

ASCE
Standards Writing Manual for ASCE Standards Committees
Prepared by ASCE Codes and Standards Committee
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ASCE Standards Writing Manual for ASCE Standards Committees

1.0 Scope, purpose, and management.

1.1 Scope. This writing manual shall define the different classes of ASCE (referred to herein as the Society) standards and describe the required format and writing style for the development of standards by the ASCE Rules for Standards Committees.

1.2 Purpose. The purpose of this manual shall be to standardize the form and style of standards prepared by standards committees of the Society. The overall intent of this manual shall be to achieve standards that are clearly written, consistent in terminology, and in a form and style that is readily usable.

1.3 Management. This manual shall be maintained by the Society's Codes and Standards Committee (CSC).

2.0 General requirements for all standards.

The following requirements shall apply to all standards promulgated by the Society.

2.1 Definitive. Requirements in a standard shall be definitive and expressed as specific instructions and not as explanations.

2.2 Realistic. Requirements shall not be arbitrary, but instead shall be based on factors that are necessary to achieve the purpose of the standard.

2.3 Technically sound. Requirements shall be technically sound and shall cover only those items that are subject to control and are pertinent. Requirements shall be reasonably consistent with current practices and capable of being specified by the user.

2.3.1 Referenced standards. Standards referenced in ASCE standards shall be developed and maintained through a nationally recognized consensus process such as the American National Standards Institute (ANSI) or the American Society for Testing and Materials (ASTM). Any exception to this shall be approved by the applicable Standards Council Executive Committee having technical jurisdiction.

2.3.2 Referenced standards availability. Standards referenced in ASCE standards shall be available to the public.

2.3.3 Reference standard edition. The specific edition of a referenced standard shall be cited.

2.4 *Clearly stated.* The requirements shall be expressed in understandable language that is free of ambiguity and shall be clear so that differences of interpretation are unlikely.

2.4.1 Title. The title of the standard shall clearly indicate whether the standard is written in mandatory or nonmandatory language through the use of such terms as *guide*, *guideline*, or *consensus guideline* in the title of nonmandatory standards.

2.4.2 Scope. The scope or application of a standard shall be clearly described.

2.4.3 Definition of terms. All terms shall be defined where they deviate from an ordinarily accepted meaning or dictionary definition. All terms should appear in italics on first mention, not in quotes. After first mention, terms should appear in regular font.

2.5 *Consistent.* Requirements in a standard shall not be contradictory or incompatible with each other. Wherever possible, a standard shall use nationally accepted sizes, shapes, and devices.

2.5.1 Consistency with referenced standards. Requirements incorporated into a standard through reference to another standard shall be consistent.

2.5.2 Conflicts between standards. A standard shall not state that its provisions govern over the provisions of a referenced standard.

2.6 *Wording consistent with application.* The wording of a standard shall determine how it is to be applied by the user. Standards shall contain either prescriptive or performance-based wording. However, standards shall be permitted to contain wording that is prescriptive as well as descriptive of desired performance.

2.6.1 Prescriptive standard. A prescriptive standard shall be a document that contains wording that specifically describes ways and means of attaining the end results. It shall not only state what is to be attained but also specify how it is to be attained. It shall be permitted to include limitations on certain elements of the process being described and specify the order or timing of actions, events, or activities.

2.6.2 Performance-based standard. A performance-based standard shall be a document that contains wording that specifically describes the end result to be attained. This type of standard shall be worded to describe how the design, method, or specification is to perform when completed.

2.7 Wording consistent with classification. A document, which is prepared by standards committees of the Society in accordance with the ASCE Rules for Standards Committees, shall be written to be consistent with its classification as either a *mandatory* or *nonmandatory* standard.

2.8 Deviations from general requirements. Deviations from these general requirements within this manual shall only be made with the approval of the CSC after the submittal of acceptable justification.

