

TRUNK ROAD INFRASTRUCTURE STANDARD No. 05

ASSET MANAGEMENT

Supplement to Austroads Guide: Asset Management



ACT
Government

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.05 – ASSET MANAGEMENT constitutes a supplement to the

AUSTROADS GUIDE TO ASSET MANAGEMENT

The Territory and Municipal Services Directorate accepts the principles and general guidance in the Guide to Asset Management. 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.

Asset management for road and related infrastructure in the ACT must be undertaken 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 Asset Management, an outline of which is provided in subsequent sections.

2 GENERAL PRINCIPLES

Adopting the Austroads Guide to Asset Management means that the management of roads and road-related assets 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.

Effective asset management is of critical importance for road and transport agencies and managers of road infrastructure because:

- Roads and associated infrastructure are vital links in providing access and mobility for communities and industry.
- The value of road infrastructure assets for all classes of roads is extremely high compared with other public infrastructure.
- Competition for limited funds across government and other sectors is increasing.
- It is essential to ensure that the value and serviceability of these assets is retained for future generations, and that best value to users and investors is provided.

The Austroads Guide defines road asset management as the comprehensive and structured approach to the long-term provision and maintenance of physical road infrastructure using sound engineering, economic, business and environmental principles to facilitate the effective delivery of community benefits.

A key asset management objective is to minimise the whole of life cycle costs of road assets, whilst aiming to meet the needs and expectation of the community and other stakeholders who use or benefit from the asset, and to fulfil government objectives in terms of safety, environment and equity of access.

The Austroads Guide to Asset Management complements the detailed technical guidance given in other Austroads Guides.

3 REFERENCE DOCUMENTS

The primary reference documents for asset management 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
- National Capital Plan 2009
- ACT Sustainable Transport Plan 2004
- ACT Climate Change Strategy 2007-2025
- ACT Road Safety Strategy 2011
- Roads ACT Strategic Asset Management Plan 2010-2012.

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

- Trunk Road Infrastructure Standard No. 01 – Road Planning
- Trunk Road Infrastructure Standard No. 02 – Road Design
- Trunk Road Infrastructure Standard No. 05 – Asset Management
- Trunk Road Infrastructure Standard No. 06 – Pavement Design
- Trunk Road Infrastructure Standard No. 07 – Bridges and Structures.

Strategic Asset Management Plan

The ACT Strategic Asset Management Plan considers asset data and expenditure, and provides forward predictions and plans for the immediate short term and medium term, and discusses the issues of the long term. The Plan has been developed as a tool to assist The ACT Government in achieving its outcomes now and into the future, as well as supporting and underpinning various future Capital Works investment proposals or initiatives.

The Asset Management Plan reflects current government strategic commitments and provides broad future directions for road network capacity, safety, recurrent maintenance, and Capital Works programs. The Plan also reflects consideration of the complex mix of impacts that climate change may have on ACT road related assets.

Details for all reference documents other than legislation are given in Section 5 Reference List.

3.1 GUIDELINES

The primary technical guidance is set out in the **Austroads Guide to Asset Management**. The purpose of the Guide is to provide guidance on how to best to manage physical road infrastructure. The guide covers various aspects of asset management including how to determine and plan to accommodate stakeholder and community expectations, formulate and review asset strategies, develop works programs, assess asset performance and undertake asset valuation and audit.

The Guide consists of 8 Parts across 16 volumes and is structured as follows:

- Part 1 – Introduction to Asset Management
- Part 2 – Community and Stakeholder Requirements
- Part 3 – Asset Strategies
- Part 4 – Program Development and Implementation
- Part 5 – Pavement Performance
- Part 5A – Inventory
- Part 5B – Roughness
- Part 5C – Rutting
- Part 5D – Strength
- Part 5E – Cracking
- Part 5F – Skid Resistance
- Part 5G – Texture
- Part 5H – Performance Modelling
- Part 6 – Bridge Performance
- Part 7 – Road Related Assets Performance
- Part 8 – Asset Valuation and Audit.

The focus of the Guide to Asset Management is on the management of the physical road assets. The importance of total transport system management, which covers all activities concerned with the provision, operation, maintenance, renewal and disposal of transport infrastructure assets, is also duly recognised. Road asset owners and managers are therefore encouraged to adopt a comprehensive range of coordinated activities, from transport planning, through design, implementation and operations in order to maximise community benefits.

The guide complements the Austroads publication *AP-R202/02 Integrated Asset Management Guidelines for Road Networks*, which describes in detail the integrated asset management planning processes and recommended implementation stages aimed at achieving business improvements within road agencies. The guide also recognises the purpose of the *Australian Transport Council's National Guidelines for Transport System Management in Australia*, which embraces all land transport modes, and is compatible with its principles.

The specific sections of the guide and its accompanying commentaries elaborate key road asset management principles through providing best practice recommendations and by way of example.

Related guidance may also be found in:

- Austroads Guide to Road Transport Planning
- Austroads Guide to Road Design
- Austroads Guide to Pavement Technology
- Austroads Guide to Bridge Technology.

The key ACT guidance document is the **Strategic Asset Management Plan 2010-2012 for Roads ACT**, which provides the broad framework for managing The ACT Government assets.

3.2 RELATED TECHNICAL SPECIFICATIONS

There is a series of documents prepared by the ACT Government which support the broader Asset Management Plan:

- Asset Management Operational Plan for Community Paths
- Asset Management Operational Plan for Driveways
- Asset Management Operational Plan for Road Barriers
- Asset Management Operational Plan for Road Signs and Linemarking

These plans provide a detailed description of how The ACT Government defines the intervention levels in relation to the topics, and the outlines the policies and issues for the maintenance of the related facilities.

