



National Council of Examiners for Engineering and Surveying
240 Seneca Creek Road, PO Box 1686
Clemson, South Carolina 29633

NCEES Standards Development Procedures Manual

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By: J. Carter, Acting Executive Director

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By: J. Carter
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Foreword

The NCEES Standards Development Procedures Manual is based on procedures provided by the American National Standards Institute (ANSI). The objective of this manual is to outline the procedures in conformance with the *ANSI Essential Requirements* for accreditation as an ANSI Standards Developer (ASD) and to provide guidance to those participants in the NCEES standards development process.

When the ANSI Executive Standards Council issues an interpretation to the *ANSI Essential Requirements* or a policy statement, NCEES agrees to make any necessary revisions to the accredited procedures as outlined in this manual to be in conformance with ANSI requirements. These revisions shall be made in accordance with the implementation schedule supplied by the Executive Standards Council of ANSI. Any such revisions shall be noted with the date and the source and shall be furnished in writing to ANSI for reaccreditation.

In addition, editorial and substantive changes to this document and changes in the organizational structure of the NCEES standards development procedures will be forwarded to ANSI for its records.

In accordance with ANSI requirements for public access, the NCEES Standards Development Procedures Manual will be available to the public on the NCEES Web site at www.ncees.org.

The manual was authorized by the NCEES Board of Directors on July 29, 2006.

Revisions will be documented as approved.

1.0 Scope of NCEES Standards Activities

The purpose of NCEES standards is to foster uniform measures of competency for practice in engineering and surveying for protection of the public. NCEES standards are intended to complement the work of the NCEES Member Boards (state and territorial licensing boards) in establishing the level of competency required for practice and providing consistent, quality processes and assessments which define these competency requirements.

Historically, NCEES has provided leadership in engineering and surveying by working closely in collaboration with professional societies and by seeking their input into the requirements for competency. Professionals of all disciplines of engineering and from all practice settings participate in the development of standards for competency through the NCEES-lead process. This system of collaboration with professional societies provides a strong foundation for continuing the harmonization promoted by the ANSI standards process.

It is the intent of NCEES to continue to seek harmonization with professional societies in engineering and surveying to prevent duplication or overlap of standards and to promote the voluntary adoption of such standards. NCEES is supported in this effort as demonstrated by the letters of support from:

- American Congress on Surveying and Mapping (ACSM)
- American Nuclear Society (ANS)
- American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE)
- American Society of Photogrammetry and Remote Sensing (ASPRS)
- Instrumentation, Systems, and Automation Society (ISA)
- National Society of Professional Engineers (NSPE)
- National Society of Professional Surveyors (NSPS)
- Society of Fire Protection Engineers (SFPE)

NCEES standards will be structured in such a way as to facilitate their adoption into regulatory language. NCEES also intends to produce standards which provide a high level of consistency in competency for practice in different disciplines and practice settings of engineering and surveying and by enhancing the standards process by adopting ANSI procedures of balance, openness, and harmonization.

NCEES standards shall include the scope, principles, design, development, implementation, and maintenance of competency examinations in the practice of engineering and surveying; and shall include standards which demonstrate best practice in the professions of engineering and surveying.

2.0 Organization

The NCEES standards program is conducted by the organizational structure described below.

2.1 The NCEES ANSI Standards Task Force (ASTF) is a task force appointed by the NCEES president and serving under the guidance of the president. The ASTF is responsible for the definition of standards as a business strategy and for the development and maintenance of standards consistent with the mission and vision of NCEES and consistent with the procedures set forth in this manual.

2.1.1 ASTF membership: Membership of the ASTF shall include the past president, one member of the Board of Directors at large, the executive director, the associate executive director, and the director of examination development. The board member will be chosen by the president and will serve for a minimum term of one year and a maximum term of three years. The criteria for membership are knowledge of the ANSI process and experience with standards development. The executive director will recommend to the president the appointment of any additional staff or consultants as required by the task force to complete their work.

