

Australian Standard<sup>®</sup>

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**Piling—Design and installation**

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This Australian Standard was prepared by Committee CE/18, Piling. It was approved on behalf of the Council of Standards Australia on 31 May 1995 and published on 5 August 1995.

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Australian Construction Services, Department of Administrative Services

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*This Standard was issued in draft form for comment as DR 92097.*

AS 2159—1995

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PUBLISHED BY STANDARDS AUSTRALIA  
(STANDARDS ASSOCIATION OF AUSTRALIA)  
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 9884 0

## PREFACE

This Standard has been produced by the Standards Australia Committee CE/18 on Piling, and supersedes AS 2159—1978, *Rules for the design and installation of piling (known as the SAA Piling Code)*.

This Standard has been prepared because of a growing perception within the user community that the earlier document was becoming outdated and also that, in common with other modern structural codes, the Piling Code should appear in limit state format.

It was also considered that the material should be in two parts, viz. a Code of Practice which presents mandatory rules for the design, installation and testing of piled footing and guidelines which provide additional information and recommendations in relation to the Code of Practice.

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## CONTENTS

	<i>Page</i>
FOREWORD .....	5
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE .....	6
1.2 APPLICATION .....	6
1.3 REFERENCED DOCUMENTS .....	6
1.4 DEFINITIONS .....	7
1.5 NOTATION .....	8
1.6 CLASSIFICATION OF PILES .....	10
1.7 USE OF ALTERNATIVE MATERIALS OR METHODS .....	11
SECTION 2 SITE INVESTIGATIONS	
2.1 SITE INVESTIGATION .....	12
2.2 INFORMATION REQUIRED .....	12
SECTION 3 DESIGN REQUIREMENTS AND PROCEDURES	
3.1 AIM .....	13
3.2 DESIGN REQUIREMENTS .....	13
3.3 LOADS AND LOAD COMBINATIONS FOR STRENGTH AND SERVICEABILITY DESIGN .....	14
SECTION 4 GEOTECHNICAL DESIGN	
4.1 SCOPE .....	16
4.2 GENERAL PRINCIPLES OF GEOTECHNICAL STRENGTH DESIGN ...	16
4.3 DETAILED DESIGN REQUIREMENTS FOR STRENGTH .....	18
4.4 GENERAL PRINCIPLES OF GEOTECHNICAL DESIGN FOR SERVICEABILITY .....	21
4.5 DETAILED DESIGN REQUIREMENTS FOR SERVICEABILITY .....	21
SECTION 5 STRUCTURAL DESIGN	
5.1 SCOPE .....	23
5.2 GENERAL PRINCIPLES OF STRUCTURAL STRENGTH DESIGN .....	23
5.3 CONCRETE AND GROUT PILES .....	24
5.4 STEEL PILES .....	25
5.5 COMPOSITE STEEL CONCRETE .....	25
5.6 TIMBER PILES .....	25
SECTION 6 DESIGN FOR DURABILITY	
6.1 SCOPE .....	28
6.2 DESIGN FOR DURABILITY OF CONCRETE PILES .....	28
6.3 DESIGN FOR DURABILITY OF STEEL PILES .....	30
6.4 DESIGN FOR DURABILITY OF TIMBER PILES .....	32

## SECTION 7 MATERIALS AND CONSTRUCTION REQUIREMENTS

7.1	GENERAL	33
7.2	TOLERANCES AND DEFECTS	33
7.3	DISPLACEMENT PILES—PREFORMED	34
7.4	DISPLACEMENT PILES—DRIVEN CAST-IN-PLACE	36
7.5	NON-DISPLACEMENT PILES	37
7.6	RECORDS OF DATA	39

## SECTION 8 TESTING

8.1	SCOPE	41
8.2	PILE LOAD TESTING	41
8.3	STATIC LOAD TESTING	41
8.4	DYNAMIC PILE TESTING	47
8.5	INTEGRITY TESTING	49

Originated as AS 2159—1978.  
Second edition 1995.

Incorporating:  
Amdt 1—1996

## FOREWORD

Since piling is a field in which design formulae, rules of thumb, the lessons of experience, and the accumulated records of a large number of applications of proprietary systems, both successful and otherwise, can influence decision-making, there is a great need for flexibility, wide experience and commonsense in designing and constructing a piled footing system. In a real sense, these requirements are in conflict with the need to make unqualified mandatory statements and, as a result, many of the stipulations of this Standard will be seen to be short and simple when, in other cases, extensive arrays of multiple choices will be required. Where applicable, explanatory notes are added to some clauses in this Standard.

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**Australian Standard**

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SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE** This Standard sets out minimum requirements for the design, construction and testing of piled footings for civil engineering and building structures on land or immediate inshore locations. It does not extend to offshore (deepwater) construction, or to detached Class 1 building as defined in the Building Code of Australia.

NOTES:

- 1 AUSTRROADS Bridge Design Code should be considered for the design of footings for road bridges.
- 2 The date of application of the Standard on a mandatory basis is matter for the relevant authority. AS 2159—1978 will be withdrawn following substantial regulatory implementation of this edition, or within two years of publication of this edition, whichever is the earlier.

**1.2 APPLICATION** The Standard is intended for use by designers, constructors and regulatory bodies in executing their responsibilities in relation to piling in civil engineering and building.

**1.3 REFERENCED DOCUMENTS** The following documents are referred to in this Standard:

AS

- |        |   |
|--------|---|
| 1012   | Methods of testing concrete (all Parts)                                   |
| 1163   | Structural steel hollow sections  |
| 1170   | Minimum design loads on structures (known as the SAA Loading Code)        |
| 1170.1 | Part 1: Dead and live loads and load combinations                         |
| 1170.2 | Part 2: Wind loads  |
| 1170.3 | Part 3: Snow loads  |
| 1170.4 | Part 4: Earthquake loads  |
| 1302   | Steel reinforcing bars for concrete                                       |
| 1379   | The specification and manufacture of concrete                             |
| 1450   | Steel tubes for mechanical purposes                                       |
| 1554   | Structural steel welding (known as the SAA Structural Steel Welding Code) |
| 1579   | As welded steel pipes and fittings for water and waste water              |
| 1604   | Timber—Preservative-treated—Sawn and round                                |
| 1720   | Timber structures (known as the SAA Timber Structures Code)               |
| 1720.1 | Part 1: Design methods  |
| 1726   | Geotechnical site investigations  |
| 2209   | Timber—Poles for overhead lines   |
| 2701   | Methods of sampling and testing mortar for masonry constructions          |
| 2701.2 | Method 2: Methods of sampling   |
| 2832   | Guide to the cathodic protection of metals                                |
| 2832.2 | Part 2: Compact buried structures   |
| 2832.3 | Part 3: Fixed immersed structures   |