Hughes Creek, near Avenel, along the Old Sydney Road is expected to start before June this year.

North from Hughes Creek to Upton Road near Avenel work on five kilometres of freeway is under way. A contract for \$1.2 million has been let for the formation of earthworks over this length.

### ● Avenel-Tubbs Hill

Duplication work are progressing north of Avenel to south of Tubbs Hill, a distance of 12 km. This work is estimated to cost \$7.5 million and is expected to be completed in late 1978.

### ● Bypass of Violet Town

Work has started on relocating services on the 6.2 km freeway bypass of Violet Town. The project is estimated to cost \$5.5 million, at January, 1977, prices and subject to the availability of finance will be completed in mid-1979.

### ● Violet Town-Baddaginnie

Duplication work is progressing on the 10.4 km section between Violet Town and Baddaginnie. The work is expected to be completed late this year at an estimated cost of \$4.3 million.





# Road Widening . . .



● Top picture : One of Melbourne's worst traffic bottlenecks... the Nepean Highway at Elsternwick. The highway from Elsternwick to Moorabbin will be widened by the CRB. Aerial picture shows the Nepean Highway, Gardenvale railway station and the Elwood canal.

Improving Melbourne's road system can mean many things . . . from freeway construction to improved traffic management.

Selective widening of existing roads plays a major part in any large city's efforts to improve its traffic flow.

The CRB's widening projects for existing roads are designed to remove narrow sections that form traffic bottlenecks and remove structurally unsound sections.

They are planned to integrate with other road improvements (including the freeway network and intersection improvements) and provide a smooth flow of high volume traffic.

Although roads that have been widened do not provide freeway conditions for motorists, they provide reasonable continuity for high capacity movement within the urban area.

For example, traffic flow has been improved with the widening of Nepean Highway (formerly High Street) from St Kilda Junction to Carlisle Street, recently completed at a cost of \$11 million.

In mid-1975 widening of Hoddle Street between Victoria Parade and Alexandra Parade, Collingwood, was completed to provide four lanes of traffic in each direction.

## CURRENT PROJECTS

### ● Nepean Highway

The largest widening project currently being undertaken by the CRB is on the Nepean Highway between Cochrane Street, Elsternwick, and South Road, Moorabbin.

The \$32 million six-year project started in February, 1977, when notices of acquisition were served on property owners in the first section from Cochrane Street, Elsternwick, to Hampton Street, Brighton.

This urgently needed improvement to the road system servicing the eastern bayside suburbs will improve traffic flow for the 28,000 vehicles now using this section of the highway daily.

The widening project will provide four lanes for traffic in each direction and a service road along the eastern side. The widening will take place along the west, or bay side, of the existing highway.

More than 420 properties will be directly affected by the widening. The property owners have been aware of the general proposals since 1954 when a main road reservation was included in the Melbourne Metropolitan Planning Scheme to provide for the widening of the highway.

(A brochure on the Nepean Highway widening is available from the CRB Public Relations Section.)

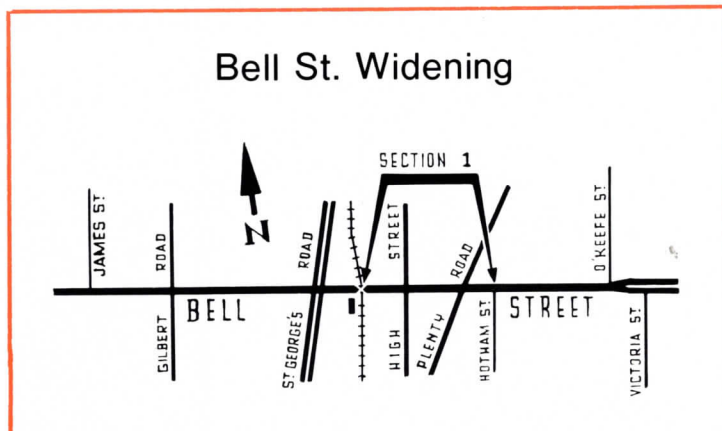
### ● Bell Street, Preston

Bell Street, Preston, between James Street and O'Keefe Street, will get a \$10 million facelift as part of plans to improve traffic flow in the northern suburbs.

Work on the 2.5 km widening project started in February, 1977, with the demolition of some buildings.

The CRB will purchase and demolish about 200 properties, and Preston City Council will carry out the construction work, substantially financed by the CRB.

The widening project is expected to be completed by 1981 and will provide three lanes for traffic in each direction and flared intersections at major crossroads.



### ● Mahoneys Road, Thomastown

The construction of dual carriageways in Mahoneys Road between the Hume Highway, Campbellfield, and High Street, Thomastown, has almost been completed by the CRB.

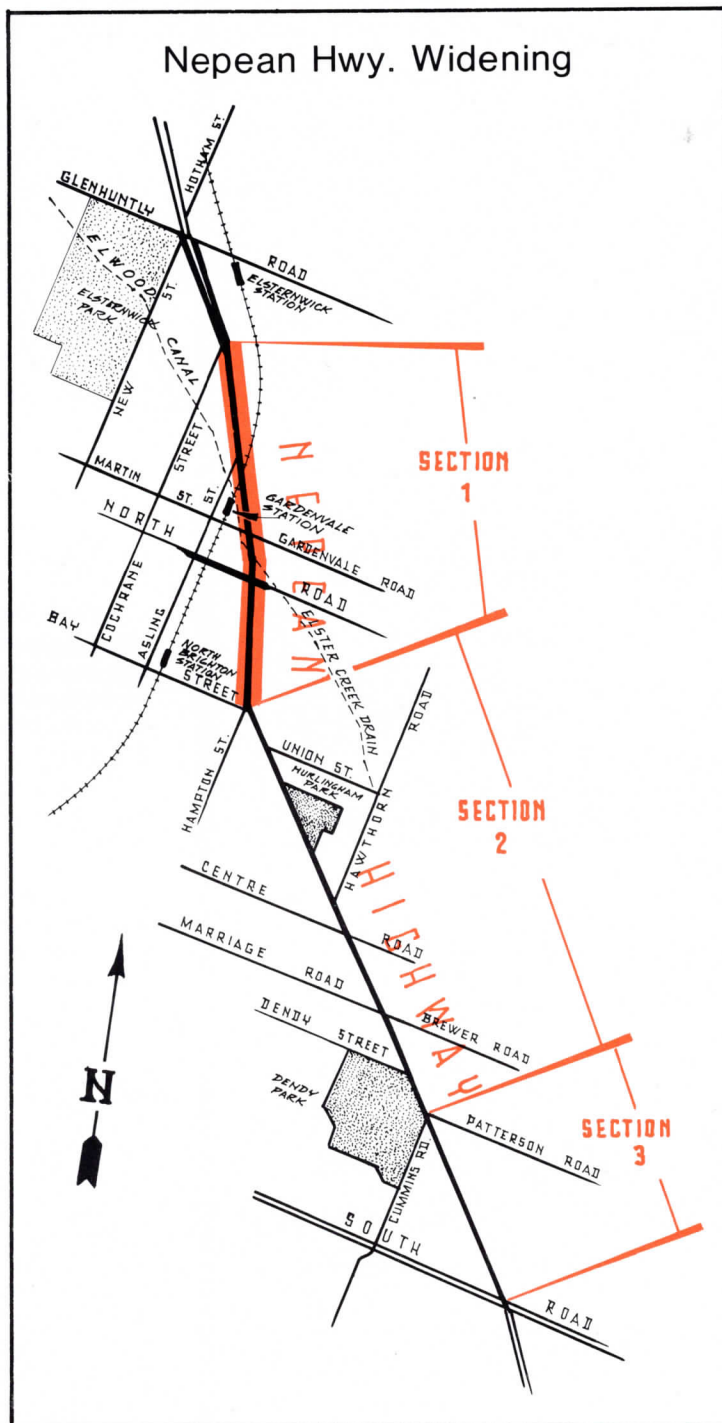
The total project covers 4.8 km and will cost about \$4.2 million. This amount includes contributions from Whittlesea Shire Council, Broadmeadows City Council and Preston City Council.

