

Appendix A

TERMINOLOGY AND ABBREVIATIONS

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A1 BUILDING TERMINOLOGY

Classification

Class 1A	A single dwelling being a detached house, town house or one or more attached dwellings, each being a building separated by a fire resisting wall including a row houses, terrace, town house or villa unit.
Class 2	A building containing 2 or more sole occupancy each being a separate dwelling.
Class 3	A residential building other than a building of Class 1 or 2.
Class 4	A dwelling in a building that is Class 5, 6, 7, 8 or 9, if it is the only dwelling in the building.
Class 5	An office building used for professional or commercial purposes.
Class 6	A shop or other building for the sale of goods by retail or the supply of services direct to the public.
Class 7	A carpark or storage or display of goods or produce for sale by wholesale.
Class 8	A laboratory or a building in which a handicraft or process for the production, assembling, altering, repairing, packing, finishing or cleaning of goods or produce is carried on for trade, sale or gain.
Class 9	A building of a public nature.
Class 10	A non habitable building or structure.

A2 TRUSS TERMINOLOGY

Apex	The connection region between two top chords.
Bridge truss	This truss can be either a common or truncated truss. With overhang removed at heel. A bridge bracket is fitted to one or both of the cut off ends.
Chord	Structural member that forms the top and bottom component of a truss.
Common truss	Framed truss supported on both ends by load bearing walls. It forms the main roof block and gable ends. This is also known as a standard truss.

Creeper rafter (or) Jack rafter	Member used to form a hip end by connecting the hip end wall and truncated trusses to the hip rafter.
Girder truss	Structural truss found at the intersection of two roof blocks. It is used to support bridge trusses and eliminates the needs for an internal load bearing wall.
Half truss	Triangular shaped truss with the end web fixed vertically at 90 degrees to the bottom chord. It is commonly used to form verandah roofs in two storey construction.
Heel	The connection region between top and bottom truss chords of a non parallel chord truss.
Hip rafter	This member defines the edge of the hip, connecting the hip end wall and truncated trusses. It provides support for creeper rafters.
Panel point	The connection region between a web and chord member.
Saddle truss	A framed truss with the top chords cut at heel to form the foot cut. It is used to form the valley line where two roof planes intersect. Saddle trusses are supported by trusses and rafters below.
Truncated truss	A truss of varying depth with a horizontal top chord. These trusses are usually used to form the hip end.
Web	A structural member in a truss which is connected to the top and bottom chords.

A3 WALL TERMINOLOGY

Bracing wall	An assembly to resist horizontal forces from wind or earthquake actions including diagonal straps or members, shear panels, diaphragms, cantilevered columns or portal (rigid) frames. When the assembly is specifically designed to resist the design actions then it is called a 'designated bracing wall'. When its resistance is considered but not specifically designed for, it is called a 'nominal bracing wall'.
Cladding	Material used to cover the external surface of walls or roofs.
External walls	Walls exposed to external wind pressure.
Internal walls	Walls not exposed to external wind pressure.
Lining	The materials used to cover the internal surfaces of walls or ceilings.
Lintel sill	Also known as ledger.
Load bearing walls	Walls designed to support vertical loads from roofs and/or floors. (This definition differs from that given in the Building Code of Australia).
Non load bearing walls	Walls not designed to support roofs or floors but may be designed to support ceilings. (This definition differs from that given in the Building Code of Australia).
Nogging	A horizontal member fitted between studs in a wall frame which restrains the studs from buckling in the plane of the wall. Noggings may also be used for attachment of cladding or lining or as part of a bracing system.
Wall/brick tie	A bracket connecting brick cladding to a wall frame.

A4 FLOOR TERMINOLOGY

Bearer	Structural member that supports floor joists.
Blocking	Members attached perpendicular to joists to prevent lateral or torsional movement of joists.
Continuous span	Span that extends over several supports (more than 2).
Flooring	Permanent covering of a floor.
Joist	Structural member directly supporting floor (flooring).
Pier	Vertical member supporting building.
Stump	Vertical member supporting an elevated floor of a building.

