

TRUNK ROAD INFRASTRUCTURE STANDARD No. 08

ROAD TUNNELS

Supplement to Austroads Guide: Road Tunnels



ACT
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Territory and Municipal Services

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PREFACE

The Austroads series of Guides for provision and management of road and transport infrastructure provides a level of consistency across all jurisdictions in Australia and New Zealand. All road authorities have agreed to adopt the Austroads Guides as the primary technical reference, together with the relevant Australian and New Zealand Standards.

The Australian Capital Territory has adopted the Austroads Guides, and has issued a revised series of documents to reflect this development in standards and specifications for practice in the ACT. This present document is part of the ACT Trunk Road Infrastructure Standard (TRIS) series spanning the broad scope of road infrastructure development in the ACT:

- TRIS 01 – Road Planning
- TRIS 02 – Road Design
- TRIS 03 – Traffic Management
- TRIS 04 – Road Safety
- TRIS 05 – Asset Management
- TRIS 06 – Pavement Design
- TRIS 07 – Bridges and Structures
- TRIS 08 – Road Tunnels
- TRIS 09 – Project Delivery
- TRIS 10 – Project Evaluation.

Each of the TRIS documents indicates adoption of the relevant Austroads Guide, sets out specific requirements for implementation in ACT, and calls up more detailed Specifications.

This ACT Trunk Road Infrastructure Standard No.08 - ROAD TUNNELS constitutes a supplement to the

AUSTROADS GUIDE TO ROAD TUNNELS

The Territory and Municipal Services Directorate accepts the principles and general guidance in the Guide to Road Tunnels. This Trunk Road Infrastructure Standard is issued to clarify any exceptions or additional requirements for implementation in the ACT, and to identify relevant complementary documents.

The planning, design and construction of road tunnels in the ACT must be implemented in general accordance with the Austroads Guide above, and in accordance with specific provisions of this Trunk Road Infrastructure Standard.

Where any differences in practice exist between the Austroads Guide and this Trunk Road Infrastructure Standard, the latter will prevail.

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I GENERAL

This document constitutes a supplement to the Austroads Guide to Road Tunnels, an outline of which is provided in subsequent sections.

2 GENERAL PRINCIPLES

Adopting the Austroads Guide to Road Tunnels means that the planning, design and construction of road tunnels in ACT is to be undertaken in accordance with the principles of that Guide, and in accordance with the relevant requirements and specifications of the ACT government.

Road tunnels as defined and described in the Austroads Guide do not currently exist in ACT. However, any future development of road tunnels is to be undertaken in accordance with the Guide and this Trunk Road Infrastructure Standard.

3 REFERENCE DOCUMENTS

The primary reference documents for road tunnel construction in ACT are as follows:

- Roads and Public Places Act 1937
- Road Transport (General) Act 1999
- Legislation Act 2001
- Planning and Development Act 2007
- Territory Plan 2008
- Public Roads Act 1902.

Reference should also be made to other directly relevant ACT Trunk Road Infrastructure Standards, particularly:

- Trunk Road Infrastructure Standard No. 02 - Road Design
- Trunk Road Infrastructure Standard No. 07 – Bridges and Structures.

Details for all reference documents other than legislation are given in Section 0 Reference List.

3.1 GUIDELINES

The primary technical guidance is set out in the **Austroads Guide to Road Tunnels**, which is structured as follows:

- Part 1 – Introduction to Road Tunnels
- Part 2 – Planning, Design and Commissioning
- Part 3 – Operation and Maintenance.

The Guide is intended for use by engineers and technical specialists in tunnel technology working on the planning, design and operation of road tunnels, proponents of road tunnel solutions, senior decision makers and regulators associated with the construction of tunnels.

Related guidance may also be found in:

- Austroads Guide to Road Design
- Austroads Guide to Traffic Management.

3.2 RELATED TECHNICAL SPECIFICATIONS

Australasian Fire Authorities Council 2001, *Fire safety guidelines for road tunnels*, Tunnel Fire Safety Issues Committee, AFAC, East Melbourne, Vic
WorkCover NSW 2006. *Tunnels under construction: code of practice*, Work Cover New South Wales, Gosford, NSW.

Workplace Health and Safety Queensland 2007, *Tunnelling code of practice*, Workplace Health and Safety Queensland & Queensland Department of Justice and Attorney General, Brisbane, Qld.

Detailed requirements for materials, processes, or procedures related to road tunnels in the ACT are prescribed in:

- ACT Trunk Road Infrastructure Technical Specification No.02 - Earthworks
- ACT Trunk Road Infrastructure Technical Specification No.10 – Major Concrete Works

Implementation of road tunnel works must be undertaken in accordance with these Technical Specifications.

The Austroads Guides and the ACT Specifications refer to the requirements of relevant Australian Standards.

4 SUPPLEMENTARY MATERIAL

The following tabulated material indicates elements of the implementation of road tunnels in ACT, as they relate to the content of the various Parts of the Austroads Guide to Road Tunnels. The tables provide advice on any additional ACT requirements, or exceptions, to the provisions of the Guide. Complementary documentation is also indicated where relevant.

Supplement to the Austroads Guide to Road Tunnels

SUPPLEMENT TO THE AUSTROADS GUIDE TO ROAD TUNNELS PART 1: INTRODUCTION TO ROAD TUNNELS PUBLICATION DATE: 2010		
This Part provides a comprehensive introduction to planning for road tunnels and describes important issues and considerations relating to implementation, general planning, regulation, structural and geometric design, drainage, geology, the environment as well as operation, construction and maintenance. It also covers critical considerations such as flood protection, fire and life safety, ventilation and risk management.		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 1 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

SUPPLEMENT TO THE AUSTROADS GUIDE TO ROAD TUNNELS PART 2: PLANNING, DESIGN AND COMMISSIONING PUBLICATION DATE: 2010		
This Part sets out expectations regarding appropriate design for road tunnels. It discusses all aspects of planning, design and commissioning of road tunnels including structural and geotechnical requirements, fire and life safety, ventilation, lighting, traffic monitoring and control, plant monitoring and control, electrical power supply and the requirements for associated building structures.		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 2 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

SUPPLEMENT TO THE AUSTROADS GUIDE TO ROAD TUNNELS PART 3: OPERATION AND MAINTENANCE PUBLICATION DATE: 2010		
This Part provides guidance on the management of operation and maintenance of road tunnels, including the factors to be considered in setting appropriate performance standards. It also provides guidance on stakeholder engagement relevant to the operation and maintenance of the tunnel, including the establishment of protocols required to ensure effective coordination. It covers a range of areas including organisational framework, risk analysis, traffic management, incident management, asset management, human factors, training and environment.		
Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 3 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

5 REFERENCE LIST

Austroads 2009. *Guide to Road Design, Parts 1-8, AGRD09*, Austroads, Sydney, NSW.

Austroads 2009. *Guide to Traffic Management, Parts 1-13, AGTM 09*, Austroads, Sydney, NSW.

6 STANDARD DRAWINGS