A CRB traffic survey last year showed that about 18,000 vehicles use Mahoneys Road daily.

### ● Banksia Street, Heidelberg

Work on widening and flaring the Banksia Street-Lower Heidelberg Road intersection was completed in February this year. Work on the adjoining intersection of Banksia Street with Dora Street is expected to be completed later this year.

The whole project is estimated to cost \$1.5 million.



## FUTURE PROJECTS

### ● Western Highway between Princes Highway West and Gordon Street, Footscray

This one kilometre long widening project was recently approved in principle by the CRB but has not yet been programmed for construction. It will involve tram line relocation and property acquisition. About 21,000 vehicles use the Western Highway in Footscray each day.

### ● Dandenong Road, Malvern

This section through Malvern and Caulfield is the last remaining undivided road bottleneck on Dandenong Road and Princes Highway East between the St Kilda Junction and east of Dandenong.

The work planned by the CRB to provide dual carriageways will improve traffic flow along Dandenong Road, and improve the various intersections along the length.

Negotiations with Councils and other authorities are continuing but it is not known at this stage when work is likely to commence.

# WORLD ROAD NEWS

The US Department of Transportation is planning a one-year, \$20 million study to determine the potential for using abandoned railroad rights of way as bikeways.

...

The 1976-1980 road program of West Germany calls for an expenditure of \$12,700 million. Included will be 400 km of four-lane motorways, 100 km of two-lane highways, 1000 km of highways with four narrow lanes and 100 km of highways with two narrow lanes.

...

The Royal Automobile Club of Great Britain has told the British Government it would not be possible nor feasible to shift large amounts of long distance freight traffic from road to rail as has been proposed. The RAC urged the government to establish an emergency program to complete missing motorway links.

...

Deteriorating rural roads are adding to food costs in the United States, according to the American Farm Bureau Federation which represents 2.5 million farm families. They claim that 85% of the rural roads are inadequate and increase farm produce transport costs.

...

As far back as 1954 Japan's first five year Road Improvement Program was begun with revenue from a petrol tax allocated to a special fund for road improvement.

Up to that time Japan's road system was fairly unco-ordinated but it now has one of the most developed road systems in the world.

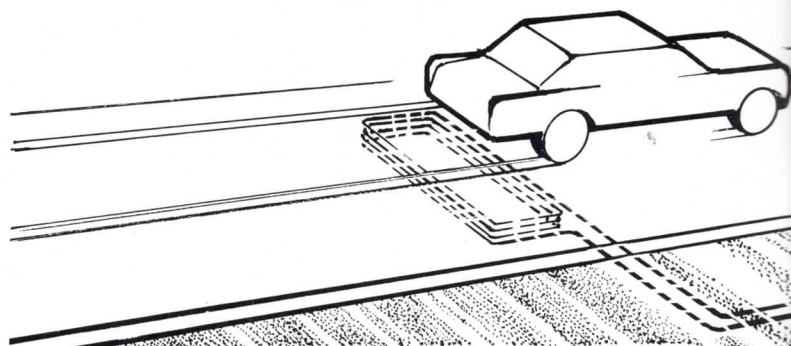
## More roads and fewer babies...

Sri Lanka has added to the long list of economic and social benefits provided by good roads.

The list now includes population control.

A recent story in the "Washington Post" newspaper reported on the progress made in curbing population growth.

"The socialist-style democracy, which changed its name from Ceylon in 1972, has also benefitted from its small size and good road system which have made it easy to distribute birth control information and materials," the article said.



# COMPUTERS MASTERMIND TRAFFIC FLOW

**Computer controlled traffic signals will be operating in three heavily trafficked areas in Melbourne by the end of the year.**

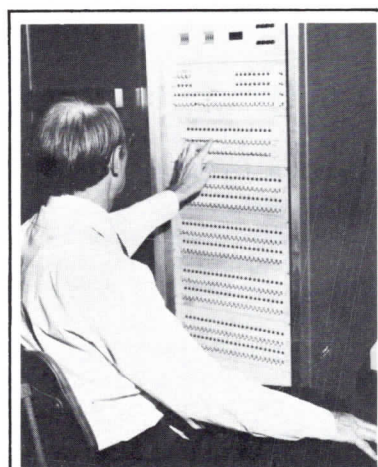
The computer controlled signals will record traffic counts every three minutes, analyse the figures and review the signal cycle for the current traffic volume every 10 minutes. The computer requires pre-programmed computer tapes.

One computer is in operation at St Kilda Junction and the others will be installed at Johnson Street bridge, South Melbourne, and Hoddle Street, Richmond.

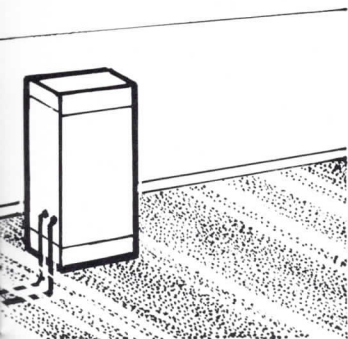
The computers are 'almost human'; even in the off peak periods mid-morning or late at night, they will monitor unusually heavy flows of traffic, and adjust the signals to a peak hour type cycle.

In this way traffic will be able to use the road to its full capacity.

Each computer receives information from dozens of loop detectors, 2 metres by 1 metre in area, under the road. At present there are



**Traffic engineer Kerras Burke checks the computer equipment at St. Kilda junction.**



more than 4000 loop detectors at intersections throughout Melbourne, but only three areas will have the loops linked to computers.

Work on Victoria's first computer controlled traffic signals at St Kilda Junction started in late 1974. The \$120,000 computer equipment and \$180,000 worth of signals have been in operation for a year, but the final signalling connection at Carlisle Street came into operation only in March, 1977.

The CRB is installing a smaller set of computer controlled signals at the Johnson Street Bridge extension of Footscray Road over the Yarra River at South Melbourne. The signals are scheduled to be in operation late this year.

Another computerised signal project is planned for seven intersections along Hoddle Street in Collingwood and Richmond. When installation is completed late this year, the computer controlled signals will replace the present radio controlled signals that have only three phases — morning peak, afternoon peak, and off-peak.

### AT ST KILDA JUNCTION

At St Kilda Junction the system is more complicated because of the volume of trams, many of which turn through the junction.

The computer — called a Traffic Responsive Master Controller — makes a special allowance on its signal cycles when a tram is turning. Previous signal cycles made this allowance even when no trams were at the intersection, adding to the delays for motorists.

About 125 loop detectors have been placed at the junction. Each detector consists of a coil of heavy wire and is sealed under the road. Two wires lead underground to a control box in a cabinet beside the road or mounted on a post.

When a car passes over a loop detector, a signal registers at the control box and is passed by underground wires to a main control and then to a master control where the computer instructs a digital master on the program required for the signals.

### **What it costs to install traffic signals . . .**

*Each intersection has at least four loop detectors under the road approaches which together cost between \$200 and \$300 to supply and instal.*

*The detectors are connected to a control box which houses the expensive control equipment which regulates the traffic signal cycles. This control equipment is valued at approximately \$4000 for a typical signal installation.*

*The cost of signal posts ranges from \$100 for small posts to more than \$1000 for the largest. Signal lantern costs range from \$150 to \$300 depending on the number of signals.*

*The total cost of installing a traffic signal system at a standard type intersection is in the vicinity of \$50,000.*

# KEEPING THE SNOW ROADS OPEN

**Each winter CRB snow-clearing teams keep open to traffic the roads leading to the ski resorts at Mt Hotham, Mt Buller, Falls Creek and Mt Buffalo.**

The ski-ing season generally starts in June, but snow-clearing teams are on standby if roads need to be cleared during May.

There are 24 men working in the CRB snow-clearing teams and they live on the mountains in specially built quarters.

Graders, snow ploughs and snow blowers are used for the work.

After extensive testing last year, the CRB has purchased a German-built Unimog snow-clearing machine. The attachments to the machine may be used not only for clearing snow, but also for general road maintenance work throughout the year.

