

TRUNK ROAD INFRASTRUCTURE TECHNICAL SPECIFICATION No. 04

FLEXIBLE PAVEMENT CONSTRUCTION



ACT
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Territory and Municipal Services

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PREFACE

The Australian Capital Territory has adopted the Austroads Guides for provision and management of road and transport infrastructure. The Territory and Municipal Services Directorate has issued a revised series of documents to reflect this development in infrastructure standards and specifications for practice in the ACT.

This present document is part of the ACT Trunk Road Infrastructure Technical Specifications (TRITS) series spanning the broad scope of road infrastructure development and management in the ACT:

- TRITS 01 – Roadworks
- TRITS 02 – Earthworks
- TRITS 03 – Underground Services
- TRITS 04 – Flexible Pavements
- TRITS 05 – Rigid Pavements
- TRITS 06 – Kerbs and Footpaths
- TRITS 07 – Segmental Paving
- TRITS 08 – Incidental Works
- TRITS 09 – Landscape
- TRITS 10 – Bridges and Related Structures
- TRITS 11 – Pavement Marking
- TRITS 12 – Street Lighting
- TRITS 13 – Traffic Signals
- TRITS 14 – Road Signs
- TRITS 15 – Road Furniture

This ACT Trunk Road Infrastructure Technical Specification No. 04 – FLEXIBLE PAVEMENT CONSTRUCTION prescribes the detailed practices for construction of flexible pavements in the ACT. It is issued to clarify any exceptions or additional requirements for implementation in the ACT, and to identify relevant complementary documents.

In many areas of road infrastructure construction and management, the ACT has adopted the relevant specifications of the NSW Roads and Maritime Services (formerly RTA NSW). The relevant RMS documents are identified and referenced in these ACT Trunk Road Infrastructure Technical Specifications.

The works must be carried out according to the referenced RMS specifications with the exception of items detailed in the Technical Exception Clauses.

Where any differences in practice exist between the RMS Specifications and this Trunk Road Infrastructure Technical Specification, the latter will prevail.

The ACT Government replaces RMS where applicable as the Road Authority. ACT replaces NSW where applicable as the place where the work is conducted. Equivalent ACT authorised organisations and legislation replace NSW's where applicable. Roads ACT's authorised representative is equivalent to RMS's principal.

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I INTRODUCTION

The Australian Capital Territory has adopted the Austroads Guides for provision and management of road and transport infrastructure. The Territory and Municipal Services Directorate has issued a revised series of documents to reflect this development in standards and specifications for practice in the ACT. The planning, design and management of Earthworks in the ACT must be implemented in general accordance with the Austroads Guide to Pavement Technology and in accordance with specific provisions of the ACT Trunk Road Infrastructure Standard No.6 - Pavement Design.

The Australian Capital Territory has adopted the NSW Roads and Maritime Services (RMS - formerly RTA NSW) specifications for road works, including flexible pavement construction. Pavement construction must be carried out according to the referenced RMS specifications with the exception of items detailed in the Technical Exception Clauses.

This ACT Trunk Road Infrastructure Technical Specification No. 04 – Flexible Pavement Construction prescribes the detailed practices that must be followed in the implementation of the relevant RMS specifications in the ACT.

The works covered in this Section of the specification cover the construction of flexible pavements comprising crushed rock, gravel and suitable soil pavement layers, bituminous layers and surfacing.

I.1 SCOPE

The works covered in this Section of the specification cover the construction of flexible pavements comprising crushed rock, gravel and suitable soil pavement layers, bituminous layers and surfacing.

This Specification includes stabilised pavements but does not include gravel surfaced pavements.

I.2 STRUCTURE OF SPECIFICATION

The Specification refers to a list of RMS Specifications. Each referenced RMS specification contains a more detailed scope statement.

Exceptions and deviations from these are listed in the Technical Exception Clauses.

2 REFERENCE DOCUMENTS

Reference documents include Austroads Guides, Australian Standards and RTA Test Methods.