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

3.3 LEGISLATIVE DOCUMENTS

4 SUPPLEMENTARY MATERIAL

This document, and the associated Strategic Asset Management Plan, constitute the primary supplementary documents to the Austroads Guide.

The following tabulated material indicates elements of the implementation of road asset management in ACT, as they relate to the content of the various Parts of the Austroads Guide to Asset Management. 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 ASSET MANAGEMENT PART 1: INTRODUCTION PUBLICATION DATE: 2009		
Part 1 provides an introduction to the topic of asset management as related to the physical road infrastructure. It provides an overview of the key asset management principles and practices, and outlines the remaining Parts of the guide.		
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 ASSET MANAGEMENT PART 2: COMMUNITY AND STAKEHOLDER REQUIREMENTS PUBLICATION DATE: 2009		
Part 2 provides guidance on how community and stakeholder requirements can and should influence asset management undertaken by road agencies.		
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 ASSET MANAGEMENT PART 3: ASSET STRATEGIES PUBLICATION DATE: 2009		
Part 3 provides guidance on the frameworks and principles of asset strategies. Asset strategies articulate the proposed management of the capacity, condition and use of road system assets to achieve the level of road system performance which is acceptable, affordable and sustainable to meet the needs of stakeholders and the community. The focus is to assist road agencies to develop performance-driven asset management strategies which achieve community-driven outcomes. Part 3 presents an integrated strategy framework comprising: an overarching road system management strategy, a road investment strategy, an infrastructure preservation strategy and road use management strategies.		
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.	

**SUPPLEMENT TO THE AUSTROADS GUIDE TO ASSET MANAGEMENT
PART 4: PROGRAM DEVELOPMENT AND IMPLEMENTATION
PUBLICATION DATE: 2009**

This guide gives practitioners guidance for decision making at a network level for program development and implementation. Program development involves identifying asset requirements, setting appropriate levels of service for maintenance intervention in developing a maintenance works program, the development of a total needs program and its evaluation, selection of maintenance treatment and capital works options and the process of prioritisation and optimisation of the programmed works to ensure best value for money. Program implementation covers developing appropriate delivery arrangements of the works program and includes public reporting and information dissemination about the program and the media used achieve this.

Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 4 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

**SUPPLEMENT TO THE AUSTROADS GUIDE TO ASSET MANAGEMENT
PART 5: PAVEMENT PERFORMANCE
PUBLICATION DATE: 2009**

Part 5 contains a brief overview of the topic without going into detail. Discussion on key issues is provided in other sub-Parts 5A to 5H. The measurement of pavement performance and its significance is briefly discussed. The section on data management touches on the key aspects of data classification, level of service and information quality levels. The reader may gain a general overview of the key issues of data management, data types and classification.

Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 5 of the Guide, and sub-Parts 5A to 5H, are adopted with no exceptions in principle for the practice in ACT.	

**SUPPLEMENT TO THE AUSTROADS GUIDE TO ASSET MANAGEMENT
PART 6: BRIDGE PERFORMANCE
PUBLICATION DATE: 2009**

Part 6 provides a focus on how to best manage the physical bridge assets. It provides guidance on the establishment and maintenance of bridge asset inventories, and on the monitoring of asset performance. It discusses the need for agencies to measure asset performance against objectives, and therefore is primarily concerned with condition data collection and performance modelling at a network level.

Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 6 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

**SUPPLEMENT TO THE AUSTROADS GUIDE TO ASSET MANAGEMENT
PART 7: ROAD RELATED ASSETS PERFORMANCE
PUBLICATION DATE: 2009**

Part 7 provides guidance on the application of asset management concepts and principles for the management of a broad range of diverse road related assets. The strategy framework is applicable to all road system assets. Guidance on managing the specific performance characteristics of pavements and structures is provided in Parts 5 and 6.

Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 7 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

**SUPPLEMENT TO THE AUSTROADS GUIDE TO ASSET MANAGEMENT
PART 8: ASSET VALUATION AND AUDIT
PUBLICATION DATE: 2009**

Part 8 provides comprehensive guidance on how to undertake an asset valuation to assist the asset manager with long-term asset and financial management requirements, and how an auditor undertakes an audit of infrastructure. It also covers how to present information on financial sustainability of the agency to external stakeholders and other customers by use of public reports and other media. It complements the IPWEA Australian Infrastructure Financial Management Guidelines.

Reference Section	ACT Practice, Complementary Material, or Departures	Date
General	Part 8 of the Guide is adopted, with no exceptions in principle for the practice in ACT.	

5 REFERENCE LIST

Australian Transport Council (ATC) 2006, *National Guidelines for Transport System Management*, ATC, Canberra, ACT.

Austroads 2002, *Integrated Asset Management Guidelines for Road Networks*, AP-R202/02, Austroads, Sydney, NSW.

Austroads 2009, *Guide to Asset Management Parts 1-8*, Austroads, Sydney, NSW.

Austroads 2009, *Guide to Bridge Technology Parts 1-7*, Austroads, Sydney, NSW.

Austroads 2009, *Guide to Pavement Technology Parts 1-10*, Austroads, Sydney, NSW.

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

Austroads 2009, *Guide to Road Transport Planning*, Austroads, Sydney, NSW.

Roads ACT 2010, *Asset Management Operational Plan for Community Paths*, Roads ACT, Canberra, NSW.

Strategic Asset Management Plan 2010-2012 for Roads ACT, Opus International Consultants, Sydney, NSW, 2010.