

Iowa – Codes, Rules, and Ethics for Professional Engineers

Four (4) Continuing Education Hours
Course #IA101

Approved Continuing Education for Licensed Professional Engineers

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Course Description

The course is designed as a distance learning interactive course that enables the practicing professional engineer to 1) revisit the emphasis that his or her professional license has a direct and vital impact on the safety, health, and welfare of the public and 2) keep up to date on the legal aspects that govern the practice of engineering in the state of Iowa.

The Iowa four (4) Laws, Rules and Ethics course satisfies the continuing education requirement of minimum of 2 hours of Ethics.

This course also overviews the Iowa State laws governing the profession of engineering. An extra 2 hour is awarded and applies to the overall 30 hours of continuing education required for each IA licensed engineer.

The course consists of three major sections as outlined below.

1. Iowa Laws and Rules
 - a. Iowa Code
 - b. Iowa Administrative Rules
2. Code of Ethics
 - a. General Code of Ethics for all Professional Engineers
3. Ethics Case Reviews

Objectives

The objectives of this course is to:

1. Familiarize the student with the standards of professional behavior for adherence to the highest principles of ethical conduct,
2. Apply those principles in reviewing real case studies,
3. Familiarize the student with the laws and rules regulating the practice of engineering in the state of Delaware.

Upon successful completion of the course, the student will be well versed to exhibit the highest standards of honesty and integrity deemed paramount to his or her license and profession as well as be well versed in the Iowa state laws governing the practice of the engineering profession

Grading

Students must achieve a minimum score of 70% on the online quiz to pass this course.

The quiz may be taken as many times as required until the student successfully passes.

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IOWA CODE

CHAPTER 542B PROFESSIONAL ENGINEERS AND LAND SURVEYORS

542B.1 Licensed professional engineers and surveyors.

A person shall not engage in the practice of engineering or land surveying in the state unless the person is a licensed professional engineer or a licensed professional land surveyor as provided in this chapter, except as permitted by section 542B.26.

542B.2 Terms defined.

As used in the chapter, unless the context otherwise requires:

1. "Board" means the engineering and land surveying examining board provided by this chapter.
2. "Design coordination" includes the review and coordination of technical submissions prepared by others, including as appropriate and without limitation, consulting engineers, architects, landscape architects, land surveyors, and other professionals working under the direction of the engineer.
3. "Engineer intern" means a person who passes an examination in the fundamental engineering subjects, but does not entitle the person to claim to be a professional engineer.
4. "Engineering documents" includes all plans, specifications, drawings, and reports, if the preparation of such documents constitutes or requires the practice of engineering.
5. "Engineering surveys" includes all survey activities required to support the sound conception, planning, design, construction, maintenance, and operation of engineered projects, but excludes the surveying of real property for the establishment of land boundaries, rights-of-way, easements, and the dependent or independent surveys or resurveys of the public land survey system.
6. "In responsible charge" means having direct control of and personal supervision over any land surveying work or work involving the practice of engineering. One or more persons, jointly or severally, may be in responsible charge.

7. "Land surveying documents" includes all plats, maps, surveys, and reports, if the preparation thereof constitutes or requires the practice of land surveying.

8. "Land surveyor" means a person who engages in the practice of professional land surveying. Unless the context otherwise requires, any reference in this chapter to "land surveyor" or "land surveying" means "professional land surveyor" or "professional land surveying".

9. a. "Practice of engineering" means any service or creative work, the adequate performance of which requires engineering education, training, and experience in the application of special knowledge of the mathematical, physical, and engineering sciences, such as consultation, investigation, evaluation, planning, design and design coordination of engineering works and systems, planning the use of land and water, performing engineering surveys and studies, and the review of construction for the purpose of monitoring compliance with drawings and specifications, any of which embraces such services or creative work, either public or private, in connection with any utilities, structures, buildings, machines, equipment, processes, work systems, projects, and industrial or consumer products or equipment of a mechanical, electrical, hydraulic, pneumatic, or thermal nature, insofar as they involve safeguarding life, health, or property, and including such other professional services as may be necessary to the planning, progress, and completion of the services identified in this subsection.

b. A person is construed to be engaged in the practice of engineering if the person does any of the following:

(1) Practices any branch of the profession of engineering.

(2) Makes a representation by verbal claim, sign, advertisement, letterhead, card, or other manner that the person is a professional engineer.

(3) Uses any title which implies that the person is a professional engineer or that the person is certified under this chapter.

(4) The person holds the person's self out as able to perform, or who does perform, any service or work included in the practice of engineering.

10. a. "Practice of land surveying" includes providing professional services such as consultation, investigation, testimony, evaluation, planning, mapping, assembling, and interpreting reliable scientific measurements and information relative to the location of property lines or boundaries, and the utilization, development, and interpretation of these facts into an orderly survey, plat, or map. The practice of land surveying includes but is not limited to the following:

(1) Locating, relocating, establishing, reestablishing, setting, or resetting of permanent monumentation for any property line or boundary of any tract or parcel of land. Setting permanent monuments constitutes an improvement to real property.

(2) Making any survey for the division or subdivision of any tract or parcel of land.

(3) Determination, by the use of the principles of land surveying, of the position for any permanent survey monument or reference point, or setting, resetting, or replacing any survey monument or reference point excluding the responsibility of engineers pursuant to section 314.8.

(4) Creating and writing metes and bounds descriptions as defined in section 354.2.