3.0 Classification of standards.

A standard shall set the rules, conditions, or requirements concerned with definition of terms; classification of components; delineation of procedures; specification of dimensions, materials, performance, design, or operations; description of fit and measurement of size; and/or measurement of quality and quantity in describing materials, products, systems, services, or practices. Standards shall be classified as either mandatory or nonmandatory.

3.1 Mandatory standard. A mandatory standard shall be enforceable and shall be worded so that a person auditing its use or application can point out where it has been followed or where it has not been followed, or the extent to which it has or has not been followed. Portions not intended to be adopted and enforced shall be incorporated in a commentary or other advisory document.

The following are examples of mandatory standards:

- (a) Standard test method that provides a definitive procedure for the identification, measurement, and evaluation of one or more qualities, characteristics, or properties of a material, product, system, or service.
- (b) Standard specification that provides a set of requirements to be satisfied by a material, fabrication process, product, system, or service.
- (c) Design standard that establishes minimum requirements for the design of a product, material, or system that will provide acceptable performance when subjected to prescribed loads and/or conditions.
- (d) Construction standard that establishes minimum requirements for the construction of a product, material, or system that will provide acceptable performance when subjected to prescribed loads and/or conditions.

3.2 Nonmandatory standard. A nonmandatory standard shall be written in permissive language and requires that a person auditing its use or application rely on judgment to ascertain whether the standard has been followed. The following are examples of nonmandatory standards:

- (a) Consensus practice that provides recommendations based on existing practices for construction, materials, testing schemes, and/or other types of practices that, along with significant judgment on the part of users, provide a basis for defining project-specific requirements.
- (b) Consensus guideline that offers a series of options, suggestions, methods or instructions but normally shall not recommend a specific course of action.
- (c) Standard contract document that provides standard forms of contracts, agreements, standard general provisions, and so on for use in establishing requirements of contracts or agreements.
- (d) Standard drawing that provides illustrations depicting specific items such as standard details, standard connections, standard nomenclature, and so on.

4.0 Material preparation.

4.1 Existing standard Word files. At the beginning of the committee's review and update cycle, the Chair should contact the ASCE Publications Production Department to request the Word and electronic figure files from the existing standard, if applicable, to begin revisions for the updated standard.

4.2 Permission inventory form. The committee shall download a Permission Inventory Form, available at the links in *Publishing Books with ASCE* that is available at <http://dx.doi.org/10.1061/9780784478998>, and complete it, identifying which figures and tables are original, which need permissions, and confirming that permissions have been obtained.

5.0 Style.

5.1 Writing style. The style of writing shall be directed toward the intended readership. It shall be easy to read and in proper grammatical language. Coined words (i.e., jargon peculiar to a particular industry or technical discipline) shall be defined. The use of indefinite pronouns and lack of clear antecedents should be avoided. For clarity, conjunctions and compound sentences shall be used with great care. Verbose statements shall be avoided. The style shall be simple to

avoid being misunderstood. Other manuals shall be used for detailed instructions on writing (see Section 10).

5.2 Spelling. *Merriam Webster's Dictionary online edition* (<https://www.merriam-webster.com/>) shall be used as the guide to correct spelling; the form appearing first shall be preferred in most cases. (see Section 10).

5.3 Hyphenation.

5.3.1 Determination. *Webster's Dictionary online edition* shall be consulted on the question of whether a compound word should be hyphenated or presented as one or two words.

5.3.2 Permanent compounds. Words shall be considered permanent compounds (i.e., those that have been accepted into the general vocabulary), if so designated in *Webster's Dictionary online edition*.

5.3.3 Temporary compounds. For temporary compounds (i.e., the joining of words for a specific context), the editor shall make the final determination.

5.3.4 Multiple adjectives. The use of multiple adjectives to define a noun shall be avoided. (For example, consider using "requirements for electrical analog indicating instruments" rather than "electrical-analog-indicating-instrument requirements.")

5.4 Abbreviations. Technical or nontechnical abbreviations, which are words or phrases that have been shortened by leaving out or substituting letters, shall be avoided unless necessary for clarity and style. When necessary, commonly accepted abbreviations shall be used.