In a further new development, the CRB's Mechanical Sub-branch has developed a relatively cheap snow

blower that can be attached to any of the CRB's Aveling Austin graders (see report below).

These developments are significant in economic terms as the equipment can be used effectively throughout the whole year instead of only during the snow season.

At Mt Buller, the primary aim of the CRB snow-clearing team is to provide access to Mount Buller Village for two-wheel drive vehicles to Tip Corner, and four-wheel drive vehicles to the Village Square.

At Mt Buffalo the CRB undertakes the clearing of snow from the Mt Buffalo Tourists' Road between the snow line and Cresta car park at Tatra Inn. Snow clearing is also carried out at the car parks and within Mt Buffalo National Park.

At Mt Hotham the CRB carries out snow clearing on the Alpine Road between Harrietville and Omeo.

Snow is also cleared from the Bogong High Plains Road between Mt Beauty and Falls Creek Village.

In emergencies where private vehicles get stuck in snow and block the traffic or snow-clearing operations, CRB snow-clearing operators will help tow or push the car out of the road.

If the driver requires further assistance he may contact a local towing service or garage.

Illegally parked cars are one of the main problems hampering snow-clearing work.

Daily snow patrols ensure that obstacles are cleared from the road as early as possible.

**A Snow Roads Report is issued to the media each Thursday during the ski-ing season and up-to-date information can be obtained by telephoning the CRB, Melbourne (860 2584) on Thursdays between 3.00 p.m. and 5.00 p.m. and for late bulletins, on Fridays during same time period.**



● **A German - built Unimog snow clearing machine in action at Mt. Buller.**

## CRB EXPERTISE PAYS OFF . . .

**A new and relatively cheap snow-clearing device has been developed by the CRB's Mechanical Sub-branch.**

It is a self-contained snow blower which can be mounted on the CRB's Aveling Austin graders.

The unit was tested on the Mt Donna Buang Tourists' Road last August and proved to be very effective.

Graders, equipped with a front-mounted snow blade, are used to clear the snow to the side of the road in the form of a windrow.

After making its initial clearing pass with the blade, the grader returns using the snow blower attachment to pick up the snow from the windrow and throw it well clear of the road.

The blower is a compact self-contained machine comprising a Schmidt S3 blower (similar to that used in conjunction with the Unimog tractor) powered by a governed 2 litre Volkswagon engine through a modified gear box. Two speeds are available — high speed for long

casting distances, and low speed for short casts but larger volumes.

When mounted on the grader instead of the blade, the blower can be manoeuvred into any position using the normal grader blade controls. Control of the blower engine, clutch and chute direction is achieved also from the cab by means of a remote control box.

Considerable credit for the equipment's success is due to Mr R Wallace who acted as project engineer during its design and development.

The Chief Mechanical Engineer, Mr Peter Jeffreys, stresses the economic advantages:

"The blower, which cost less than \$10,000, in conjunction with an existing grader provides us with a snow-clearing machine equal to, and better in some respects, than imported machines costing at least five times as much.

"Not only that, but we have more versatility, since it can be mounted on any of several graders and, possibly, on other machines such as Front End Loaders."

## Snow Driving Advice

The CRB has published a booklet with advice for motorists who plan to drive to ski resorts. The booklet, "Snow Driving - It's an Art" is available from the Public Relations Section, CRB, 60 Denmark Street, Kew, 3101, telephone 860 2584.



*The payment of compensation to property owners who live in the path of planned road widening projects or new road construction projects is a major aspect of road building in Victoria and accounts for millions of dollars each year.*

*Expanded road facilities are needed in any developed, mobile society, to cope with modern transport demands. This often involves the acquisition of private property.*

*With most major road projects, property owners have been aware of the proposals for many years. For example, in the case of the CRB's largest current road widening project — the Nepean Highway widening from Elsternwick to Moorabbin — owners have been aware of the general proposals since 1954 when a main road reservation was included in the Melbourne Metropolitan Planning Scheme.*

*Under the provisions of the Country Roads Act, the CRB is required to make full compensation at current market values for the property acquired and all damages sustained.*

*The CRB's objective is to place the owner in the same financial position after the property is sold to the CRB as he was prior to the sale.*

*The steps to settlement, and the factors taken into account in the CRB's offer of compensation are outlined on the next three pages ...*

A detailed black and white line drawing of a suburban street scene. It shows a variety of houses with different rooflines, chimneys, and windows. In the foreground, there are several cars and a bus, suggesting a busy residential area. The drawing is framed by a green border.

**YOUR PROPERTY...**  
**YOUR ROADS**

# STEPS TO SETTLE

## NEGOTIATING THE SALE

After the statutory requirements have been met, the CRB forwards a formal notice of acquisition to the owner of each property from which land is required, together with a form to enable a claim for compensation to be made.

The notice of acquisition explains why the property is needed. An information pamphlet is enclosed.

If the owner seeks more information, an officer of the CRB Estates Section will call to explain what is involved in the sale of the property, and help the owner to complete the claim for compensation.

At the same time the CRB obtains advice from qualified independent valuers to help it make an assessment of the property's market value. The valuer will discuss any special areas of claim with the owner. This valuation forms the basis for the CRB's offer of compensation.

An owner can obtain the services of a qualified valuer to prepare his claim and the cost of the valuation in accordance with prescribed fees will be reimbursed by the CRB.

## EXAMPLES OF PROPERTY OWNERS' ENTITLEMENTS

### (1) When an owner-occupier residential property is being acquired.

When a home owner has to sell his property to the CRB, he receives a compensation payment which should enable him to buy a property of similar value on the market, thus maintaining the standard of housing he enjoyed before the CRB bought his property.

The amount of compensation consists of the current market value of the property plus out of pocket expenses incurred as a direct result of the CRB's purchase of the property.

Factors taken into account in assessing the offer of compensation include:

- Current market value of property.
- Legal fees, transfer costs and stamp duty (for the property being sold and the replacement property).
- A valuation fee for the property being acquired



# MENT...

based on the Australian Institute of Valuers' scale of fees.

- Removal expenses. (These expenses are not paid when a property is rented.)
- Mortgage and interest costs: If the property being purchased by the CRB is subject to a mortgage, legal expenses are reimbursed for the discharge of that mortgage and for obtaining a new mortgage on a replacement property. If the new mortgage is at a higher rate of interest than the previous mortgage, an allowance towards the increased interest will be considered.
- Other out of pocket expenses such as the cost of transferring a telephone and the cost of compulsory school uniforms if children are required to change schools due to the CRB's purchase of the property. (These out of pocket expenses are not paid in respect of a property that is rented.)
- Defence Services Home Loan Entitlements: The Defence Services Home Division permits the transfer of a loan from one property to another,

but there is sometimes a delay in obtaining approval for the transfer. If the delay is substantial the CRB will pay the interest on a temporary loan until the replacement loan has been granted.

- An additional amount (called solatium) of up to 10 per cent of the market value of the house and land. The actual percentage paid will depend on the inconvenience caused to the property owner by the acquisition.