2.1 LEGISLATIVE DOCUMENTS

2.2 GUIDELINES

Austrroads Documents

Part 1:	Introduction to Pavement Technology
Part 2:	Pavement Structural Design
Part 3:	Pavement Surfacing
Part 4:	Pavement Materials
Part 4A:	Granular Base and subbase
Part 4B:	Asphalt
Part 4C:	Materials for concrete road pavements
Part 4D:	Stabilised materials
Part 4F:	Bituminous binders
Part 4G:	Geotextiles and geogrids
Part 4H:	Test methods
Part 4I:	Earthworks materials
Part 4J:	Aggregate and source rock
Part 4K:	Seals
Part 4L:	Stabilising binders
Part 5:	Pavement Evaluation and Treatment Design

Part 6:	Unsealed pavements
Part 7:	Pavement maintenance
Part 8:	Pavement Construction Assurance
Part 9:	Pavement work practice
Part 10:	Surface drainage
Supplementary	

Documents

RMS Pub.11.050	RMS Austroads Guide Supplements – Supplement to the Austroads Guide to Pavement Technology Part 2: Pavement Structural Design
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2.3 RELATED TECHNICAL SPECIFICATIONS

AS 1141	Methods for sampling and testing aggregates:
AS 1152	Test sieves
AS 1160	Bituminous emulsions for construction and maintenance of pavements
AS 1289	Methods of testing soils for engineering purposes
AS 1580	Paints and related materials
AS 2008	Residual bitumen for pavements
AS 2106	Methods for the determination of the flash point of flammable liquids (closed cup)
AS 2150	Asphalt (Hot-Mixed)
AS 2157	Cutback bitumen
AS 2341	Methods of testing bitumen and related roadmaking products
AS 2357	Mineral Fillers for Asphalt
AS 2700	Colour standards for general purpose
AS 2734	Asphalt (Hot-Mixed) Paving - Guide to Good Practice
AS 2758	Aggregates and rock for engineering purposes
AS 2891	Methods of sampling and testing asphalt
AS 3568	Oils for reducing the viscosity of residual bitumen for pavements
AS 3582	Supplementary cementitious materials for use with Portland and blended cement
AS 3583	Methods of test for supplementary cementitious materials for use with Portland and blended cement
AS 4489	Test methods for limes and limestones

2.3.1 Guide to the RMS Specifications

CR082	Guide to QA Specification R82
CR132	Guide to QA Specification R132
N3252	Guide To The Selection of Polymer Modified Binder
NR44	Guide to Roads and Maritime Services (replacing Roads and Traffic Authority) QA Specification R44
NR106	Guide to QA Specification R106 - Sprayed Bituminous Surfacing (With Cutback Bitumen)
NR107	Guide to QA Specification R107 - Sprayed Bituminous Surfacing (With Polymer Modified Bitumen)

2.3.2 Pavements – Flexible

RMS R71	Unbound and Modified Pavement Course
RMS R73	Construction Of Plant Mixed Heavily Bound Pavement Course
RMS R75	In Situ Pavement Recycling by Deep-Lift Cementitious Stabilisation
RMS R82	Lean-Mix Concrete Subbase

2.3.3 Bituminous Products

RMS 101	Cold Milling of Road Pavement Materials
RMS 103	High Pressure Waterblasting of Bituminous Seals
RMS 106	Sprayed Bituminous Surfacing (with Cutback Bitumen)
RMS 107	Sprayed Bituminous Surfacing (with Polymer Modified Bitumen)
RMS 109	Bituminous Slurry Surfacing
RMS 110	Coloured Surface Coatings for Bus Lanes and Cycleways
RMS 111	Sprayed Bituminous Surfacing (with Bitumen Emulsion)
RMS 112	Sprayed Bituminous Surfacing (for Enrichment & Rejuvenation)
RMS 113	Sprayed Bituminous Surfacing (with Fibre Reinforcement)
RMS 116	Heavy Duty Dense Graded Asphalt
RMS 119	Open Graded Asphalt
RMS 121	Stone Mastic Asphalt
RMS 123	Thin Open Graded Asphalt Surfacing