Abbreviations that are not commonly known shall be defined in the standard in a list of acronyms appearing at the beginning of the first chapter.

5.4.1 Usage. Technical abbreviations shall be used only where necessary to save time and space and only where their meaning is unquestionably clear to the intended reader. Abbreviations and their corresponding full terms or words shall be defined in the first chapter.

5.4.2 Definitions, symbols, and notations. Standard definitions, symbols, and notations that relate to their field of applicability shall be used wherever possible. If a standard has definitions, symbols, and notations that have specific technical meaning or that are unique to the field, a definitions, symbols, and notations section shall be provided as part of the first chapter.

5.4.3 Presentation. Lowercase letters shall be used for abbreviations for units in text except for those derived from proper names. (For example, psi is the abbreviation for pounds per square inch; and Rh, the abbreviation for Rockwell hardness.) Periods shall be omitted at the end of abbreviations and between letters in abbreviations.

5.5 Notes. Explanatory statements shall be permitted in the text of standards for emphasis or offering informative suggestions. Such explanatory statements, if necessary, shall be considered part of the commentary (see Section 6.8). An exception is a note in a table or figure, which shall be considered a part of the standard. The text of those notes shall not be italicized but indented to the left of standard text, and contained within the section in which they appear. The text of notes shall be preceded by *Note:* and shall end with a period.

5.6 Footnotes.

5.6.1 General. Footnotes shall be permitted in a standard for purposes of clarification.

5.6.2 Mandatory standards. Footnotes shall be discouraged in standards written in mandatory language and shall not be considered as part of the standard unless indicated otherwise in the footnote.

5.6.3 Nonmandatory standards. Footnotes shall be permitted in a nonmandatory standard and shall be considered a part of that standard.

5.6.4 Numbering. Footnotes to the text shall be numbered consecutively beginning with each new chapter. If the same footnote occurs frequently throughout the text, the footnote is renumbered at each occurrence.

5.6.5 Table footnotes. Table footnotes shall be considered part of the table.

5.7 Numbers.

5.7.1 Numbers from one to ten. Numbers from one to ten shall be spelled out unless used with dimensional terms or measurements.

5.7.2 Numbers above ten. Numerals shall be used for numbers above ten. Where an isolated number greater than 10 and less than 100 is to appear in the general text, the number shall be spelled out unless used with dimensional terms or measurements.

5.7.3 Mixing number forms. Numerals and spelled-out numbers shall not be mixed in the same paragraph. Choose one form or the other.

5.7.4 Time and physical quantities. Arabic numerals shall be used for all units of measuring time and physical quantity.

5.7.5 Tolerances. Numbers for tolerances shall be either plus (+) or minus (-) or both (\pm), and where necessary, the direction shall be specified.

5.8 *Acronyms*. Full terms to which an acronym applies shall be defined in the standard in a list of acronyms appearing at the beginning of the first chapter (see Section 5.4). Thereafter, the acronym only is used throughout the standard. Acronyms shall be in all capital letters.

5.9 *Capitalization*. Capital and lowercase letters (capitals for the first letter of the first word, lowercase for the balance) shall be used for section and subsection headings, captions for figures, and column headings in tables. Figure captions shall end with a period. Titles for tables shall have all significant words capitalized and end with a period.

5.10 *Sections and subsections*.

5.10.1 Arabic numerals. Arabic numerals shall be used in sequence for sections and subsections. A subsection shall be designated by adding a period and number to the section number (e.g., 4.1). This subsection, in turn, shall be permitted to be divided by a second period and a second number and indented (e.g., 4.1.1), if subsections are used. There shall be no fewer than two numbered subdivisions. Five numbers divided by periods (e.g., 4.1.1.1.1) shall be the maximum.