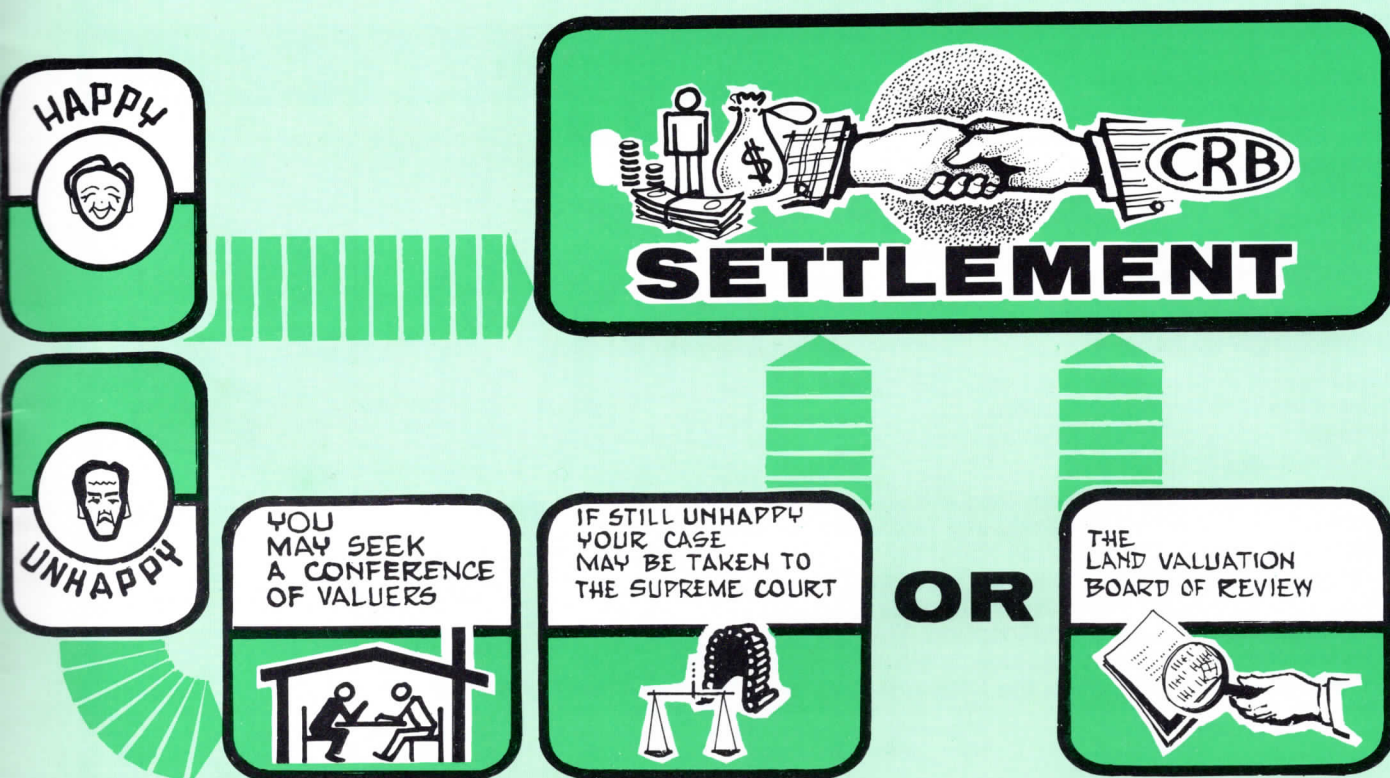
## INTEREST FREE LOANS

Interest free loans are considered in special cases where an owner living in the property faces difficulty in buying an equivalent house on the market.

A loan may be made available provided the owner has lived in the house for at least two years before the notice of acquisition was served, and provided the market value of the property does not exceed \$75,000.

The amount of the loan may not exceed the difference between the market value of the property being acquired by the CRB, and \$75,000.

The interest free loan is repayable if the replacement property is sold or if the owner stops using it as a permanent residence, or if both the owner and spouse die.



# YOUR PROPERTY... YOUR ROADS

## LIVING IN THE PROPERTY AFTER COMPENSATION IS PAID

In cases where a property is being compulsorily acquired and is not required immediately for road construction purposes — and the owner requests more time to find a replacement property — the CRB will consider allowing the owner to remain in the property for 13 weeks rent-free, another 13 weeks at half-rental and a further 13 weeks paying rent at the current market rate.

### **(2) When commercial or industrial property is being acquired**

When the property being acquired is commercial or industrial, the CRB pays compensation consisting of the current market value of the property, legal costs, valuer's fee and transfer fees. As in the case of an owner-occupied residential property, a payment for solatium is also considered.

In addition, compensation will be considered for other applicable items such as loss of goodwill or loss of business during the transfer to a new location, removal costs and reinstallation of machinery.

### **(3) When part of a residential, commercial, industrial or rural property is being acquired**

In addition to paying the current market value of the portion of the property that is acquired, the compensation payment will take into account the effect that the acquisition may have on the remaining part of the property.

For example, the owner's remaining property may require additional running costs after the acquisition, or the balance of the property may lose value because of severance.

As in the case of an owner-occupied residential property, allowance is made in the offer of compensation for legal costs, valuer's fee and transfer fees, any other necessary expenses resulting directly from the acquisition e.g. the relocation of improvements on the property, or the erection of a fence.

## POSSESSION BY CRB BEFORE COMPENSATION IS PAID

- (a) *Interest* — If it is necessary for the CRB to take possession of the property before compensation is paid, the CRB will pay interest from the date of possession.
- (b) *Payment in Advance* — Where the CRB compulsorily acquires a property and has taken possession of it, and negotiation about the amount of compensation are unresolved, the owner can request an advance of 90 per cent of the CRB's estimate of compensation. This payment is made without prejudice to the final amount of compensation the CRB will pay.

## WHERE AGREEMENT ON COMPENSATION CAN'T BE REACHED

If an owner is dissatisfied with the CRB's offer of compensation, and has not had his property valued by a qualified valuer, he should do so. The cost of the valuation in accordance with the prescribed fees will be reimbursed by the CRB.

If the owner still disagrees about the amount of compensation offered by the CRB, he can ask for a conference between his valuer and the independent valuer engaged by the CRB.

If this does not settle the dispute, the owner has the right to have the amount determined by the Land Valuation Board of Review, or the Supreme Court.

## PAYMENT OF THE COMPENSATION

The CRB will pay the full amount of the compensation within 60 days of the agreement on the amount concerned, subject to the production of all necessary proof and documents for transfer of an unencumbered title and possession of the property.

## SPECIAL CASES OF HARDSHIP

Where owners of property affected by future roadworks can substantiate that they are suffering substantial hardship the Board is prepared to consider seeking the approval of the Minister of Transport to the purchasing of these properties by negotiation ahead of the time they are required for road construction purposes.

## INFORMATION AND ADVICE

General enquiries about property acquisition should be made to the CRB's Estates Section — Telephone 861 5321.

## How it DOESN'T happen



## Monitoring exhaust emission



● The CRB's new air pollution monitoring van is tested near the Johnston Street Bridge, Collingwood. Inset: Scientific Officer David Ford checks some of the van's equipment.

Vehicle exhaust emission can now be measured by a new mobile monitoring van developed by the CRB.

The \$70,000 van started taking readings during March at 10 sites in Malvern.

This monitoring programme, to extend over two months, is part of the State Government's investigation into a possible road connection between the South Eastern Freeway and the Mulgrave Freeway. The investigation is being carried out by a study group comprising representatives of the Ministry of Transport, Ministry of Conservation, the MMBW, Malvern, Camberwell and Hawthorn Councils, and the CRB.

At each site, measurements are taken of carbon monoxide, ozone, nitrogen oxides, airborne lead, the level of visibility and weather conditions. The readings start before the morning peak and continue until about 7 p.m.

The measurements obtained are recorded on a cassette tape. The van can be left unattended at the site, and at the end of the day the information on the cassette is transcribed and analysed by computer.

Scientific Officer David Ford, who is carrying out the investigation programme, said there was very little statistical information available on air pollution on specific roads in Melbourne.

He said the van can be placed in the vicinity of a road near the source of vehicle emission to obtain specific readings. The location would vary depending on the type of research.

The impact that speed and traffic volumes have on air pollution can also be measured.

The EPA takes overall air pollution readings from different parts of Melbourne but does not normally measure vehicle exhaust emission at particular locations.

Dear Sir,

Now that I have vacated the office of Secretary of the Mortlake Shire and my successor has taken over, I feel that I must write to the Country Roads Board and express my very great appreciation for the goodwill always extended to me by the Board and its officers over the 48 years which I have actually occupied the post of a Shire Secretary in this State.

I took up office as Secretary of the Otway Shire early in 1928. The Shire was of course "broke" and it could not pay its contributions to the Board. For the next six years this state of affairs went on and therefore I seemed to grow closer to the Board which did all it was possible to help.

We had visits from both the Board and several from Mr Hicks, Board Accountant at that time, to clear up a lag in claims for old jobs. Right through this period the CRB was doing major works—not as one sees them today with all the modern road making machinery—in some cases by pick, shovel and barrow. The most wonderful thing done for settlers in remote areas at that time was the construction of Isolated Settlers Roads.

