

TRUNK ROAD INFRASTRUCTURE TECHNICAL SPECIFICATION No. 05

RIGID PAVEMENT CONSTRUCTION



ACT
Government

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.05 – RIGID PAVEMENT CONSTRUCTION prescribes the detailed practices for construction of rigid 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 works covered in this Section comprise the construction of Portland cement pavements.

Each referenced RMS specification contains a more detailed scope statement.

2 REFERENCE DOCUMENTS

Reference documents include Austroads Guides, Australian Standards and RMS Specifications, as listed below.

2.1 LEGISLATIVE DOCUMENT

2.2 GUIDELINES

Austrroads Guide to Pavement Technology

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

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

2.3.1 Guide to the RMS Specifications

CR082	Guide to QA Specification R82
CR083	Guide to QA specifications R83 and R84
NG36	Guide to Roads and Maritime Services (replacing Roads and Traffic Authority) QA Specification G36 – Environmental Protection

2.3.2 Pavements - Rigid

RMS 83	Jointed Concrete Base
RMS 84	Continuously Reinforced Concrete Base
RMS 90	Roller compacted concrete subbase
RMS 93	Diamond grinding of concrete pavement

2.3.3 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
	Concrete
RMS 3201	Concrete for Maintenance
RMS 3202	Wax Emulsion Concrete Curing Compound
RMS 3204	Preformed Joint Fillers for Concrete Road Pavements and Structures
RMS 3211	Cements, Binders and Fillers
RMS 3221	Roller compacted concrete
RMS 3222	No-Fines Concrete (For Subsurface Drainage)

2.3.4 Australian Standards

Relevant Australian standards are listed in the RMS specifications.

AS 1012	Methods of testing concrete
AS 1012.1	Sampling fresh concrete
AS 1012.3.1	Determination of properties related to the consistence of concrete – slump test
AS1012.4.2	Determination of air content of freshly mixed concrete – Measuring reduction in air pressure in chamber above concrete.
AS1012.8	Making and curing concrete compression, indirect tensile and flexure test specimens in the laboratory or in the field.
AS 1012.9	Determination of the compressive strength of concrete specimens.
AS 1012.12.2	Determination of mass per unit volume of hardened concrete – Water displacement method.
AS 1012.13	Determination of the drying shrinkage of concrete for samples prepared in the field or in the laboratory.
AS 1012.14	Securing and testing cores from hardened concrete for compressive strength or indirect tensile strength.
AS 1141	Methods of sampling and Test Aggregate
AS 1141.11	Particle size distribution by dry sieving.
AS 1141.14	Particle shape by proportional calliper.
AS 1141.18	Crushed particles of coarse aggregates.
AS 1147.22	Wet/dry strength variation.
AS 1141.24	Soundness (by use of sodium sulphate solution).
AS 1160	Bitumen Emulsions for Construction and Maintenance of Pavements.
AS 1302	Steel Reinforcing Bars for Concrete.
AS 1303	Steel Reinforcing Wire for Concrete.
AS 1304	Steel Wire Reinforcing Fabric for Concrete.
AS 1379	The specification and manufacture of concrete.
AS 1478	Chemical admixtures in concrete.

AS 1554.3	Welding of reinforcing steel.
AS 2758	Aggregates & Rock for Engineering Purposes.
AS 2758.1	Concrete aggregates
AS 3582.1	Supplementary Cementitious materials – flyash.
AS 3610	Formwork for Concrete.
AS 3799	Liquid membrane – forming curing compounds for concrete.
AS 3972	Portland and blended cement.
As 1348	Glossary of Terms Used In Road Engineering.

2.3.5 RMS Test Methods

Relevant test methods are listed in the RMS specifications.

RMS T1192	Adhesion of Sealant
RMS T1193	Accelerated Ageing of cured sealant

3 JOINTED CONCRETE BASE

Jointed concrete base construction must be according to **ACT edited RMS R83**.

4 CONTINUOUSLY REINFORCED CONCRETE BASE

Continuously reinforced concrete base construction must be according to **ACT edited RMS R84**.

5 ROLLER COMPACTED CONCRETE SUBBASE

Roller compacted concrete subbase construction must be according to **RMS R90**.

6 DIAMOND GRINDING OF CONCRETE PAVEMENT

Diamond grinding of concrete pavement must be according to **RMS R93**.

7 REFERENCES

Roads & Maritime Services 2007, *QA Specification R90: Roller compacted concrete base*, RMS, Sydney, NSW.

Roads & Maritime Services 2010, *QA Specification R83: Jointed concrete base*, RMS, Sydney, NSW.

Roads & Maritime Services 2010, *QA Specification R84: Continuously reinforced concrete base*, RMS, Sydney, NSW.

Roads & Maritime Services 2011, *QA Specification R93: Diamond grinding of concrete pavement*, RMS, Sydney, NSW.

8 STANDARD DRAWINGS