2.1.2 ASTF chair: The ASTF chair will be the past president of the Board and will serve a one-year term to coincide with the term of past president.

2.1.3 Responsibilities of the ASTF: The ASTF operates under authority delegated by the NCEES president. The committee provides strategy, oversight, quality control, and continuous improvement for the management of the standards process. The ASTF will be responsible for the definition of the consensus groups appropriate for the standards being accredited (see also 3.8, 3.9 and i below). Duties of the task force will be to:

- a. Define the strategy for the selection of standards for accreditation under the ANSI process. The task force will investigate, define, recommend, and implement standards strategies and policies for NCEES.
- b. Review potential new standards prior to submission to the NCEES Board of Directors for approval.
- c. Investigate the existence of any standards that may currently exist to prevent duplication.
- d. Approve the Standards Development Procedures Manual and its revisions.
- e. Provide recommendations to the president for any committees, subcommittees task forces and consensus groups required to conduct the activities of the committee to develop, register, maintain, and update the standards and to complete the balloting process.
- f. Consult NCEES standing committees to make recommendations on the selection of Subject Matter Experts (SMEs) appropriate to serve on technical committees.
- g. Define a proposed nomenclature scheme to organize and categorize NCEES standards to improve usage and clarity by the stakeholders.

- h. Manage and direct the NCEES standards activities in accordance with this manual.
- i. Determine those groups having a material interest in responding to the standards. The ASTF will define consensus committees and canvass groups and provide liaison with external groups as needed for the promulgation of the standards. Initial consensus body stakeholder groups are listed in this document in section 3.9 but may be subject to modification based on the description of the proposed standard.
- j. Evaluate the promotion of American National Standards for international use when appropriate.
- k. Provide oversight to assure that the ANSI consensus process is fulfilled and that due process is implemented as outlined in this manual.
- l. Provide liaison, reports, and communication with ANSI.
- m. Seek harmonization and coordination of standards within the industry to prevent overlap or duplication.
- n. Provide information as required for the ANSI reaccreditation process.
- o. Submit ANSI Compliance Forms as issued by ANSI.
- p. Provide a report to the NCEES president.

2.1.4 Sponsorship: The NCEES sponsors the ASTF and provides leadership, staff assistance and financial support to complete the functions of the standards procedures in accordance with this manual and in conformity to ANSI Essential Requirements.

2.1.5 Non-member attendance at ASTF meetings: Non-members of the ASTF may attend the ASTF meetings, pending written approval of the ASTF chair, based upon the validity of the request and pertinence to the meeting agenda. Persons wishing to attend ASTF meetings must make written request to the ASTF chair 30 days in advance and must provide the rationale for attending the meeting.

2.1.6 Minutes: ASTF meeting minutes shall be considered confidential and will be received by the Board in executive session. Records of the committee that are required by ANSI will be supplied in accordance with the ANSI Essential Requirements.

2.2 Appeals Committee (Ad Hoc): See section 4.0.

2.3 Technical Committee(s) (Ad Hoc): The ASTF will consult with NCEES standing committees to make recommendations for technical committee membership and SMEs required to accomplish the writing and development of the standards and to ensure the technical accuracy of the standards proposed. The technical committee members shall be comprised of members of NCEES standing committees, task forces, staff, and consultants as appropriate, taking into consideration the recommendations of the NCEES standing committee chairs. The members of the technical committees will be chosen based on their technical expertise and knowledge of the standards development process. As a condition of membership in a technical committee, the members will be required to sign an assignment agreement relinquishing all rights to the material developed, to NCEES, in accordance with the Copyright Procedures 6.6.

2.4 Canvass groups are consensus bodies responsible for the approval of American National Standards in accordance with the ANSI Essential Requirements. The composition of the consensus body shall be defined based on the specific standard to be approved. The ASTF will define the membership of the consensus body based on those groups which are appropriate. Consensus body membership will be determined as provided in 3.8 and 3.9 with consideration for a balance of interests and lack of dominance.

