Australian/New Zealand Standard™

Structural design requirements for utility services poles

Standards Australia

STANDARDS NEW ZEALAND

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee CE/19, Utility Services Poles. It was approved on behalf of the Council of Standards Australia on 21 May 2000 and on behalf of the Council of Standards New Zealand on 16 May 2000. It was published on 30 August 2000.

The following interests are represented on Committee CE/19:

Bureau of Steel Manufacturers of Australia
Concrete Pipe Association of Australasia
Electricity Engineers Association of New Zealand
Electricity Supply Association of Australia
National Precast Concrete Association of Australia
New Zealand Concrete Society
New Zealand Heavy Engineering Research Association
New Zealand Timber Industry Federation
University of Technology Sydney

Additional interests participating in the preparation of this Standard:

Australian Aluminium Council
AUSTROADS
National Association of Forest Industries

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at www.standards.com.au or Standards New Zealand web site at www.standards.co.nz and looking up the relevant Standard in the on-line catalogue.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 98206.

Australian/New Zealand Standard™

Structural design requirements for utility services poles

First published as AS/NZS 4676:2000.

Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

ISBN 0 7337 3449 9

PREFACE

This Standard was prepared by the Joint Standards Australia/ Standards New Zealand Committee CE/19, Utility Services Poles.

The objective of this Standard is to provide power authorities, manufacturers, and designers, with the requirements for the design and installation of utility services poles.

This Standard is intended for use in conjunction with the following Standards:

AS 2209	Timber poles for overhead lines
AS/NZS 4065	Concrete utility services poles
4677	Steel utility services poles

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance

CONTENTS

Page

Page

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
Structural design requirements for utility services poles

S E C T I O N 1 S C O P E A N D G E N E R A L

1.1 SCOPE

This Standard sets out general requirements for structural design and minimum design loads applicable to pole structures supporting—

(a) street or floodlighting;

(b) road or railway signalling equipment;

(c) aerial conductors carrying electric power, or communication signals;

(d) equipment for communication through the atmosphere; or

(e) any combination of these.

This Standard does not apply to lattice towers, guyed masts, masts or flag poles.

NOTES:

1 Design requirements for steel lattice towers and masts for communication purposes are given in AS 3995.

2 For information on the additional loads induced by the temporary attachment of flags or banners to utility services poles see Clause 3.8.

1.2 GENERAL

The structural design of utility services poles shall be based on accepted principles of structural mechanics taking due account of environmental and site factors for the particular locations in which the poles will be situated and their expected service life.

Design shall be either by calculation in accordance with Sections 2 to 5 inclusive, or by load testing in accordance with Section 7.

NOTE: A pole supplier should elect to use the calculation method for poles that are required in limited numbers, and to select the load-test method for poles that are required in sufficiently large numbers so that the expense of testing may be offset by potential material savings.

1.3 REFERENCED DOCUMENTS

The documents referred to in this Standard are listed in Appendix A.

1.4 DEFINITIONS

For the purpose of this Standard the definitions given in AS 1158.1, AS 1798 and those below apply.

1.4.1 Guyed/stayed

Stabilized above ground level against lateral forces by one or more steel cables, which are anchored at their lower ends to the ground or other permanent construction.

AS/NZS 4676:2000 Structural design requirements for utility services poles