2.3.4 Material Specifications

	Soils and Gravels
RMS 3061	Bound and Unbound Material for Pavement Repairs
RMS 3051	Granular Base And Subbase Materials For Surfaced Road Pavements
RMS 3071	3071 Selected Material in Formation
RMS 3151	Cover Aggregate for Sprayed Bituminous Surfacing
RMS 3152	Aggregates for Asphalt
RMS 3153	Reclaimed Asphalt Pavement Material
RMS 3154	Granulated Glass Aggregate
	Bituminous Materials
RMS 3252	Polymer Modified Binder
RMS 3253	Bitumen for Pavements
RMS 3254	Bitumen Emulsion
RMS 3256	Comminuted Scrap Rubber
RMS 3258	Aggregate Precoating Agent (Bitumen Classes 170 and 320)
RMS 3259	Bitumen Adhesion Agent (Bitumen Classes 170 and 320)
RMS 3261	Cutback Bitumen
RMS 3263	Hot Poured Elastomeric Joint Seal and for Roads
RMS 3266	Cold mix Asphalt
RMS 3268	Aggregate Pre-coating Agent (Polymer Modified Bitumen)
RMS 3269	Bitumen Adhesion Agent (Polymer Modified Bitumen)

3 UNBOUND AND MODIFIED PAVEMENT COURSE

Unbound and modified pavement course must be according to [RMS R71](#).

4 STONE MASTIC ASPHALT

Stone Mastic Asphalt construction must be according to [ACT edited RMS R121](#).

5 THIN OPEN GRADED ASPHALT SURFACING

Thin Open Graded Asphalt Surfacing (TOGAS) construction must be according to [ACT edited RMS R123](#).

6 SPRAYED BITUMINOUS SURFACING (WITH CUTBACK BITUMEN)

Sprayed Bituminous Surfacing (with cutback bitumen) construction must be according to [ACT edited RMS R106](#).

7 SPRAYED BITUMINOUS SURFACING (WITH POLYMER MODIFIED BITUMEN)

Sprayed Bituminous Surfacing (with polymer modified bitumen) construction must be according to **RMS R107**.

8 SPRAYED BITUMINOUS SURFACING (WITH EMULSIFIED BITUMEN)

Sprayed Bituminous Surfacing (with emulsified bitumen) construction must be according to **RMS R111**.

9 BITUMINOUS SLURRY SURFACING

Bituminous slurry surfacing construction must be according to **ACT edited RMS R109**.

10 HEAVY DUTY DENSE GRADED ASPHALT

Heavy Duty Dense Graded Asphalt construction must be according to **ACT edited RMS R116**.

11 OPEN GRADED ASPHALT

Open Graded Asphalt construction must be according to **RMS R119**.

12 COLOURED SURFACE COATINGS FOR BUS LANES AND CYCLEWAYS

Open Graded Asphalt construction must be according to **ACT edited RMS R110**.

13 REFERENCES

Roads and Maritime Service 2006, *QA Specification R106: Sprayed bituminous surfacing (with cutback bitumen)*, RMS, Sydney, NSW.

Roads and Maritime Service 2006, *QA Specification R107: Sprayed bituminous surfacing (with polymer modified binder)*, RMS, Sydney, NSW.

Roads and Maritime Service 2006, *QA Specification R111: Sprayed bituminous surfacing (with bitumen emulsion)*, RMS, Sydney, NSW.

Roads and Maritime Service 2009, *QA Specification R109: Bituminous slurry surfacing*, RMS, Sydney, NSW.

Roads and Maritime Service 2009, *QA Specification R123: Thin open graded asphalt surfacing*, RMS, Sydney, NSW.

Roads and Maritime Service 2010, *QA Specification R71: Unbound and modified pavement course*, RMS, Sydney, NSW.

Roads and Maritime Service 2010, *QA Specification R121: Stone mastic asphalt*, RMS, Sydney, NSW.

Roads and Maritime Service 2011, *QA Specification R110: Coloured surface coatings for bus lanes and cycleways*, RMS, Sydney, NSW.

Roads and Maritime Service 2012, *QA Specification R116: Heavy duty dense graded asphalt*, RMS, Sydney, NSW.

Roads and Maritime Service 2012, *QA Specification R119: Open graded asphalt*, RMS, Sydney, NSW.

14 STANDARD DRAWINGS