3.0 Standards Development Process

3.1 The standard shall first be reviewed and approved by the ASTF. An NCEES standing committee, special task force, staff person, or the ASTF may generate the proposal for a draft NCEES standard.

3.2 After review and approval by the ASTF, the Board of Directors must approve the conceptual scope of any new standard prior to the formal process of standard development and approval.

3.3 In the initial stages of development, the ASTF will define whether or not to have the proposed standard incorporated into regulations. For standards to be adopted/written into regulations, they must be:

- a. Written in a manner suitable for reference
- b. Representative of best practice
- c. Acceptable by stakeholders and endorsed by them
- d. Readily accessible
- e. Enforceable (in the regulatory context)

3.4 Notification process of a proposed new standard must include Submission Requirements. For the original standard, the following shall be submitted:

- a. Title and proposed nomenclature (example: ANSI/NCEES-TPE-420/2006)
- b. Statement of scope
- c. Explanation of need
- d. Identification of stakeholders
- e. Information on existing standards that may bear relevance to this project
- f. Supporting materials as required

3.5 ASTF shall provide notification of initiation of a new standards activity standard by submitting the ANSI Project Initiation Notification System (PINS) form. ANSI will provide notice to the public via announcement in the ANSI Standards Action. All resulting comments will be handled in accordance with ANSI Essential Requirements 2.4.

3.6 Industry review: after the completion of the draft, the ASTF will submit the first draft standard to industry representatives for comment and approval. At this time, industry representatives will preview the proposed standard prior to formal announcement. They

will ascertain the degree of modification to the standard that may be expected and confirm the direction of the standard prior to formal announcement of the draft for review.

3.7 Balance and openness: the standard review process is open to anyone with a material interest in the standard and will not be limited to membership in NCEES. The process should include a balance of interests and not be dominated by one group based upon size, position, leverage, strength, or representation to the exclusion of other groups. No interest category shall constitute more than 50% of the entire consensus body.

3.8 Canvass groups are consensus bodies for approval of American National Standards: these groups must include all groups materially affected by the standard. Consideration for groups shall include, but not be limited to, producers, users, and general interest. Groups that represent these categories in relation to NCEES standards are initially defined in 3.9 below.

3.9 Consensus body, initial lists: given the nature and scope of NCEES standards, the ASTF will consider, at a minimum, the following groups for membership in the consensus body: professional societies in engineering and surveying, Member Boards of NCEES, members of the public at large (and particularly public members of state boards), representatives of federal and state government agencies, testing companies, security consultants, psychometric consultants, employers, licensure candidates, licensed professional engineers and surveyors, engineering and surveying students, and engineering and surveying educators. Persons balloting must be bonafide representatives of the defined stakeholder group they are representing.

Each member will be assigned by NCEES to one of three interest categories: user, producer and general interest. Definitions: Users are those using the licensure process and/or the assessments and could include potential licensees, Member Boards, license holders, employers, employees, human resource professionals and legislative members. Producers are those providing licensure services and/or assessment or credentialing services and may include regulatory bodies, testing companies, test developers, societies and professional membership groups. General interest would include members of the public at large, professional engineers and surveyors, educators, and trainers.

3.10 Canvass group notification by letter ballot. An invitation will be sent to persons identified by the ASTF as having a material interest in the standard. This group is given 30 days to provide a response that they are or are not interested in commenting on the standard.

3.11 Ballots sent to canvass group representatives will include detailed instructions on voting and comments. (See also sections 3.19–3.23) These instructions will include a requirement that the respondent acknowledge that the draft is a copyright of NCEES, that copying the draft standard without permission is not allowed, and that all responses are

the sole property of NCEES and will be forwarded to ANSI as required. Any respondents not willing to assign their rights to comments will not be allowed to participate in the balloting process and their comments will be disregarded.

3.12 At the end of the 30 days, ballots will be sent to respondents who have indicated interest in commenting on the standard and who have agreed to the assignment statement. Each ballot will include the notice for a maximum of forty-five days to respond. The results of the letter ballots shall be confidential information for the ASTF.