5.10.2 Paragraphs within sections. Paragraphs within sections and subsections shall be numbered only where more than one is required. The terms *section* and *subsection* shall not be used in headings or references; cross references shall be made by referring simply to the appropriate section or subsection number. The number and section headings shall be permitted to be used individually or together when referring to major section headings.

5.10.3 Lists. A list of items within a section or subsection shall be presented in outline form with the items labeled (a), (b), (c), and so on. If further breakdown of the list is necessary, 1., 2., 3., and so on, shall be used. Only one such list shall be presented in any one section or subsection to avoid confusing cross references. Closing punctuation in lists of short items shall be omitted. In general, bulleted items shall be discouraged. In addition, all lists must be labeled with either letters or numbers.

5.11 *Language*.

5.11.1 Shall. The word "shall" is understood as denoting a mandatory requirement. "Shall" is to be used wherever the criterion for conformance with the specific

recommendation requires that there be no deviation. Its use shall not be avoided on the grounds that compliance with the standard is considered voluntary.

5.11.2 *Should*. The word "should" denotes a recommendation. "Should" is to be used wherever noncompliance with the specific recommendation is permissible. "Should" is not to be substituted for "shall" on the grounds that compliance with the standard is considered voluntary. The word "should" is not to be used in a mandatory standard.

5.11.3 *May*. The use of the word "may" is to be considered permissive and shall not be used in a mandatory standard.

5.12 *Units of measurement*. Both customary units and SI (or metric) units must be included in standards, and they should follow the units of measurement as specified in the ASCE Rules for Standards Committees. Customary units should be given first, followed by SI units in parentheses.

6.0 Section order and descriptions.

Following is a list of typical sections, designated as required or optional. Sections other than those specified in this list shall depend on the classification of the standard being prepared.

6.1 *Title (required)*. The title shall convey the subject of the standard in a clear and concise manner with minimum words (256 character limit is recommended).

6.2 *Copyright page (required)*. A copyright page shall be included, which is prepared by the Society's publications staff. The Society's internet address for posting errata, addenda, and supplements to the standard (prepared by the Society's publications staff) shall be provided on the copyright page.

6.3 *ASCE Standards page (required)*.

6.3.1 *First paragraph*. The ASCE Standards page shall be required. The following paragraph shall be included as the first paragraph:

The Board of Direction approved revisions to the ASCE Rules for Standards Committees to govern the writing and maintenance of standards developed by ASCE. All such standards are developed by a consensus standards process managed by the ASCE Codes and Standards Committee (CSC). The consensus process includes balloting by a balanced standards committee and reviewing during a public comment period. All standards are updated or reaffirmed by the same

process at intervals between five to ten years. Requests for formal interpretations shall be processed in accordance with Section 7 of ASCE Rules for Standards Committees, which are available at http://www.asce.org/uploadedFiles/Technical_Areas/Codes_and_Standards/Content_Pieces/asce-rules-standards-committees.pdf.

Errata, addenda, supplements, and interpretations, if any, for this standard can also be found at <http://ascelibrary.org/>.

6.3.2 Nonmandatory standards. *Nonmandatory* standards shall include the following paragraph on the ASCE Standards page:

The provisions of this document are written in permissive language and, as such, offer to the user a series of options or instructions, but do not prescribe a specific course of action. Significant judgment is left to the user of this document.

6.3.3 Mandatory standards. *Mandatory* standards shall include the following paragraph on the ASCE Standards page:

The provisions of this document are written in mandatory language and, as such, are intended to be suitable for regulatory or contractual purposes.

6.3.4 Last paragraph. The following paragraph shall be included as the last paragraph on the ASCE Standards page:

This standard has been prepared in accordance with recognized engineering principles and should not be used without the user's competent knowledge for a given application. The publication of this standard by ASCE is not intended to warrant that the information contained therein is suitable for any general or specific use, and ASCE takes no position respecting the validity of patent rights. The user is advised that the determination of patent rights or risk of infringement is entirely his or her own responsibility.

