AS 5100.1 Supplement 1—2006

Bridge design—Scope and general principles—Commentary (Supplement to AS 5100.1—2004)

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PREFACE

This Commentary was prepared by the Standards Australia Committee BD-090, Bridge Design to supersede HB 77.1 Supp 1, *Australian Bridge Design Code—General—Commentary (Supplement to SAA HB 77.1—1996)*.

The objective of this Commentary is to provide users with background information and guidance to AS 5100.1—2004.

The Standard and Commentary are intended for use by bridge design professionals with demonstrated engineering competence in their field.

In this Commentary, AS 5100.1—2004 is referred as 'the Standard'.

The clause numbers and titles used in this Commentary are the same as those in AS 5100.1, except that they are prefixed by the letter 'C'. To avoid possible confusion between the Commentary and the Standard, a Commentary clause is referred to as 'Clause C…..' in accordance with Standards Australia policy.

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STANDARDS AUSTRALIA

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C1 SCOPE

AS 5100.1 scope lists the type of structures to which the Standard applies. The list is not exhaustive and the relevant authority may specify the use of the Standard for other road-, rail- or pedestrian-related structures.

C2 APPLICATION

In order to promote uniformity of practice in design of road, rail and pedestrian bridges, the Standard has been prepared for use by all authorities and organizations with jurisdiction over the provision of road, rail and pedestrian bridges in Australia, including Austroads Member Authorities, the Australasian Railway Association Member Authorities, Local Government Authorities and other authorities and organizations (e.g., port, rail, park, electricity supply, water supply, private sector organizations and the like).

The Standard specifies the minimum standards required for public safety and the relevant authority or designer may determine that higher standards are required for the structure.

The Standard is for the design of road, railway and pedestrian bridges in Australia, of conventional form and with spans up to approximately 100 m.

The Standard also defines loadings, particularly road and railway impact loadings that apply to major structures over or adjacent to roadways and railways.

For trains with speeds greater than 160 km/h, the stiffness of the bridge structure is of particular importance in order to achieve satisfactory riding characteristics. Additional specifications are required for bridges for very fast trains.

The Standard also defines loadings, particularly railway collision loadings which apply to major structures over or adjacent to railways. These include major buildings, but not signal structures, electrification structures and the like.

C3 REFERENCED DOCUMENTS

The Standards listed in Clause 3 are subject to revision from time to time and the current edition should always be used. The currency of any Standard may be checked with Standards Australia.

C4 DEFINITIONS

(No Commentary)

C5 NOTATION

The basis of the notation is generally in accordance with ISO 3898, *Bases for design of structures—Notations—General symbols*. Standards Australia's policy is to use ISO recommendations on notation, wherever practicable, in structural design Standards such as AS/NZS 1170 series, AS 2327 series, AS 3600, AS 4100, AS/NZS 4600 and AS 5100 series.

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