



Melbourne, 23-24 August 2010

On behalf of Austroads, ARRB is pleased to offer a two-day training workshop on Traffic Theory and Applications.

Analyses of traffic behaviour are essential to both traffic management and road design, and also have application in the broader transport planning field. Such analyses draw upon many aspects of traffic theory, an appreciation of which greatly enhances the technical insights and capabilities of traffic engineers, road designers and transport planners.

This workshop will present and explain the key areas of traffic theory, illustrate their application to various types of traffic analysis and provide participants with hands-on practice in identifying and undertaking the analyses appropriate to different situations.



Who should attend:

- Traffic engineers with the State Road Authority, municipalities and consultancies
- Road designers in public or private practice
- Other transport professionals wishing to have a deeper appreciation of traffic behaviour

Course outline:

The workshop will cover content from both Part 2 *Traffic Theory* and Part 3 *Traffic Studies and Analysis* of the new Austroads Guide to Traffic Management.

It will present a detailed explanation of each of the principal areas of traffic theory, will indicate the areas of application of each, and will provide participants with practical experience in undertaking analyses related to each area of application. The workshop will address:

- Basic traffic flow variables and relationships
- Probabilistic aspects of traffic flow and associated statistical distributions
- Traffic headway distributions
- General concepts of traffic capacity and level of service
- Queuing theory
- Gap acceptance
- Analyses for unsignalised intersections, roundabouts and signalised intersections

The program also will provide overviews of applications of traffic theory to related analyses, including car following, traffic bunching and overtaking, traffic platoons and platoon dispersion, and freeway congestion management.

Course enquiries

For further information about this course, please contact the Events Coordinator on 03 9881 1680, or via email training@arrb.com.au You can also visit our website www.arrb.com.au/workshops



Additional information:

The workshop will relate closely to appropriate Parts of the new, web-based Austroads *Guide to Traffic Management*, drawing upon both Part 2, *Traffic Theory*, and Part 3, *Traffic Studies and Analysis*, of that Guide, to present key aspects of traffic theory and to illustrate typical applications. Applications relevant to other Parts of the same Guide, for example, those addressing traffic management for networks, intersections and activity centres will also be indicated.

Similarly, many applications fall under the heading of road design and reference also will be made to relevant Parts of the new Austroads Guide to Road design.

What to bring on the day:

The practical components of the workshop will require participants to undertake a significant volume of calculations associated with application of theory to traffic problems. Each participant should provide himself/herself with a pocket electronic calculator, with at least exponentiation and memory store/recall capabilities, for use in these exercises.

The presenters:

David Bennett – ARRB Associate

David's civil engineering career has been almost entirely in the transport sector and has included work with a State road authority, in academia (including 16 years as Head of Transport Section, Department of Civil Engineering, University of Melbourne), in consulting and with ARRB Group. Having held a number of senior appointments at ARRB, David retired from full-time work in 2007, as Group Manager, Traffic Management and Safety.

Over his last three years of full-time work, he was responsible for ARRB's management, on behalf of Austroads, of the production of the web-based *Guide to Traffic Management* and *Guide to Road Design*. He also contributed as an author to several Parts of each of those Guides and is the sole author of Part 2, *Traffic Theory*, and a contributing author to Part 3, *Traffic Studies and Analysis*, of the Guide to Traffic Management. As an ARRB Associate, David has recently taken a major role in the production of a new geometric design manual for roads for the Emirate of Dubai, United Arab Emirates.

Michael Levasseur – Consultant, ARRB Group

Michael is a Consultant working within Transport Management and Safety. Michael has more than eleven years working in government and consulting in Australia, the United States and United Kingdom.

He has experience working on a wide variety of projects related to Intelligent Transport Systems (ITS), These include strategy and feasibility development, preliminary design and implementation, cost and benefit evaluation, traffic signal operations, traffic modelling, and incident management planning.

Michael has a degree in Civil Engineering from the University of New Hampshire and is a licensed professional engineer in the State of Colorado, USA

This course is endorsed and supported by:

Institution of Engineers, Australia (IEAust):
This course is recognised by ENGINEERS AUSTRALIA for Continuing Professional Development.