NCEES will make every attempt to accomplish balloting in electronic format.

3.13 All draft standards will be marked “COPYRIGHT, NCEES.” (See also Copyright Procedures 6.6)

3.14 The ASTF must file the BSR-8 Form with ANSI to provide information for publication in the ANSI Standards Action. This must be completed prior to distribution of ballots in 3.12. NCEES shall also publish an announcement of the availability of the standards for public review in the NCEES publication, Licensure Exchange, and on its Web site.

3.15 The ASTF will seek consensus within the framework of due process by reviewing all comments and responding. The ASTF shall respond to all comments submitted during the public review process and shall maintain a record of these comments. This record is to remain confidential with the exception of use as required by ANSI.

3.16 Effort must be made to achieve maximum participation by all affected parties.

3.17 Ballots: Ballots may be filed as follows:

- a. Approve without comment
- b. Approve with comment
- c. Negative (see 3.20) (with rationale)
- d. Abstain (with or without reason)

3.18 Negative ballots should be accompanied by specific reasons for the vote in such detail as to provide the ASTF an opportunity to respond. This requirement shall be clearly stated in the ballot. It is the responsibility of the voter to provide the rationale/comments. If no rationale is provided for the negative ballot, no attempt shall be made to resolve the ballot. Objectors will be notified in writing of the disposition of their objection. In the event that negative ballots cannot be resolved, the originators must be notified of this result as well as of their opportunity to appeal. Unresolved negative ballots must be reported to ANSI. Unresolved public review objectors will also be notified of the disposition of their objection and, in the case of unresolved objections, of their right to appeal in accordance with ANSI Essential Requirements 2.5.

3.19 The ASTF will address all negative comments by accepting comments and modifying the document or by explaining why the recommendations cannot be accepted.

The ASTF will respond to all negative comments (including public review objectors) and provide information on their resolution. Attempts at resolution will be published as part of the recirculation of information to the consensus body.

3.20 Resolution of negative ballots shall be published to allow participants to reconsider their vote. Each unresolved objection and attempt at resolution, and any substantive change made in a proposed American National Standard shall be circulated and reported to the consensus body in order to afford all members of the consensus body an opportunity to respond, reaffirm, or change their vote as outlined in ANSI Essential Requirements 2.5. This procedure will include unresolved public review comments.

3.21 Negative votes may only be changed at the written request of the voter.

3.22 Substantive revisions to the standards as a result of the balloting and comment period shall result in review and republication of the modified standard in *Standards Action* for a period of 30 days.

3.23 Editorial changes: Typographical errors or grammatical errors which are changed do not constitute a requirement for the republication or revision of the standards.

3.24 If consensus is reached with a majority of affirmative ballots, the ASTF may determine that consensus for approval has been reached

3.25 Definition of results: A new proposed American National Standard, or the revision, reaffirmation or withdrawal thereof shall be approved by more than a majority (50% + 2) of the entire consensus body.

3.26 After completion of the process, the ASTF must certify to ANSI that all procedures for due process have been implemented, consensus has been reached, and a balance of interest represented by the consensus body. This will be completed by submitting a BSR-9 form with accompanying ballot information.

3.27 The ASTF shall provide any clarification or response required by ANSI.

3.28 Declaration as an American National Standard: After approval by ANSI, NCEES will publish the notification in NCEES publications, media, and trade journals as appropriate.

3.29 Publication of the standard: ASTF will work to assure that any ANSI-approved standards are published within 6 months of approval.

3.30 Standards approved by ANSI will be subject to maintenance and review for a 5-year period.

3.31 Interpretation: During the standards development process, the ASTF will provide any required interpretation of the standard to assure that there are no incorrect or

improper interpretations of the standard that may lead to harm or misuse. Public notice of the standards will offer the interpretation as required at any time during the process. The description of the standard will also include interpretations of the standards for clarification. (See section 6.13 for details.)

