



2007 World Road Congress

The 2007 World Road Congress will be held in Paris, France, from 17 until 21 September.

As a forum for international road industry professionals in the development, management and operation of roads and road transport, the Congress will provide an outstanding opportunity to meet new people, exchange knowledge and experience and discuss solutions. Austroads is coordinating the Australian and New Zealand involvement and it is anticipated that a significant Australasian delegation will attend.

The Congress will include; a ministerial session on road pricing; strategic direction sessions; technical sessions, based on the work of technical committees; and special sessions, with Austroads organising a session on heavy vehicle operations. There will also be poster sessions, at which individual contributions and national reports will be presented.

A number of events and activities are being arranged specifically for the Australasian delegates, including a welcome reception at the Australian Embassy. If you are planning to attend the Congress, please advise the Austroads national office so you can be included in the arrangements. Contact austroads@austroads.com.au and an information package will be sent to you. A copy of the information package is also available online at www.austroads.com.au

Early bird registration is available for a reduced price until 30 June 2007.

World Road Association (PIARC) technical committees

In each edition of the newsletter, Austroads aims to provide a brief overview about the work of two World Road Association (PIARC) technical committees.

Engineers and other specialists are appointed by PIARC member countries to sit on one of 18 technical committees. Technical committees work on various subjects in the road and road transport field to produce reports based on best practice and make recommendations to road and research engineers. The terms of reference of the various technical committees are available on the [PIARC website](#).

This edition of the newsletter looks at Road/Vehicle Interaction and Financing Road System Investment.

Road/Vehicle Interaction technical committee

Austroads representative – Steve Brown, VicRoads

Historically, the Road/Vehicle Interaction technical committee has dealt with road surface characteristic issues. This work is continuing, however, the committee has broadened its interest beyond just the pavement surface to include interaction with vehicles. This has included the development of a 20 to 30 year vision of what impact future vehicles might have on our road pavements and how pavement managers can plan for this. To understand what vehicles, particularly trucks, might look like in the future, a special workshop is to be held at the World Road Congress later this year. Truck manufacturers, tyre companies and pavement managers will work together to predict what changes might occur in the future.

Other areas where the committee has undertaken work include:

- producing a report on road traffic noise emissions and a paper for the Congress on noise measurement methodologies
- development of a specification for the manufacture of special tyres for skid resistance measurements
- development of guidelines for the management of skid resistance
- work on a review of evenness (longitudinal and transverse profile) measurement devices and guidelines for the measurement, management and use of evenness data

- development of an inventory of methods used for crack and defect detection together with guidelines for automatic crack measurement.

Financing Road System Investment

Austrroads representative – Kathryn Martin, Main Roads Western Australia

The technical committee, Financing Road System Investment, helps with the exchange of knowledge about road financing models by examining how funds are obtained for road infrastructure, how they are allocated across maintenance and investment projects, and new financing strategies such as public private partnerships (PPPs) and their effectiveness.

Almost all countries are facing pressure on central budgets and struggling to fund adequate road infrastructure maintenance, whilst at the same time improving the network to meet emerging needs. This work examines the increasing extent to which private finance is used and the extent to which road users (direct tolls) rather than central budgets are being asked to contribute to road funding.

Trend analysis for the allocation of road funding shows an increasing proportion in OECD countries is being spent on traffic operations. The use of asset valuation information in budget allocations for sustainable asset management is an emerging field, with Norway taking a lead role.

The technical committee has also developed nine case studies of recent PPP projects. At the World Road Congress, the committee will report on the success factors for effective use of PPPs and identify the benefits of country specific regulations in providing a basis for successful PPPs that maintain a strong public sector oversight function.

RoadWatch – Austrroads publications notification service

RoadWatch is an email based service that provides users of the Austrroads publications website with a customised notification alert. Subscribers can nominate to receive alerts about specific publications and/or subject areas, or all publications and subject areas. They are advised by email of any new publications that are released, or changes to existing publications, relevant to their specific areas of interest. The service is available free to all visitors who register on the website. As at 1 June, there were over 12,000 subscribers to the service.

For more information, or to register for RoadWatch, visit the [Austrroads publications website](#).

Austrroads/ARRB fellowships

In 2003, Austrroads agreed to fund Austrroads/ARRB fellowships to encourage and support young engineers carry out postgraduate roads research. The fellowships are aimed at both supporting research and developing the researchers of the future. Recipients of the fellowships enrol with a university as a PhD candidate and also work closely with researchers from the ARRB Group.

Matthew Byrne was awarded the inaugural Austrroads fellowship in 2004 after receiving his BE Honours from Monash University. His PhD research topic was pavement deterioration modelling, which involved using a minimum message length (MML) approach to the data mining of road authority databases. MML is about looking for patterns in the data, by means of the length of data messages, and can lead to greater insights into the relationships between the different variables in a database. This area of work is often referred to as artificial assisted intelligence and is very much at the cutting edge of contemporary mathematics.