## LETTERS

I can well remember farmers in places like the Wild Dog Valley and Johanna River gaining access to their properties by horse and sledge because the access was so steep. Soon the pack-tracks were gone and these isolated but fertile valleys were open with good access.

After Otway I went to Woorayl which had been opened up for some years but still the CRB had to assist with roading, many deviations and so on. By this time cars were being advertised to travel "50 miles an hour all day long". Still, it was only 10 mph less than today's legal limit. It was at Leongatha that Mr F W Fricke, (CRB Chairman 1938-40) and his daughter and Mr Dale (CRB Chairman 1945-49) attended a Shire Municipal Ball. It was truly quite an event.

Is it any wonder that one's mind remains full of the happy struggles of one's earlier days—Billy tea and scones in Turtons Track with the Board, camp made fruit cake away up Sunnyside Road, road inspections were quite famous.

Can one compare the old with the new—of course not, but it is useful at times to remember other times.

Thank you once again. I appreciate all that the CRB did for me in those early days.

**W J Gray**  
**Mortlake**

Dear Sir,

It disturbs me very much to see so many of our native birds killed by motorists on our roads. I have (in one day) counted ten mutilated magpies and a kookaburra lying on the Murray Valley Highway in the ten miles between my home and Nathalia. These birds are evidently picking up insects left stunned on the road.

My experience has proved that a toot on the horn warns them of an approaching car, and saves their lives.

I suggest that the CRB might consider starting a slogan such as "Save our Birds, Toot them off the road"! You will be doing Australia a great service in helping to save this needless slaughter of our declining bird-life.

**C S Garonne**  
**Kotupna**

# ENGINEERS HAVE WIDER VIEW

Engineers had widened their concept of the "best solution" for transport problems to include environmental factors, Mr R E Saunders, leader of the CRB Environmental Studies Section told the conference.

He said the Government had directed that the full implications of road proposals should be carefully evaluated for environmental factors.

"As a result, local environmental controls are viewed as an educational tool aimed at instil-

ling an attitude of awareness towards community values and the environment, and a willingness to consult."

Mr Saunders said environmental studies searched for better solutions to road planning and design problems.

"Better solutions are not necessarily cheaper or even more cost effective solutions, but ones which take into account the broad effects of our proposals on the whole surrounding environment."

## THE 33rd MUNICIPAL ENGINEERS CONFERENCE

He said a wide range of environmental study detail based on government guidelines was often required for different projects.

For example, planning for the Seymour to Avenel section of the Hume Freeway was considered significant enough in environmental terms to warrant the preparation of an Environmental Impact Study.

After the statement was approved by the CRB, it was forwarded to the Ministry of Conservation. The Ministry invited public submissions and circulated the statement to local councils and statutory authorities.

The environmental reporting system was now an accepted part of CRB activities.

Mr Saunders said the aim of environmental study and assessment procedures was not "to satisfy every Tom, Dick and Harry", but rather to establish a system which ensured that environmental factors were fully considered in decision making, and the effects of proposed works were taken into account before decisions were made about construction.



Some of the conference delegates inspect work on the Greensborough Freeway site where road over rail overpasses are being constructed.

## Predicting future trends

Future demand for road travel may be different to that now anticipated, CRB Chief Planning Engineer, Mr R T Underwood told the conference.

He said present indications are that the demand for increased road travel, by both private and public vehicles, will continue well into the foreseeable future.

"However, the longer term effects of population growth and vehicle ownership trends, environment protection policies, energy conservation policies, and the like, cannot now be assessed with any surety.

"Accordingly, it may be desirable to express estimates of future road travel as a range, i.e.,

high usage estimate, low usage estimate, and best estimate."

Mr Underwood said many proposals would not be implemented for some years. In some urban areas the population was reasonably mobile, and the area could undergo redevelopment, so that in the normal course of events, the population and development that would be affected by the proposals at the implementation stage may be substantially different from that now there.

Thus, placing too much weight on problems as perceived under existing conditions may not be realistic in those situations where implementation was some years away.

Transport studies in urban corridors were being carried out to identify problems now and in the future and how to overcome them.

It was a fundamental requirement that deficiencies, or needs, be clearly identified, and be accepted by the community. Without this acceptance of need, it would be very difficult to arrive at acceptable proposals.

Recent studies of this type that have been carried out in Melbourne include the F6 Corridor Study, the Eastern Corridor Study (which was a combination of the earlier Ringwood Roads Impact Study, and the Koonung Corridor Study), and the Western Approaches to the Eastern Freeway Study.

The Conference was held at the CRB Head Office, Kew, on the 21st and 22nd March, 1977.

# Better traffic flow at low cost

**Schemes to improve traffic management need not be high cost major projects, the CRB Assistant Chief Road Design Engineer, Mr A M Noble, told the conference.**

He said the emphasis today was often on low-cost, high value programs.

Improvements should meet certain criteria:

- *expenditure should provide positive benefits*
- *work should be capable of being carried out in stages*
- *work should be compatible with other local and State schemes*

He said in so many situations improvements could be obtained at little or no extra cost, for example, moving new signs that had been placed where they were poorly visible to approaching motorists.

"In recognition of the need for better traffic management to reduce accidents, Governments in some countries have introduced programmes generally of minor construction or reconstruction works to improve traffic operations, capacity and safety."

In Victoria priority road programs such as METCON or STATCON derived a great deal of their success from large scale implementation, which affected driver expectancy and behaviour — isolated or haphazard implementation may have resulted in increased accidental potential at certain locations.

"Irrespective of the need to conform with the normal budget constraints of Government programs, there is a constant need for engineers to determine priorities outside such programs. Within the limited finances presently available to road authorities and municipalities it is necessary to make the maximum use of these resources to achieve the highest benefit at the lowest cost," Mr Noble said.

# Roads and the Garden State

**Each year Victoria's road authority, the CRB, makes a major contribution to landscaping in the "Garden State".**

More than 100,000 trees and shrubs are planted annually by the CRB along State highways, freeways and roads under the Board's jurisdiction.

The CRB Chairman, Mr R E V Donaldson, said this had been and will continue to be the Country Roads Board's contribution to Victoria's reputation as the Garden State.

"We have always regarded ourselves as a conservation authority and actively pursued a policy of landscaping roadways," Mr Donaldson said.

"Apart from the Forests Commission, we are the biggest planter of native trees and shrubs in the State, and on the Hume Freeway (Wallan-Broadford) project opened last year, we planted a total 40,000 trees and shrubs."

From 25th March to 30th March the CRB joined seven other State Government departments at a display at the Exhibition Buildings to highlight Garden Week in Victoria.

Victoria, the Garden State, has much to be proud of when looking at the State's natural bush areas, National Parks and recreation areas.

Roads are the principal means of travelling to these scenic areas.

Mr Donaldson said he believed the greatest problems facing the development of the roadside, and in fact the Garden State of Victoria are vandalism and litter.

"As many as 20 percent of trees and shrubs planted in new landscaping projects are destroyed by vandals," he said.

Collection of litter from our roads reserves costs about \$1 million annually.



- The view of the Yarra Bend Park that motorists will have when the Eastern Freeway is opened. The park, around the banks of the Yarra River at Yarra Bend, has been extensively landscaped with thousands of trees and shrubs planted by the CRB.

Last year in the American state of Connecticut, the Construction Industries Association initiated a plan to revive millions of dollars of highway construction and improvements that had become bogged down by public apathy, a hostile press, environmentalists and anti-highway groups.

Within a year the Association was successful in gaining wide community support, correcting false allegations in the media, lifting work bans on \$1 billion of highway improvements, and encouraging new construction projects. Citizens recognised the necessity of good roads.

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# THE PUBLIC AND ROAD ISSUES

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In 1975 much of Connecticut's road program, particularly improvements of existing highway facilities and completion of the Interstate system, had ground virtually to a standstill. This had come about principally from the efforts of highly vocal anti-highway organisations which, among other things, had succeeded in halting \$1 billion of highway work by court order.

There were other efforts by mass transit advocates to stall much needed extension of planned segments of the Interstate system.