4.0 Appeals Process

4.1 The president of the NCEES Board may appoint an Appeals Task Force on an ad-hoc basis as needed. Membership on the Appeals Task Force shall be based on technical knowledge of the draft standard and knowledge of the standards process. Task force members will be asked to serve as needed for a period no longer than one year.

4.2 Under the ANSI guidelines, an appeal to the process may be made at any time based on procedural or technical grounds.

4.3 If the appeal is procedural, the Appeals Task Force chair, representing the wishes of the Task Force, shall review the appeal and report on the findings to the person filing the appeal.

4.4 If the appeal is technical, the Appeals Task Force chair, representing the wishes of the Task Force, shall review the appeal and report on the technical aspects of the appeal.

4.5 It is the responsibility of the person filing the appeal to provide the following: a complete description of the objection, a description of any adverse effects caused by the standards, and recommended actions that would satisfy concerns.

4.6 If the appeal is denied, the person filing the appeal must be notified of this decision as well as his or her option to make further appeal to the ANSI Board of Standards Review.

4.7 The Appeals Task Force will provide ANSI all documentation submitted prior to the filing of a final appeal to ANSI.

4.8 Notice of the appeals process and the requirement that appeals be provided in writing to the ASTF will be published in the balloting process.

5.0 Maintenance of American National Standards

By the fourth year of the date of the approval of the standard, the ASTF shall review the standard for updates and revisions prior to submission of the re-approval process to ANSI. The ASTF may choose to pursue the following:

- a. Revise the standard to incorporate updated language which may change technical content
- b. Reaffirm that a review of the standard resulted in a decision that no change is needed

- c. Withdraw the standard if it is no longer of value

These actions require the appropriate filing documents and notice to ANSI. Unless an extension is granted, all American National Standards shall be reaffirmed, revised or withdrawn within a period not to exceed five years from the date of its approval as an American National Standard.

6.0 Administrative Documentation for NCEES Standards Development Procedures

6.1 Metric: The metric system will be used in standards where appropriate, particularly where the standards are used in the international practice of engineering and surveying. NCEES standards will use the metric system where it is compatible with the systems in effect which govern the practice of engineering and surveying. At this time, the metric system is not commonly used in the practice of engineering in the United States, nor within the educational system supporting this practice.

6.2 Records Retention: According to NCEES procedures, the compliance and security manager (CSM) is responsible for the records retention policy. By July 1 of each year, directors submit to the CSM a list of documents that have been sent to storage or destroyed during the 12-month period from July 1 of the preceding year through June 30 of the current year. (This list excludes destroyed documents no longer relevant to Council business.) Lists should include enough detail to clearly identify the documents and should include the location of records.

Document destruction is suspended when a lawsuit or investigation is threatened or reasonably foreseeable. The IT director is responsible for ensuring electronic destruction is disabled and reviewed. The executive director along with legal counsel will determine the need for a legal hold and will complete the legal hold form and forward to the CSM. The CSM will inform all directors and board members immediately of the need to suspend normal destruction schedules. A legal hold log along with acknowledgements of receipt of the notice will be maintained by the CSM.

All documents (including electronic documents) that are no longer relevant to the Council's business should be destroyed at the end of every quarter. Drafts of documents that have been finalized should not be retained, unless a director finds it necessary. Personal notes should not be kept after they are no longer needed.

Documents must be retained or destroyed as set forth in the schedule. The schedule and all documents (including electronic documents) should be reviewed on an annual basis by the CSM and IT director to ensure compliance. Electronic storage systems will be tested periodically to ensure accuracy. Directors and managers will direct the storage or filing of all documents that must be retained, as well as the destruction of documents that must be purged.

Human Resources will be responsible for communicating the Document Retention Policy, schedule, and procedures to all employees.

The retention schedule and procedures will be reviewed by directors and the CSM each year in January. Any revisions necessary will be incorporated into the documents and distributed to staff.