His research established that the MML approach can be used to develop prediction models based on large quantities of historical data from road authorities and this approach has been applied to the Queensland rural road network to detect seasonal patterns in road roughness. This work has the longer term potential of finding ways by which these variations can be economically reduced to maintain acceptable levels of ride comfort.

Having completed his PhD work, Matthew will take up a position at the ARRB Group in July 2007.

New Austrroads publications

The following guides and technical reports have been released and are available from the [Austrroads publications website](#):

Guide to Pavement Technology Part 4B: Asphalt (AGPT04B/07)

Part 4B: Asphalt has been prepared as part of the *Austrroads Guide to Pavement Technology* to provide an introduction to the nature of asphalt as a material and its application in road pavements. Asphalt is widely used in the construction and surfacing of roads in Australasia. The properties of asphalt are complex and its performance requirements vary considerably with the application. Engineers responsible for the design of works incorporating asphalt have a responsibility to acquire an adequate understanding of the properties of asphalt and appropriate usage, as well as an understanding of the application of specifications and construction requirements.

The purpose of this publication is to provide an overview of the principal types of asphalt, selection of asphalt mix type, selection of component materials, asphalt mix design, performance characterisation, and manufacture and placing.

Guide to Project Evaluation Part 4: Project Evaluation Data (AGPE04/07)

This is an updated version of Part 4 of the *Austrroads Guide to Project Evaluation* which was originally published in 2005.

It provides a collection of the input unit values and related input data used in project evaluation. Many of the tables presented in this publication are based on Austrroads biannual updates of travel cost unit values. It also incorporates results of recent research related to accident rate estimation and costing, and the valuation of emissions and other externalities. Where data is not available from Austrroads publications, appropriate third party sources are indicated (e.g. traffic counts). *Part 4: Project Evaluation Data* provides guidance rather than values for infrastructure costs, which are best estimated by each transport agency or department.

Telecommunications in Road Reserves – Operational Guidelines for Installations (AP-G72/07)

Austrroads has worked with Communications Alliance, representing telecommunications carriers, to produce a revised and updated publication relating to telecommunications in road reserves.

The guidelines have been developed to establish ways the road authorities and telecommunications carriers can safely, effectively and efficiently manage their respective facilities in road reserves.

This updated version of the similarly titled guidelines was first published in 2002. The publication has been improved to assist both road authorities and telecommunications carriers achieve collaboration when working in road reserves.

Some of the updates and improvements include:

- an expansion of bi-lateral agreements between road authorities and telecommunications carriers
- emphasis on the exchange of information and discussion of future projects at the earliest possible stage
- new sections on road authority considerations when planning roadworks; risk management plans; redundant telecommunications infrastructure; and examples of how to protect telecommunications assets on road projects
- additional information about the management of traffic and processes for dealing with alterations to facilities due to roadworks.

There is also an accompanying document for use by road authorities; *Telecommunications in Road Reserves – Administrative Guidelines for Road Authorities (AP-R303/07)*. Both publications are available to download as a PDF from the [Austrroads publications website](#).

Process for Setting Intervention Criteria and Allocating Budgets: Literature Review (AP-T80/07)

This report provides a review of the available published literature on multi-objective analysis techniques and their use in setting maintenance intervention criteria and allocating budgets. A multi-objective resource allocation model is proposed which allows for trading off intervention criteria across the different assets to meet budget limits. The report includes background information on life cycle cost analysis, its data needs and use in setting maintenance intervention criteria. It also includes a review of current maintenance intervention criteria used by Australasian road authorities for a number of asset items.

Austrroads LTPP and LTPPM Study: Summary Report for 2005-06 (AP-T81/07)

This report presents the summary of project activities conducted in 2005-06. A number of suitable sealed granular pavement sites were identified across Australia for inclusion in the LTPP (long term pavement performance) study. An improved revised method was used to calibrate models for roughness, rutting and cracking to suit Victorian, South Australian and Tasmanian local conditions.

Application of the Analytic Hierarchy Process in Road Asset Management: User Manual (AP-T84/07)

This manual provides guidance for the application of the analytic hierarchy process (AHP) as a decision support tool in road asset management. AHP is a multi-criteria analysis technique that allows trade-off between objectives with different measurement units. With AHP, the user can rank or prioritise a number of options according to their performance in achieving the objectives or assessment criteria. Within the report, the steps involved in applying AHP for the following road asset management activities are demonstrated by examples including; ranking maintenance intervention criteria; allocating budget across the different assets; and trading-off maintenance intervention criteria across assets to meet budget limits.

Road safety risk reporter

The latest issue of the Road Safety Risk Reporter newsletter is now available. This issue explores crash reduction estimates for road safety treatments. The newsletter, produced by the ARRB Group, is designed to disseminate results from the Austrroads-funded Road Safety Engineering Risk Assessment project, which is developing information and advice on more effective ways to reduce road crashes and injuries using road engineering-based measures.