Fed up with what was happening — or, rather, with what wasn't happening — the Connecticut Construction Industries Association (CCIA) and the Connecticut Good Roads Association decided upon a plan of action.

The Chairman of the CCIA public relations committee, Raymond A Roncari, said "We have been complaining to ourselves long enough. We have been kicked around in the mass media, we have witnessed false allegations and incorrect facts go un rebutted, we have experienced the adoption of legislation that makes it practically impossible to continue in business, and we have been subjected to accusations and disruptions in our way of life by self-appointed citizens' groups.

"Now we have decided to pick up the gauntlet and tell it like it is. We have embarked on a public information campaign in which we will correct distortions, prevent inaccuracies, challenge falsehoods, and hopefully get the construction industry back to the productive capacity that is necessary for the growth and well being of the state's economy."

CCIA's first step was to hire a Director of Communications as a full-time staff member. Veteran newsman William J Huebner, former real estate and construction editor of the Hartford Times, was given the job.

PR Committee Chairman, Roncari said: "We need to know how to correct the problem of misinformation and inaccuracies issued by groups in opposition to highways. The solution we arrived at was to hire a newspaperman with a public relations background and heavy contacts with the news media so that our message could be given at least equal space or time as our opponents."

Bill Huebner got to work late in 1975 organising action committees throughout Connecticut, composed of citizens favouring completion of the Interstate highway system in the state. CCIA provided these groups with educational material and bumper stickers proclaiming support for the highway program. Letter writing campaigns to legislators and congressional representatives were initiated, along with TV and radio appearances and press conferences. These activities united the citizens in favour of highways into a powerful force and provided a balance to the opposition.

At public hearings called throughout the state on proposed new Interstate programs, the citizens committees formed car pools and chartered buses to transport supporters to the hearings. This resulted in proponents of highways outnumbering opponents for the first time in the history of state hearings. Supporters were dominant, and political decision-makers and the press took strong notice of the fact.



Bumper stickers... part of the campaign by American road construction organisations against the anti-highway lobby that had halted \$1 billion of road works.

Some problems developed during the course of the campaign. Once the public information program started and news media realized a source of accurate information was available, demands for documentation became exceedingly heavy. Because a limited news reference library existed at CCIA, an expanded library had to be put together quickly.

Moreover, opponents to road construction programs soon became aware of a counterforce challenging their policy papers, statements, figures, and so on. A battle developed in the media between the pro-construction and anti-construction forces. To combat this, the organisation of citizen committees throughout the state was developed as auxiliary groups to assist CCIA. Further, CCIA received excellent support from construction unions at hearings and from union public relations people.

The CCIA efforts prevailed to the extent that, during the early months of 1976, every highway expansion or new highway construction program shelved for lack of public support was taken from the shelf and activated in face of this heavy citizen demand for new and better highways. The court-ordered ban on \$1 billion of highway work was lifted. There was a major effort by citizens groups and labour unions to use \$70 million of lapsing Federal Highway Trust Fund monies, due to expire 30th June, 1976, to widen sections of Interstate highways. All deadlines were met and \$70 million in new contracts were awarded.

The executive secretary of CCIA, Donald Lynch, said that several secondary benefits derived from the organisation's public relations efforts, including an overall awareness of the part the construction industry actually plays in the economy of the state.

"Nonsolicited volunteer groups favouring certain projects asked for our logistical support: speech writing, press releases, and so on. These new groups, actually the grass-roots support we had been seeking, became active."

In summing up the program, Raymond Roncari said: "I have always believed that success would be the inevitable result if we had fair play between the industry and the news media and if we sent the right man to fill the right place."

"If one were to measure success based on a release of construction dollars forced by demands by the public and news media, that measure of success is evident now within the Connecticut Construction Industries Association.

"Our program was born out of necessity. It is recommended to all other associations dealing with construction and the construction industry's relationship with the citizens and news media."

● *From Asphalt, publication of the U.S. Asphalt Institute, October, 1976.*

"Speaking Of ..." is a regular feature of CRB News, where reprinted or discussion articles are published on matters directly or indirectly relating to roads and transport in general. They do not necessarily represent the views of the CRB but are published as a matter of interest and discussion.

# STUDENTS REPLY TO CRB SURVEY

**Victorian high school students have definite ideas on roads, cars and how both affect the environment.**

A CRB survey in schools produced a total of 500 completed questionnaires from suburban and country schools.

The survey revealed strong trends:

- More than 90 per cent of students plan to apply for a driver's licence when reaching eighteen.
- More than 80 per cent plan to have their own cars after getting their licences.

Most students said roads were necessary for travel and employment — but had a harmful effect on the environment because trees had to be cut down, animals were hit by vehicles, and busy roads resulted in noise and air pollution.

And if they were road builders, the students would build roads where they would have the least effect on the environment; they would make them wider and safer; and maintain the road surface at a high standard.

Students obviously regard the environment surrounding the roads as important, and recommend that trees and shrubs should be planted alongside roads.

## Among the comments were:

*Question 8: Are roads harmful to the environment?*

"Roads with their cars, buses and other forms of transport spewing forth every imaginable kind of pollution (air, noise, etc)."

"No they are not! What on earth would we all do if roads did not exist — fly to work?"

"Bushland and homes are destroyed to make way for roads."

*Question 9: If I were building roads I would . . .*

"Scrap the whole project and look towards starting on a pollution-free type of transportation system."

"Make bitumen more attractive (don't ask me how)."

"Have good lighting, good quality surface."

## Survey results

|                                                                           | CRB SURVEY |    | U.S. SURVEY |    |
|---------------------------------------------------------------------------|------------|----|-------------|----|
|                                                                           | YES        | NO | YES         | NO |
| Q.1. Do you plan to apply for a driver's licence when you reach eighteen? | 91         | 9  | 97          | 3  |
| Q.2. Do you plan to have your own car when you get your licence?          | 82         | 18 | 73          | 27 |
| Q.3. Is public transport available in your area?                          | 89         | 11 | 80          | 20 |
| Q.4. Does your family use public transport?                               |            |    |             |    |
| Frequently                                                                | 22         |    | 7           |    |
| Occasionally                                                              | 29         |    | 25          |    |
| Seldom                                                                    | 34         |    | 35          |    |
| Never                                                                     | 15         |    | 23          |    |
| Q.5. Is the public transport adequate in your area?                       | 57         | 43 | 53          | 47 |
| Q.6. Are the main roads adequate in your area?                            | 66         | 34 | 78          | 22 |
| Q.7. Should additional roads be built?                                    | 41         | 59 | 36          | 64 |

# CONTRACTS

• A summary of major contracts over \$100,000 entered into by the CRB from 6th November, 1976, to 25th February, 1977.