A5 ABBREVIATIONS

ABCB	Australian Building Codes Board
AISC	Australian Institute of Steel Construction now known as Australian Institute of Steel (ASI)
ASTM	ASTM International previously known as American Society for Testing and Materials
BCA	Building Code of Australia
BCA Volume 1	Volume 1 applies to Class 2 to 9 buildings
BCA Volume 2	Volume 2 applies to Class 1 and 10 buildings (houses, sheds, carports etc.)
BMT	Base metal thickness
CHS	Circular hollow sections
CMAA	Concrete Masonry Association of Australia
C ₂ H ₂	Ethyne
CO ₂	Carbon dioxide
COV	Coefficient of variation
DALY	Disability adjusted life year (time based measure that combines years of life lost due to premature mortality and years of life lost due to time lived in states of less than full health)
Dia.	Diameter
E	Young's modulus of elasticity (200 x 10 ³ MPa)
EPS	Expanded polystyrene
FC	Fibre cement
G	Shear modulus of elasticity (80 x 10 ³ MPa) or the permanent action
GMAW	Gas Metal Arc Welding, commonly known as MIG welding.
Ha	Hectare
I	Second moment of area
IFI	International Fastener Institute
IISI	International Iron and Steel Institute
ISO	International Standards Organisation
J	Torsion constant for a cross section
kN	Kilonewton
L	Length of member
LCA	Life Cycle Assessment

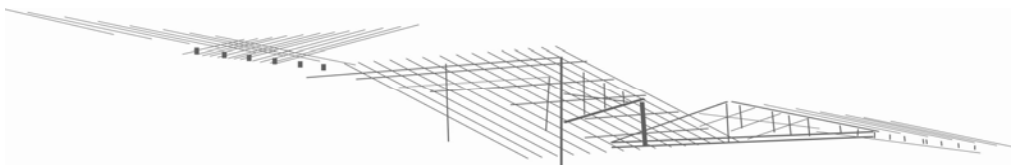
MPa	Megapascal
Mt	Megatonne
NASH	National Association of Steel-Framed Housing
NASH Standard Part 1	Residential and Low-rise Steel Framing Part 1: Design Criteria
NASH web site	www.nash.asn.au
OECD	Organisation for Economic Co-operation and Development
PFC	Parallel flange channel
PJ	Petajoule (10^{15})
PO ₄	Phosphate
Q	Imposed actions
RHS	Rectangular hollow sections
SHS	Square hollow section
TCT	Total coated thickness
TL	Teralitre (10^{12})
TPI	Threads per inch
W _s	Serviceability wind action
W _u	Ultimate wind action



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NASH Handbook

Design of Residential and Low-rise Steel Framing



©NASH 2009

ISBN 978-0-646-51133-7

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- Mean that a design, material or building solution complies with the Building Code of Australia (BCA);
- Absolve the user from complying with any Local, State, Territory or Australian Government legal requirements.

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Preface

Steel framing is commonly chosen for houses and other forms of low-rise construction as it is:

- Cost effective
- Dimensionally stable
- Non combustible
- Termite and borer proof
- Durable
- Strong but lightweight
- 100 percent recyclable
- Consistent in its properties and performance

