

Specification of permanent wood foundations for housing and small buildings



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Preface

This is the fourth edition of CSA S406, *Specification of permanent wood foundations for housing and small buildings*. It supersedes the previous editions published in 2014, 1992, and 1983.

This edition has been revised with the following changes of significance:

- a) Tables [5A](#) to [5L](#) and [10A](#) to [10L](#) series, as well as Tables [3A](#) and [3B](#) and [7A](#) and [7B](#) and some figures, have been modified to reflect the new load combinations in the *National Building Code of Canada*, 2015.
- b) Reference to “preserved wood foundations” has been corrected to the new industry term of “permanent wood foundations”.
- c) More details have been added to the concrete footings supporting walls and columns.
- d) Revised details have been added to the requirements for high wind and seismic force.

The design provisions and tables have been updated to comply with the 2014 edition of CSA O86, *Engineering design in wood*, and the *National Building Code of Canada*, 2015.

This Standard was prepared by the Subcommittee on Permanent Wood Foundations under the jurisdiction of the Technical Committee on Wood Preservation and the Strategic Steering Committee on Construction and Civil Infrastructure and was formally approved by the Technical Committee.

Notes:

- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*
- 3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as “substantial agreement”. Consensus implies much more than a simple majority, but not necessarily unanimity”. It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*
- 4) *To submit a request for interpretation of this Standard, please send the following information to inquiries@csagroup.org and include “Request for interpretation” in the subject line:*
 - a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
 - b) *provide an explanation of circumstances surrounding the actual field condition; and*
 - c) *where possible, phrase the request in such a way that a specific “yes” or “no” answer will address the issue.*

Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization and are available on the Current Standards Activities page at standardsactivities.csa.ca.
- 5) *This Standard is subject to review within five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to inquiries@csagroup.org and include “Proposal for change” in the subject line:*
 - a) *Standard designation (number);*
 - b) *relevant clause, table, and/or figure number;*
 - c) *wording of the proposed change;*
 - d) *rationale for the change.*

S406-16

Specification of permanent wood foundations for housing and small buildings

1 Scope

1.1

This Standard applies to the selection of materials for, and the fabrication and installation of, permanent wood foundations.

1.2

Specific details are provided for buildings up to three storeys in building height above the foundation and having a building area not exceeding 600 m².

1.3

This Standard provides for the optional use of wood sleeper, poured concrete slab, and suspended wood basement floor systems as components of the permanent wood foundation, and for the use of permanent wood foundations enclosing crawl spaces (see Figures [A.1](#) and [A.7](#)).

1.4

The values given in SI (metric) units are the standard. The values given in parentheses are for information only.

Note: *In commercial practice, nails are commonly identified by their length in inches. Lumber sizes are expressed in terms of thickness × width, with metric values (mm × mm) referring to standard dry dressed sizes and with imperial values (in × in) referring to nominal nondressed sizes, both in conformance to CSA O141.*

1.5

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the Standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.