| Road                                                      | Description                                                                                                                                                                                           | Contractor                             | Amount \$    |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--------------|
| South Gippsland Freeway (Hampton Park)                    | Supply of materials for the South Gippsland Freeway bridge over the South Gippsland Highway at Hampton Park.                                                                                          | Humes Ltd, Melbourne                   | 130,992.00   |
| Hume Highway (Campbellfield)                              | Supply and delivery of crushed rock and asphalt to the Hume Highway between Campbellfield and Kal Kallu.                                                                                              | Boral Resources (Vic) P/L, Hawthorn    | 238,551.00   |
| South Gippsland Freeway (Hampton Park)                    | Construction of a two span bridge 74 m long and 16 m between kerbs over the South Gippsland Highway at Hampton Park.                                                                                  | Hood Constructions P/L, Mt Waverley    | 108,536.00   |
| Mornington Peninsula Freeway (Chelsea Heights)            | Supply of concrete beams for a bridge over the Patterson River on the Western carriageway of the Mornington Peninsula Freeway.                                                                        | May's Vibrated Concrete P/L, Moorabbin | 125,237.00   |
| Canterbury Road/Dorset Road Intersection, Bayswater North | The supply, delivery, spreading and compaction of asphalt.                                                                                                                                            | Boral Resources (Vic) P/L, Hawthorn    | 106,092.00   |
| Princes Freeway/Maltby Bypass                             | Supply, delivery, spreading and compaction of 5310 tonnes of asphalt and 9900 tonnes of wearing course on both carriageways of the Princes Freeway (Maltby Bypass).                                   | Construction Materials (Aust) Ltd      | 385,699.50   |
| Hume Freeway (Avenel)                                     | Construction of earthworks and drainage for 3106 metres of divided freeway carriageways, 1846 metres of single freeway carriageway and 2706 metres of frontage road for the Hume Freeway at Avenel.   | Keathson P/L, Thomastown               | 1,186,954.00 |
| Hume Freeway (Avenel)                                     | Supply and stockpiling of 225,000 tonnes of crushed rock and 275,000 tonnes of pavement material for the Hume Freeway.                                                                                | Pioneer Concrete (Vic) P/L, Prahran    | 1,901,070.00 |
| South Gippsland Freeway (City of Berwick)                 | Supply, delivery, spreading and compaction of 6250 tonnes of asphalt on the South Gippsland Freeway between the Princes Highway East and the Eastern Railway Overpass.                                | Boral Resources (Vic) P/L, Hawthorn    | 165,859.00   |
| South Gippsland Freeway (Hampton Park)                    | Supply and delivery of 25,000 tonnes of crushed rock to the South Gippsland Freeway at Hampton Park.                                                                                                  | Pioneer Concrete (Vic) P/L, Prahran    | 154,250.00   |
| Princes Highway West, Brooklyn                            | Supply, delivery, spreading and compaction of 5500 tonnes of wearing course and 200 tonnes of asphalt on the Princes Highway West between Millers Road/McDonald Road and Kororoit Creek.              | Pioneer Asphalts Pty Ltd, Clayton      | 142,500.00   |
| Calder Highway (Harcourt)                                 | Construction of 1751 metres of roadworks on the Calder Highway north of Harcourt.                                                                                                                     | Leech Earthmoving Pty Ltd, Castlemaine | 315,161.45   |
| Donna Buang Tourists' Road                                | Supply and delivery of 400 tonnes of asphalt and supply, delivery, spreading and compaction of 3000 tonnes of asphalt on the Donna Buang Tourists' Road between the 10 mile turntable and the summit. | Boral Resources (Vic) P/L, Hawthorn    | 113,500.00   |
|                                                           | Supply and delivery of spherical glass beads for period 1st February, 1977, to 31st January, 1979.                                                                                                    | Potter Industries P/L, Derrimut        | 127,500.00   |

## ROAD PUBLICATIONS

The following publications can be obtained from the CRB by filling in the attached coupon and returning it to Public Relations Section, Country Roads Board, 60 Denmark Street, KEW, 3101.

| CRB                                                              | NAASRA                                            |
|------------------------------------------------------------------|---------------------------------------------------|
| <input type="checkbox"/> The Roadbuilders                        | <input type="checkbox"/> Roads and Traffic Noise  |
| <input type="checkbox"/> Traffic Noise - A Shared Responsibility | <input type="checkbox"/> Roads and Traffic Safety |
| <input type="checkbox"/> Improving Melbourne's Road System       | <input type="checkbox"/> Roads and Pollution      |
| <input type="checkbox"/> Widening of Nepean Highway (Revised)    |                                                   |
| <input type="checkbox"/> Snow Driving - It's An Art              |                                                   |
| <input type="checkbox"/> Roads With Built-in Safety              |                                                   |
| <input type="checkbox"/> Science in Road Development             | Name .....                                        |
| <input type="checkbox"/> Urban Freeways                          | Organisation .....                                |
| <input type="checkbox"/> The Hume Challenge                      |                                                   |
| <input type="checkbox"/> Orbost (Princes Freeway)                | Address .....                                     |
| <input type="checkbox"/> Back Issues, CRB News                   |                                                   |
| <input type="checkbox"/> Calder Freeway (Keilor Section).        |                                                   |
| <input type="checkbox"/> Converting Lancefield Road to Freeway   |                                                   |

# U.S. EXPERT HAS SIMPLE ROAD TOLL SOLUTION

Recent advances in car accident prevention have resulted simply from minimizing the demands put on drivers, American safety expert, Professor Robert Borkenstein, said in Melbourne recently.

Fatality rates on low-demand freeways were about one-fourth of those on rural roads and highways, he told the 7th International Conference on alcohol, drugs and traffic safety, held in late January.

"Engineering the highways and vehicles with fewer demands on the driver still has untouched opportunities. Improving capabilities of drivers to meet the remaining demands is much more difficult.

"Human behaviour is stubborn. While many high risk driving acts are criminal in nature, most are simple driving errors brought about by the incapability of drivers to meet the demands."

He said these driving errors should be tacked as a problem of matching demands and capabilities as well as a problem of fault and responsibility.

"We need traffic laws to limit the types of behaviour conducive to accidents. These laws are guidelines for the well-intended driver and prohibitions for those who are aggressive and dangerous."

Professor Borkenstein said a current study underway at the University of North Carolina

Highway Research Centre is focussed on integrating data on all types of unsafe driving actions. This research could lead to an entirely new foundation for traffic laws — laws that would be perceived as more realistic by the well-intended segment of the driving public.

He said that in all developed countries, the number of private cars in use was increasing rapidly.

"Fatality rates based on distance travelled varies widely. Perhaps the fact that some nations have low rates is rooted in maturation. For instance, the United States has had fifty years to try to learn to live with the automobile on a large scale

while most nations have had only a decade or so of this experience.

"There is still great inequity, especially in the third and fourth world nations. The mobility provided to the people of these nations also varies enormously, but not as enormously as fifteen years ago.

"Two decades ago three-quarters of all the automobiles, vans, and trucks in the entire world as well as half the improved highways of the world were in the USA, serving only eight per cent of the world's population. During the last decade, this condition has changed rapidly.



**Construction of a new bridge to carry the Goulburn Valley Highway across the Goulburn River at Trawool will be completed in May 1977. The five span bridge and roadworks is estimated to cost \$1 million.**

## Mildura Bridge study

**A study of the environmental and landscape effects of the siting of a new bridge across the Murray River at Mildura is currently being made by an independent consultant.**

Professor Ken Polakowski of Melbourne University's Centre for Environmental Studies has made three visits to Mildura since January to look at the proposed sites and discuss plans with the Mildura City Council and residents.

CRB officers have conducted noise tests in Mildura as part of the study. They used analytical equipment at three different locations over an 18 hour period.

Professor Polakowski's recom-

mendations will be made to the CRB.

The study was initiated after the Board and Mildura City Council met on 9th December, 1976, to discuss which site should be chosen for Mildura's bridge.

The CRB and New South Wales Department of Main Roads' engineers favour Deakin Avenue as the site for the bridge, but the Mildura City Council favours a bridge site close to and upstream of the existing bridge.

No decision has been made on a final site for the bridge. The CRB and the DMR, NSW, have rejected proposals to improve

the existing bridge as being uneconomic.

Replacement of the Murray River Bridge at Mildura has become desirable because the minimum width of 4.25 metres on its lift span is imposing safety risks and delays to traffic, which at present flows at the rate of more than 6,000 vehicles a day. In addition, traffic flow is interrupted while the span is lifted for shipping.

● Professor Polakowski joined Melbourne University in July, 1975, from Michigan University's School of Natural Resources, where he was involved in selecting a scenic route between national parks in three states, and advising on the best recreational use for a three mile long river front park in Michigan. He will return to the US in July, 1977.

# Towards better roads

***Towards Better Roads details progress on improvements by the CRB to the major road network of the State.***

***The cost estimates used are current as at March, 1977.***

***Major works currently under construction by the CRB are summarised below.***

## **F9 Freeway, South Melbourne**

Work on the F9 Freeway between the Lower Yarra Freeway and Grant Street, South Melbourne, has been accelerated.

Work to begin this year will include—the reconstruction of Grant Street between St. Kilda Road and Sturt Street; improvements to roads immediately east of the Lower Yarra Freeway at Graham Street, Port Melbourne; and relocation of some existing services, such as gas and electricity supplies.