6.4 *Contents (required)*. The table of contents (called Contents) shall contain the main sections and at least the first tier of subsections along with a list of appendixes.

6.5 *Preface (required)*. The preface describes the technical area of coverage and, if necessary for clarity, any additional comments that describe the content of the standard. The preface also may include useful background information such as a brief history of the standard's development and

purpose, users that are expected to benefit from use of the standard, and a summary of the primary issues addressed by changes in the current standard.

6.6 *Acknowledgments (required)*. The following is the standard text for the Acknowledgments section. The chair of the standards committee may, within reasonable limits, modify this text to recognize significant contributions.

ASCE and its XYZ Institute (XYZ) acknowledge the devoted efforts of the ABC Standards Committee of XYZ. This committee comprises individuals from many backgrounds. This standard was prepared through ASCE's consensus standardization process in compliance with the ASCE Rules for Standards Committees and the procedures of the ASCE's Codes and Standards Committee (CSC). ASCE's standardization process is accredited by the American National Standards Institute (ANSI).

The acknowledgments page shall also include a list of the standards committee's officers and members at the time the standard is approved by CSC.

6.7 *Body (required)*. The body of the standard may include the following:

6.7.1 Consensus standards. This section shall include a listing of all standards that are incorporated in the standard by reference.

6.7.2 Tables, figures, and equations. Tables, figures, and equations shall be included in or close to the section to which they refer. They also must be called out in text. The words *Table*, *Figure*, and *Equation* are spelled out fully in text.

6.7.2.1 Tables. Each table shall be given a title, explained in the text, and numbered with Arabic numbers including the chapter number and the table number (e.g., Table 1-1) in the order in which they are used in each section or subsection. All tables must have column heads that are labeled and numbered.

6.7.2.2 Figures. All figures that are graphs must have both the x axis and the y axis labeled. All figures shall be referred to in each chapter in consecutive order. Each figure shall be given a caption, explained in the text, and numbered with Arabic numbers including the chapter number and the figure number (e.g., Figure 1-1) in the order in which they are used in each section or subsection

6.7.2.3 Equations. Equations shall use standard nomenclature wherever possible. Elements in an equation shall be clearly defined the first time the equation is used,

unless Chapter 1 contains a list of symbols and definitions (see Section 5.4.2). Equations must have the chapter number and the equation number included and the label appear on the far right in Arabic numbers without the word “Equation”. Equations shall be centered and numbered sequentially within a section with the section number appearing at the right (e.g., 1-1). Following the equation, definitions are listed (i.e., “where” element = definition).

6.8 Commentary (optional). A commentary shall be permitted to contain explanatory material, references, and additional information related to each particular section of the standard for which it is intended. The commentary shall not be written in mandatory language (shall, must, etc.) and shall not provide alternatives to the standard. A commentary shall not be a research document or a textbook but directly address the reasons for and provide additional information on the requirements contained in the standard. References cited in a commentary shall contain the backup research data related to the provisions of the standard. No reference standards shall appear in the commentary. Commentary appears in its own location, following the provisions. Commentary proposed for adoption by the Society shall be approved by the standards committee by letter ballot using the voting procedures prescribed in the ASCE Rules for Standards Committees.

6.9 Appendixes (optional). Appendixes shall be for the inclusion of additional material and shall be designated as either part of the standard or for information purposes only. (Sample calculations and derivation of formulas are examples of materials to be included in the appendixes.)

6.10 References (required). References shall be listed alphabetically by author. Only those references included by the standards committee in developing the standard shall be listed.

7.0 Special policies.

7.1 Copyrighted material. If a standards committee proposes to incorporate material from a copyrighted publication other than the Society’s, written permission shall be obtained by the committee from the owner. Permission shall be requested by the committee for use in the ASCE standard, and confirmation of receipt of permission must be documented in the Permission

Inventory Form (see Section 4.2). The copyright source shall be referenced at the location where the material is incorporated into the standard, such as in a figure caption or table note.

