

TRUNK ROAD INFRASTRUCTURE TECHNICAL SPECIFICATION No. 10

BRIDGES AND RELATED STRUCTURES



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. 10 – BRIDGES AND RELATED STRUCTURES prescribes the detailed practices that must be followed for works on bridges and related structures 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 by this Specification are works on bridges and related structures in the ACT. It includes precast and prestressed concrete and reinforced concrete elements and products. Also covered is the formwork, reinforcement, jointing and finishing and associated activities relevant to the production of concrete elements and products.

The Australian Capital Territory has adopted the NSW Roads and Maritime Services (RMS - formerly RTA NSW) specifications for concrete works. These works must be carried out according to the referenced RMS specifications with the exception of items detailed below.

2 REFERENCE DOCUMENTS

2.1 LEGISLATIVE DOCUMENTS

2.2 GUIDELINES

Guide to Bridge Technology. Austroads 2009.

2.3 RELATED TECHNICAL SPECIFICATIONS

2.3.1 Australian Standards

AS 1012	Methods of Testing Concrete
AS 1141	Methods for Sampling and Testing Aggregates
AS 1289	Methods of Testing Soils for Engineering Purposes
AS 1379	Specification and Supply of Concrete
AS 1391	Methods for tensile testing of metals
AS 1478.1	Chemical admixtures for concrete, mortar and grout – Admixtures for concrete
AS/NZS 1594	Hot-rolled steel flat products
AS/NZS 2271	Plywood and blockboard for exterior use
AS 2349	Method of sampling portland and blended cements
AS 2758.1	Aggregates and rock for engineering purposes - Concrete aggregates
AS 3610	Formwork for concrete
AS 3799	Liquid membrane-Forming curing compounds for concrete
AS/NZS 4671	Steel reinforcing materials
AS 5100.5	Bridge design - Concrete
AS/NZS ISO 9001	Quality management systems - Requirements

2.3.2 ASTM Standards

ASTM C295	Standard Guide for Petrographic Examination of Aggregates for Concrete
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2.3.3 British Standards

BS 10088	Stainless steels. List of stainless steels
BS 6744:2001	Stainless steel bars for the reinforcement of and use in concrete. Requirements and test methods

2.3.4 RMS Test Methods

RMS T240	Texture Depth of Coarse Textured Road Surfaces
RMS T362	Interim Test for Verification of Curing Regime - Sorptivity
RMS T363	Accelerated Mortar Bar Test for AAR Assessment
RMS T364	Concrete Prism Test for AAR Assessment
RMS T368	Dressing of Voids in Concrete Specimens and Adjustment for Embedded Steel
RMS T371	Determination of Calcium Nitrite Quantity in Fresh Concrete (Test Strips)
RMS T375	Sampling and Testing of Grout
RMS T1005	Recording the Infrared Spectrum of Materials

2.3.5 RMS (RTA) Specifications

RMS G35	Environmental Protection (Management Plan)
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RMS G36	Environmental Protection (Management System) ¹
RMS G71	Construction Surveys
RMS Q	Quality Management System
RMS B58	Permanently Cased Cast-In-Place Reinforced Concrete Piles
RMS B59	Bored Cast-in-Place Reinforced Concrete Piles (Without Permanent Casing)
RMS B80	Concrete Work for Bridges
RMS B110	Manufacture of Pretensioned Precast Concrete Members
RMS B113	Post Tensioning of Concrete
RMS B115	Precast Concrete Members (Not Pretensioned)
RMS B170	Supply and Installation of Void Formers
RMS B204	Welding of Bridges and Other Road Structures
RMS B312	Cold Applied Elastomeric Joint Sealants
RMS 3211	Cements, Binders and Fillers

2.3.6 Other

Concrete Institute of Australia – CIA Z40 – *Super-workable Concrete*.

3 COMPLIANCE

Work carried out and testing performed under this Specification shall comply with the requirements of the **RMS QA Specification B80 – Concrete work for bridges** unless specified in the ACT specific requirements or exceptions list in the table below.

RMS QA SPECIFICATION B80 – CONCRETE WORK FOR BRIDGES EXCEPTIONS		
RMS Section	B80 Item	ACT Specific Requirements or Exceptions
2.3	Admixtures	Roads ACT direction on Admixtures: <ul style="list-style-type: none"> Admixtures are supported for use include specifically fly ash Fly ash should partially substitute cement content.
2.4	Aggregates	Roads ACT direction on Aggregate: <ul style="list-style-type: none"> Aggregates used in bridge construction shall be non-reactive. Local quarries should be tested or in an approved quarries list.
3.6.1	Submission of nominated mixes	Roads ACT approved concrete mixes <ul style="list-style-type: none"> List of Roads ACT approved concrete mixes, if available? Register of Roads ACT approved concrete mixes?

4 REFERENCES

Roads & Maritime Services 2012, *QA Specification B80: Concrete work for bridges*, RMS, Sydney, NSW.

5 STANDARD DRAWINGS

¹ G35 is used as an alternate to G36. These two documents are not to be used concurrently.