A copy of the report is [available here](#) in PDF format.

Road deaths in Australia: 2006 statistical summary

The Australian Transport Safety Bureau has released its annual statistical summary of fatal road crashes and road deaths in Australia.

Since 2005 there has been an overall decrease by 1.6% in the number of fatalities on Australian roads, although some jurisdictions recorded an increase. The overall national trend for the last five years has been an average annual decrease of 1.7%.

A copy of the report is [available here](#) in PDF format.

Drinking and driving: A road safety manual for decision makers and practitioners

The Global Road Safety Partnership has released a report that explores ways to develop coordinated and integrated programs to reduce drinking and driving. The report explores the problem assessment process and how to plan and implement an anti-drinking and driving program. It also examines ways to develop a plan, provides examples of laws and the type of enforcement needed, and reviews how to develop public education and publicity campaigns, and discusses how to evaluate a program.

A copy of the report is [available here](#) in PDF format.

Walking school bus resource kits

Land Transport New Zealand has developed walking school bus resource kits. A walking school bus resource kit is a one-stop shop of resources for parents/caregivers, teachers, road safety coordinators, travel planners, or others who work in schools such as sport and health promoters, to get a walking school bus underway. The kit contains resources such as guidelines, brochures and posters, along with rewards for children such as stickers and certificates.

For more information about the scheme visit the [Land Transport NZ website](#).

Calendar of forthcoming events

ARRB knowledge transfer workshops in 2007

ARRB develops and delivers training workshops and explanatory seminars, many of which are based on Austroads publications, using internal technical experts, specialist consultants and road authority staff.

In 2007 ARRB will be running a series of workshops throughout Australia and New Zealand covering subjects such as intersections at grade, roundabouts, road network management, traffic engineering practice, community road safety and bridge inspections.

For detailed information about times, dates and locations visit the [ARRB website](#).

National Local Roads and Transport Congress

8 - 10 July 2007, Newcastle

The Australian Local Government Association (ALGA) National Local Roads and Transport Congress brings together over 400 elected council members, council officers responsible for roads and transport portfolios, state and federal government senior executives and transport industry representatives from across Australia to discuss essential information on a wide range of local roads issues, including policy, road use, maintenance and funding. The Congress is the main annual local government transport forum and plays a central role in bringing local government together to help shape and define the case for better funding and management of the nation's local road network. More information is available from: www.alga.asn.au/policy/transport/congress

Transport – The Next 50 Years

25 - 27 July 2007, Christchurch, New Zealand

The theme of this conference will cover transport in the wider context as opposed to focusing only on land transport and also contains a strategic and long-term focus. There will be plenary sessions for keynote speakers and three or four concurrent streams dealing with infrastructure funding, the future of transport, the land use planning-transporting nexus, urban form, freight issues, public transport, modal shift and transport related social issues. More information is available from: www.transport07.co.nz

Queensland Department of Main Roads Technology Forum

7 - 9 August 2007, Brisbane

The theme of the Queensland Main Roads Technology Forum is 'Delivery, Innovation and Governance'. The Technology Forum provides a unique opportunity to showcase the development of strategic initiatives and the use of contemporary innovation and technology. Delegates will gain a greater understanding and appreciation of available practices which provide flexibility while maintaining consistency across processes. For more information please contact: craig.l.moss@mainroads.qld.gov.au

International Public Works Conference

26 - 30 August 2007, Cairns

The conference is organised by the Institute of Public Works Engineering Australia (IPWEA). The program will aim to provide maximum opportunities for professional development and learning while incorporating interaction and networking with other delegates. A day will be dedicated to providing technical tours around the Cairns region. More information is available from: www.ipwea.org.au/events

Road Safety Research, Policing and Education Conference

17 - 19 October 2007, Melbourne

The theme of this conference is 'The Way Ahead' and will focus on the application of road safety research at practical and local levels into the future. The key objectives are to share information about the latest road safety research and initiatives; identify the best examples of translating research into action; and identify key areas for action in research and policy for the future.

More information is available from: www.roadsafetyconference2007.com.au

ARRB conference

30 July – 1 August 2008, Adelaide

ARRB conferences promote and facilitate discussion about issues relevant to the transport industry, and new research being undertaken on the local and international scene. Conferences are held every two years throughout Australasia, and involve local and international delegates.

The next ARRB conference will be held at the Adelaide Convention Centre. Discussions will be held about local and international research and case studies which provide innovative and practical solutions to current and emerging issues. More information is available from: www.arrb.com.au/23conf

The Austroads newsletter is developed and distributed bi-monthly.

Contributions for future newsletters are always welcome and should be emailed to the Communications Manager David Armstrong at darmstrong@austrroads.com.au

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