It is the responsibility of the ASTF to comply with the NCEES records retention policy and to comply with all recording keeping and reporting requirements of ANSI.

NCEES will maintain ASTF records of the standards process for a minimum of 5 years, or until the subsequent revision, reaffirmation, or withdrawal of the complete standard, whichever is longer. (See also 6.10.)

6.3 External distribution of documents: The distribution of committee reports documents is restricted to internal use by NCEES, except as provided by permission by the Board of Directors, or as required by ANSI for documentation on the process. Approved standards will be published as authorized by the Board of Directors and as required by ANSI.

6.4 Harmonization: NCEES will make every attempt to minimize duplicative or conflicting efforts between standards developers in the areas of engineering and surveying practice. In support of this, the ASTF will actively compare all proposed new standards to those held by other Standards Developers in the areas of engineering and surveying prior to determining to proceed with the development of a new standard.

6.5 Patents: In reviewing new standards, the ASTF will carefully consider the requirement for the inclusion of the use of any patented items. However, it is not the intent of NCEES to produce standards which require the use of patents as an essential component to compliance with such standards.

In conformity with ANSI guidelines on patents, as regards standards development, it will be the responsibility of the ASTF to assure that any standards produced by NCEES include one of the following statements:

- e. Assurance in the form of a general disclaimer to the effect that such party does not hold and does not currently intend to hold any invention the use of which would be required for compliance with the proposed standard
- f. Assurance that a license will be made available without compensation to the applicants desiring to use the license for the purpose of implementing the standard
- g. Assurance that a license will be made available to applicants under reasonable terms and conditions that are demonstrably free of discrimination

6.6 Copyrights: NCEES standards shall comply with copyright law.

6.6.1 As a prerequisite for membership on a technical committee, committee members will be required to agree to relinquish their rights to NCEES for any materials developed

by the committee. Works shall be considered joint work. All work produced by the technical committees shall be the sole ownership of NCEES.

6.6.2 All drafts shall be marked: Copyright, NCEES; including drafts that go out for review and comment during the public review process.

6.6.3 Balloting materials shall contain formalized warnings on unauthorized copying; and copyright notice shall be included on the generic public comment form.

6.6.4 NCEES will register all standards at the copyright office.

6.7 Commercial Terms and Conditions: Conditions between buyers and sellers shall not be an appropriate portion of NCEES standards. No guarantees, warranties, trademarks, or other commercial conditions shall be included in NCEES standards.

6.8 Conflict of Interest: NCEES participants in the standards process will comply with the Conflict of Interest Policy adopted by the NCEES Board of Directors and agree that they will not participate in any standards activities which represent, or appear to represent, a conflict of interest.

6.9 NCEES name and logo: The identification of NCEES standards with the NCEES logo require written approval from the NCEES Board of Directors prior to use of the name or logo.

6.10 Evidence of compliance: The ASTF shall be responsible for maintaining the record of written records that indicate NCEES standards development procedures have been followed. These records shall be made available to ANSI as required for audits.

6.11 Indemnity: NCEES agrees to hold ANSI free from harm from any suit or claim that is filed against ANSI arising from a standard designated as an American Standard which has not had ANSI-BSR (Board of Standards Review) review and approval.

6.12 ANSI Audit Process: NCEES agrees to maintain records as required under the *ANSI Essential Requirements* and to make records available as required for the ANSI audit process for reaccreditation.

6.13 Interpretation Policy: NCEES will provide interpretation on the standards at any time in the process as stated in section 3.33. The purpose of providing interpretation is to prevent the misuse of the standard and to prevent any liability to NCEES for the misuse of the standard.

- a. The ASTF chair will approve a written interpretation of the standard to accompany the ballot.
- b. Written or oral requests from consensus body members, the public, or ANSI will be responded to in writing by the ASTF as approved by the chair.

- c. Requests for interpretation should include comments to the ASTF to ascertain which portions of the standard are not clear. These comments will be forwarded to the Technical Committee for consideration.