Australian Institute of Traffic Planning and Management Inc (AITPM)



AUSTRALIAN INSTITUTE OF TRAFFIC PLANNING AND MANAGEMENT INCORPORATED

Institute of Transportation Engineers ANZ Section (ITEANZ)



Australian Local Government Association (ALGA)



Australian Local Government Association

Austroads





Workshop Program (subject to change)

Time	Day 1	Time	Day 2
8.30 am	Tea and coffee Networking opportunity for delegates	8.30 am	Tea and coffee Networking opportunity for delegates
9.00 am	<ul style="list-style-type: none"> Welcome and introduction Objectives of workshop Program 	9:00 am	<ul style="list-style-type: none"> Review of Day 1 Introduction to Day 2
9.15 am	<ul style="list-style-type: none"> Austrroads – purpose and aims The role of ARRB group in Austrroads training 	9.10 am	Presentation <ul style="list-style-type: none"> Gap acceptance theory (continued)
9.20 am	Presentation <ul style="list-style-type: none"> Uninterrupted and interrupted flow of traffic Basic traffic variables and relationships 		
10.05 am	Practice exercises <ul style="list-style-type: none"> Basic traffic variables and relationships 	9.30am	Practice exercises, review and discussion <ul style="list-style-type: none"> Gap acceptance theory
10.30am	Morning tea break	10.30 am	Morning tea break
10.50 am	Presentation and discussion <ul style="list-style-type: none"> General concepts of traffic capacity and level of service 	10.50am	Presentation and practice exercises <ul style="list-style-type: none"> Combined gap acceptance and queuing theory Analysis of unsignalised intersections
11.10 am	Presentation <ul style="list-style-type: none"> Statistical distributions in traffic Traffic headway distributions 		
12:05 pm	Practice exercises <ul style="list-style-type: none"> Statistical distributions in traffic Traffic headway distributions 	11.50am	Presentation and examples <ul style="list-style-type: none"> Analysis of roundabouts
12:30pm	Lunch break (lunch provided)	12:30pm	Lunch break (lunch provided)
1.20 pm	Presentation <ul style="list-style-type: none"> Queuing theory 	1.20 pm	Presentation and examples <ul style="list-style-type: none"> Analysis of signalised intersections
2.30 pm	Practice exercises <ul style="list-style-type: none"> Queuing theory 	2.15 pm	Presentation <ul style="list-style-type: none"> Traffic simulation and computer models for analysis
3.00pm	Afternoon tea break	3.00pm	Afternoon tea break
3.20 pm	Review and discussion <ul style="list-style-type: none"> Queuing theory 	3.20pm	Brief overviews of related topics <ul style="list-style-type: none"> Car following Traffic bunching and overtaking Traffic platoons and platoon dispersion Freeway congestion and management
3.40 pm	Presentation <ul style="list-style-type: none"> Gap acceptance theory 	4.10pm	<ul style="list-style-type: none"> Workshop summary Discussion and general Q&A session
4:30pm	Conclusion of Day 1	4.30pm	Workshop closure



ARRB Group

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Secure your place now

Fax registration to
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training@arrb.com.au

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Cancellations

If you are no longer able to attend this event a substitute attendee may take your place. However, if you wish to cancel your registration a full refund, minus a \$154 (incl. GST) service fee, will be given provided you have notified us in writing, by email, letter or fax, **at least 10 business days before the start of the conference.** **No refund is available for cancellations under 10 days.**



Registration form

Traffic Theory & Applications, Melbourne VIC

23-24 August 2010 (ARRB Auditorium, 500 Burwood Hwy, Vermont South)

Participant details

Title _____ Surname _____

First name _____ Preferred name _____

Organisation _____

Position _____

Mailing address _____

Suburb _____ Postcode _____ State _____

Business telephone _____ Business fax _____

Email _____

Special diet requirements (please tick)

- Vegetarian Vegan Gluten free Other (please specify) _____
- I would like to be kept informed of future ARRB courses and conferences
- I do not want my contact details included on the course 'participant list used for networking purposes?'

Registration fee (Australian dollars)

Registration fee includes morning and afternoon refreshments and lunch

	Price (pp)	GST	Total
Fee per delegate	\$1300.00	\$130.00	\$1430.00
Early Bird Discount	\$1130.00	\$113.00	\$1243.00
Must register prior to 27 July 2010			\$

Method of payment (please tick)

- Charge my credit card** (*We accept Visa and MasterCard only*)

Cardholder's name _____

Card number _____

Expiry date (mm/yy) _____ Please specify card MasterCard Visa

Cardholder's signature _____ Date _____

- Cheque** (payable to ARRB Group)

Please fax (03 9886 3076) or email (training@arrb.com.au) registration form first, and then mail cheque to Lorraine Ray, 500 Burwood Hwy, Vermont South Vic 3133. Please include the participant's name(s), name of your organisation, title of the workshop and job ref number 002186 with the cheque

- EFT payment** (BSB 083 266 Acc No. 647968813 Bank: NAB Glen Waverley)

Please quote job ref number 002186, your organisation, name of participant(s) and forward remittance advice with registration form

- Please invoice my organisation** Please quote purchase order no. if applicable _____