An amendment to the Melbourne Metropolitan Planning Scheme is being sought to amend the main road reservation and an environmental study of the area is expected to be completed later this year.

The current estimated cost of the freeway is \$80 million and is scheduled for completion in late 1981.

## **Mulgrave Freeway**

A further \$4 million section of the Mulgrave Freeway between Forster Road and Blackburn Road, Mount Waverley, a distance of 1.6 km, was opened on 5th April, 1977.

Widening of Forster Road between Ferntree Gully Road and Waverley Road, intersection improvements and the installation of traffic signals, have been carried out in conjunction with Waverley City Council to ensure efficient traffic movement to and from the freeway at Forster Road.

## **Eastern Freeway**

Bridges across the freeway at the Boulevard, Chandler Highway and Bulleen Road have been completed and work on the freeway section between Hoddle Street and Bulleen Road pro-

ceeding satisfactorily.

The alignment of an easterly extension of the Eastern Freeway to Doncaster Road, substantially within the existing Melbourne Metropolitan Planning Scheme reservation and with minor relocation of the Koonung Creek, has been approved by the Government.

Design of this easterly extension to Doncaster Road is continuing.

## **Mornington Peninsula Freeway**

Construction of this 6.6 km section of freeway between Eel Race Drain and Springvale Road is under way. The work is estimated to cost \$11.2 million and is scheduled for completion in 1980.

## **Hume Freeway**

Construction is under way on four sections of freeway north of Seymour.

***Bypass of Seymour to Avenel*** — Work on the first 20 km section bypassing Avenel has started and is scheduled for completion in 1981 at an estimated cost of \$16 million.

***Avenel to Tubbs Hill*** — 12 km of duplication work is expected to be completed in late 1978 at an estimated cost of \$7.5 million.

***Bypass of Violet Town*** — Work on relocating services on this 6.2 km section of freeway has begun. The project is estimated to cost \$5.5 million and is scheduled for completion in mid-1979.

***Violet Town to Baddaginnie*** — Duplication of this 10.4 km section of highway is expected to be completed late this year at an estimated cost of \$4.3 million.

## **Johnson Street Bridge, South Melbourne**

Beams for the first river span have been placed and approach roadworks are well advanced.

The project is expected to be completed by mid-1978 at an estimated cost of \$32 million.

## **Princes Freeway**

Work has commenced on the construction of the Princes Freeway from Robin Hood to east of Warragul which will provide a bypass of the towns of Drouin and Warragul.

The current work involves the duplication of two kilometres of the existing Princes Highway as part of a future freeway interchange two kilometres east of Drouin.

The total cost of the two sections is estimated to be \$31 million.

## **Nepean Highway**

Notices of acquisition have been served on properties affected by the first 2.4 km section of this project between Cochrane Street, Elsternwick and Hampton Street, Brighton.

The total 6 km project between Cochrane Street and South Road is scheduled for completion by 1983 at an estimated cost of \$32 million.

## **Camp Road, Broadmeadows**

Construction of a road over rail overpass at Camp Road is continuing and when completed, will eliminate the existing level crossing and carry Camp Road over Pascoe Vale Road.

## **Tullamarine Freeway**

The upgrading to freeway standard of the Lancefield Road section of the Tullamarine Freeway route is continuing.

Two pedestrian overpasses have been completed and work on the English Street interchange to provide access to the Essendon Airport is under way.

The project is scheduled for completion in early 1980 at an estimated cost of \$6 million.

## **Greensborough Freeway**

Construction of road over rail overpasses is continuing at Watsonia Road and Grimshaw Street, Watsonia, to eliminate these railway level crossings.

The construction of the overpasses is scheduled for completion in early 1978 at a cost of \$5.5 million.

The new overpasses are associated with the future Greensborough Freeway north from Watsonia, bypassing the Greensborough Shopping Centre.

## **Princes Freeway, Orbost**

Work is continuing on the 8.4 km freeway bypass of Orbost. The main bridge across the Snowy River was opened to traffic in November, 1976, and bridges at Ashbys and Watts Gulch have been completed.

The whole project is scheduled for completion late in 1977 at an estimated cost of \$9.5 million.

## **Western Freeway**

Construction of 8.4 km of freeway bypassing the township of Ballan is continuing.

Major earthworks and the twin bridges across the Werribee River are nearing completion, and construction of other bridges is continuing.

The project is scheduled for completion in mid-1978 at an estimated cost of \$8.2 million.

## **South Gippsland Freeway**

Construction of a freeway interchange at the South Gippsland Highway, Hampton Park, is well advanced.

In December, 1976, the CRB opened the section of the freeway between Princes Highway East and Pound Road, plus the freeway carriageway for south-bound traffic from Pound Road to the South Gippsland Highway.

The whole project is scheduled for completion late in 1977 at an estimated cost of \$12 million.

## **Princes Highway East**

**Manorina** — Reconstruction of 2.5 km of highway and improvements to intersection with Sydney Inlet Tourist Road. The

**Simpsons Creek Bridge** — Reconstruction and realignment of 3.8 km of highway and con-

struction of a three span concrete bridge. This work is estimated to cost \$650,000 and is scheduled for completion in mid-1977.

**Morwell to Traralgon** — Duplication of 10 km of highway at an estimated cost of \$2.5 million. The last 2.5 km section is scheduled for completion in mid-1978.

**Trafalgar** — Duplication of 0.8 km of highway through Trafalgar. This work is scheduled for completion by mid-1978 at an estimated cost of \$1 million.

**Warragul** — Duplication of 0.7 km of the highway between Tarwin Street and Hunter Crescent. This work is estimated to cost \$500,000 and is scheduled for completion in early 1978.

**Officer to Pakenham** — Duplication of 8.8 km of highway. This work is estimated to cost \$3 million and is scheduled for completion in mid-1978.

## **Fisher Parade Bridge, Footscray**

Work is continuing on the construction of a new bridge across the Maribyrnong River. The main bridge contract is expected to be let before June, 1977.

The project is scheduled for completion in 1978 at an estimated cost of \$1.1 million.

## **Bellarine Highway, Wallington**

Duplication is progressing on 2.5 km of the Bellarine Highway between Bawtree Road, east of Leopold and the Wallington-Ocean Grove Road.

This work is scheduled for completion in August, 1977, at an estimated cost of \$650,000.

## **Great Ocean Road**

Reconstruction of 7 km of the Great Ocean Road west of Apollo Bay is under way. The work is expected to be completed by mid-1978 at an estimated cost of \$1 million.

## **Western Highway, Horsham**

A new bridge across the Wimmera River in Horsham has been opened to traffic and work has commenced on remodelling the existing bridge. This is the last phase of construction of 1.7 km of divided highway on the southern approach to Horsham.

The whole project is scheduled for completion in late 1977 and is estimated to cost in excess of \$1 million.

## **Wimmera Highway, Natimuk**

Work is under way on the reconstruction and realignment of the highway west of Natimuk through two swamp areas.

The work is scheduled for completion in June 1977, and is estimated to cost \$220,000.

## **Princes Highway West**

**Weerite** — Construction of a road over rail overpass and 1.6 km of highway. The three span overpass and roadwork is scheduled for completion in February 1978 at an estimated cost of \$700,000.

**Camperdown** — Reconstruction of 2.9 km of highway west of Camperdown is scheduled for completion in June 1977 at an estimated cost of \$145,000.

## **Banksia Street, Heidelberg**

Work on widening and flaring the Banksia Street-Lower Heidelberg Road intersection was completed in February 1977 and work is continuing on the adjoining intersection at Banksia Street and Dora Street.

The whole project is scheduled for completion in July 1977 at an estimated cost of \$1.5 million.

## ***Ballan Bypass next year...***

The 8.4 km freeway bypass of Ballan on the Western Highway, about 80 km west of Melbourne is scheduled to be opened in mid-1978. Major earthworks and the twin bridges over the Werribee River are nearing completion.

Pictured on the site are CRB engineers (from left) Don Holmes (bridgeworks), Ted Oppy (Ballarat Divisional Engineer), Neil Brogden (Project Engineer) and Alan Harman (earthworks).