7.2 Equipment and trademarks. Photographs and drawings shall be generic. References to equipment shall be generic and shall not include trademarks or other proprietary designations. Where a sole source is believed to exist for essential materials or equipment, the standard shall contain the name and address of the source in a footnote as long as the words "or the equivalent" are included in the reference.

7.3 Safety in standards. Where a standard involves the use of hazardous materials, operations, and equipment, a generic caveat or caution shall appear in the scope of the standard. The generic caveat shall be

This standard may involve hazardous materials, operations, and equipment. This standard does not purport to address the safety problems associated with its application. It is the responsibility of whoever uses this standard to establish appropriate safety and health practices and to determine the applicability of regulatory and nonregulatory limitations.

7.4 Use of standards. Users of ASCE standards may need special knowledge or professional training and experience to properly and safely apply a standard. If necessary, specific caveats or limitations shall be included in a standard. Those who use a standard shall accept full responsibility for its use. Standards shall not preclude professional judgment in situations where they are used.

8.0 Copyediting, production, and publication.

Following the completion of committee balloting, clean, digital files of the complete text (including front matter, figures, tables, equations, commentary, and permissions documents) prepared in accordance with this *Standards Writing Manual* shall be submitted to the ASCE Codes and Standards staff. Staff shall review the document and forward it to ASCE Publications for copyediting. The document shall be accompanied by the completed Permission Inventory Form identifying which figures and tables are original, which need permissions, and confirming that permissions have been obtained. As noted above, the Permission Inventory Form is available at the links in *Publishing Books with ASCE* that is available at <http://dx.doi.org/10.1061/9780784478998>.

The copyediting will be marked with Track Changes in a Microsoft Word document, and returned to the committee for review.

The committee shall review the copyedited document, and accept changes that ensure the standard will be consistent with Society and CSC publishing style, as well as good grammar and technical clarity. The committee must address all queries from the copyeditor before ASCE Publications prepares a clean manuscript for public comment and CSC approval.

The version of the standard put forward for public comment shall not be formatted to represent or imitate in any way the formatting of the final published standard.

When the public comment period and CSC approval have been completed, the manuscript shall be submitted to ASCE Publications, where it will be typeset, proofread, indexed, and otherwise prepared for publication in both print and electronic formats according to the procedures identified in *Publishing Books with ASCE: A Guide for Authors, Editors, and Committees*. The standard shall be published in the 8-1/2 x 11 in. size.

9.0 Errata, addenda, and supplements to standards.

Errata, addenda, and supplements to a standard shall be posted on the ASCE Library website, which shall be identified in the standard as required by Section 6.2. Errata, addenda, and supplements to a standard shall only be incorporated into the standard at printing and publication (or online posting) of a revision of the standard.

9.1 Errata. Errata shall be limited to discrepancies between the balloted and published version of the standard and typographical errors in the published version of the standard. Errata shall be approved by the Chair and need not be processed as a proposed revision in accordance with the ASCE Rules for Standards Committees.

9.2 Addenda and supplements. Modifications to a standard, which the standards committee agrees are warranted prior to undertaking a comprehensive review and revision of a standard, shall be incorporated into addenda or supplements to the standard. Addenda and supplements to standards shall be approved following the procedures for proposed provisions for changes to an

existing standard prescribed in the ASCE Rules for Standards Committees. An errata PDF will be posted on the ASCE Library website as an addition to but separate from the standard.

10.0 References.

1. *ASCE Rules for Standards Committees*,

https://www.asce.org/uploadedFiles/Technical_Areas/Codes_and_Standards/asce-rules-standards-committees.pdf.

2. *Publishing Books with ASCE: A Guide for Authors, Editors, and Committees*,

<http://dx.doi.org/10.1061/9780784478998>.

3. *Chicago Manual of Style*. Chicago: University of Chicago Press, 17th Ed., 2017.

4. *Merriam-Webster's Dictionary* (Unabridged). <https://www.merriam-webster.com/>.