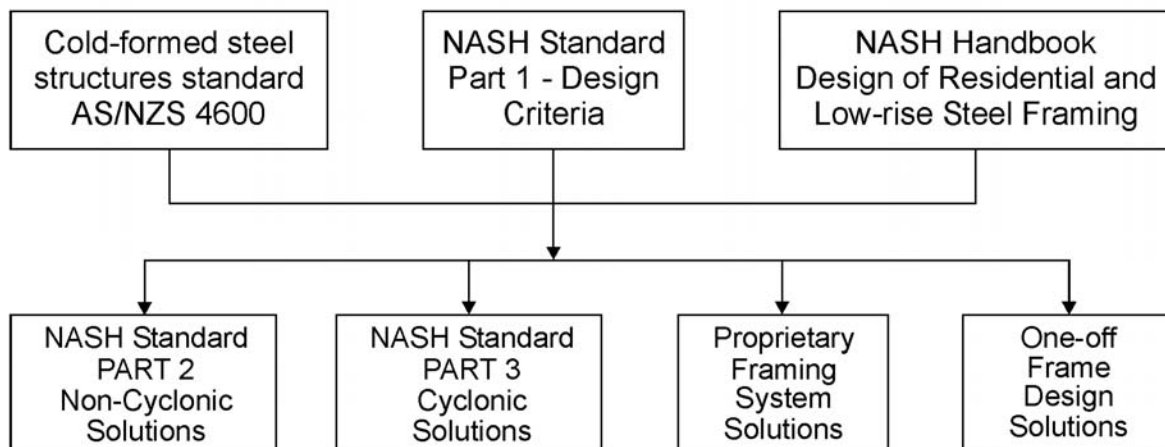
The NASH Standard – Residential and Low-rise Steel Framing Part 1: Design Criteria sets out the design criteria, in terms of structural adequacy and serviceability, for use in the design of low-rise steel framing. This includes houses as well as other low-rise residential and commercial buildings.

This Handbook aims to assist the steel framing designer in the application of the NASH Standard Part 1. However, it does not purport to provide a detailed guide on the use of the Cold-formed steel structures standard AS/NZS 4600 or replace engineering judgement.

The Handbook contains performance data for a number of proprietary components such as screws, rivets, bolts and anchors. This information has been reproduced in Appendices in good faith from information provided by the relevant manufacturers. It has been included to assist the use of the Handbook as a reference for users, but is not exhaustive. Handbook users should contact relevant manufacturers directly for additional performance information.

Two separate Standards (Part 2 & 3) are being developed to provide steel framing span tables and related information and these will be published in due course. The relationship between the Standards and this Handbook is illustrated below.

The NASH web site www.nash.asn.au is regularly updated and provides supplementary information to this Handbook.



National Association of Steel-Framed Housing Inc

NASH is an active industry association centred on light structural framing systems for residential and similar construction. NASH represents the interests of suppliers, fabricators and customers – all those involved in steel framing systems.

NASH's key objectives are to:

- Support the long term growth and sustainability of the steel frame industry.
- Maximise awareness of the steel frame industry in the market place.
- Promote the advantages of steel frames to the building industry and homeowners.

Acknowledgements

The following companies, organisations and individuals were represented on the industry committee responsible for preparing this Handbook:

Australian contributors

Kavitha Mysore	BlueScope Lysaght
Graeme Stark	BlueScope Steel
Trevor Clayton	BlueScope Steel
Lex Somerville	BMCC Services
Lam Pham	CSIRO – Sustainable Eco Systems
David Collinson	ITW Buildex
Ken Watson	National Association of Steel-Framed Housing Inc
Michael Kelly	National Association of Steel-Framed Housing Inc
Hayden Dagg	OneSteel Australian Tube Mills
Ross Dempsey	OneSteel Australian Tube Mills
Andrew Byrne	Rondo Building Services
Subo Gowripalan	Stramit Building Products
Greg Anderson	Structerre Consulting Engineers
Les McGrath	TGM Group
Emad Gad	University of Melbourne / Swinburne University of Technology
Bruce Cannon	Welding Technology Institute of Australia

International contributors

Gordon Barratt	NASH New Zealand
Hennie de Clercq	Southern African Light Steel Framing Association

The following companies provided their proprietary data which has been reproduced in Appendix D and Appendix E:

- ITW Buildex
- Bremick Fasteners
- Henrob
- Acument Australia
- Ramset
- Boral Plasterboard.