(5) Geodetic surveying for determination of the size and shape of the earth both horizontally and vertically for the precise positioning of permanent land survey monuments on the earth utilizing angular and linear measurements through spatially oriented spherical geometry.

(6) Creation, preparation, or modification of electronic or computerized data, including land information systems and geographical information systems, relative to the performance of the activities identified in subparagraphs (1) through (5).

b. This subsection does not prohibit a professional engineer from practicing any aspect of the practice of engineering. A land surveyor is not prohibited from performing engineering surveys as defined in the practice of engineering.

c. A person is construed to be engaged in or offering to be engaged in the practice of land surveying if the person does any of the following:

(1) Engages in land surveying.

(2) Makes a representation by verbal claim, sign, advertisement, letterhead, card, or other manner that the person is a land surveyor.

(3) Uses any title which implies that the person is a land surveyor or that the person is licensed under this chapter.

(4) Holds the person's self out as able to perform, or who does perform, any service or work included in the practice of land surveying.

11. "Professional engineer" means a person, who, by reason of the person's knowledge of mathematics, the physical sciences, and the principles of engineering, acquired by professional education or practical experience, is qualified to engage in the practice of engineering. Unless the context otherwise requires, any reference in this chapter to "engineer" or "engineering" means "professional engineer" or "professional engineering".

542B.3 Engineering and land surveying examining board created.

An engineering and land surveying examining board is created within the department of inspections, appeals, and licensing. The board consists of three members who are licensed professional engineers, two members who are licensed professional land surveyors, and two members who are not licensed professional engineers or licensed professional land surveyors and who shall represent the general public. An individual who is licensed as both a professional engineer and a professional land surveyor may serve to satisfy the board membership requirement for either a licensed professional engineer or a licensed professional land surveyor, but not both. Members shall be appointed by the governor subject to confirmation by the senate. A licensed member shall be actively engaged in the practice of engineering or land surveying and shall have been so engaged for five years preceding the appointment, the last two of which shall have been in Iowa. Insofar as practicable, licensed engineer members of the board shall be from different branches of the profession of engineering. Professional associations or societies composed of licensed engineers or licensed land surveyors may recommend the names of potential board members whose profession is representative of that association or society to the governor. However, the governor is not bound by the recommendations. A board member shall not be required to be a member of any professional association or society composed of professional engineers or professional land surveyors.

542B.4 Terms of office.

Appointments shall be for three-year terms and shall commence and end as provided by section 69.19. Vacancies shall be filled for the unexpired term by appointment of the governor and shall be subject to senate confirmation. Members shall serve no more than three terms or nine years, whichever is least.

542B.6 Official seal — bylaws.

The board shall adopt and have an official seal which shall be affixed to all certificates of licensure granted and may make all bylaws and rules, not inconsistent with law, necessary for the proper performance of its duty.

542B.7 Attorney general to assist — general powers.

Such board, or any committee thereof, shall be entitled to the counsel and to the services of the attorney general, and shall have power to compel the attendance of witnesses, pay witness fees and mileage, and may take testimony and proofs and may administer oaths concerning any matter within its jurisdiction.

542B.8 Expenses — compensation.

Members of the board are entitled to receive all actual expenses incurred in the discharge of their duties within the limits of funds appropriated to the board. Each member of the board may also be eligible to receive compensation as provided in section 7E.6.

542B.9 Organization of the board — staff.

The board shall elect annually from its members a chairperson and a vice chairperson. The director of the department of inspections, appeals, and licensing shall hire and provide staff to assist the board in implementing this chapter. The board shall hold at least one meeting at the location of the board's principal office, and meetings shall be called at other times by the director or the director's designee at the request of the chairperson or four members of the board. At any meeting of the board, a majority of members constitutes a quorum.

542B.11 Staff — duties.

The staff shall keep on file a record of all certificates of licensure granted and shall make annual revisions of the record as necessary.

542B.12 Disposition of fees.

The staff shall collect and account for all fees provided for by this chapter and pay the fees to the treasurer of state who shall deposit the fees in the licensing and regulation fund created in section 10A.507..

542B.13 Applications and examination fees.

Applications for licensure shall be on forms prescribed and furnished by the board, shall contain statements made under oath, showing the applicant's education and a detailed summary of the applicant's technical work, and the board shall not require that a recent photograph of the applicant be attached to the application form. An applicant is not ineligible for licensure because of age, citizenship, sex, race, religion, marital status or national origin, although the application form may require citizenship information. The board may consider the past felony record of an applicant. The board may require that an applicant submit references. Applications for examination in fundamentals in the practice of engineering and land surveying shall be accompanied by application fees

determined by the board. The board shall determine the annual cost of administering the examinations and shall set the fees accordingly.

542B.14 General requirements for licensure — temporary permit to practice engineering.

1. Each applicant for licensure as a professional engineer or professional land surveyor shall have all of the following requirements, respectively, to wit:

a. As a professional engineer:

(1) (a) Graduation from a course in engineering of four years or more in a school or college which, in the opinion of the board, will properly prepare the applicant for the examination in fundamental engineering subjects.

(b) However, prior to July 1, 1988, in lieu of compliance with subparagraph division (a), the board may accept eight years' practical experience which, in the opinion of the board, is of satisfactory character to properly prepare the applicant for the examination in fundamental engineering subjects.

(c) Between July 1, 1988, and June 30, 1991, in lieu of compliance with subparagraph division (a), the board shall require satisfactory completion of a minimum of two years of postsecondary study in mathematics, physical sciences, engineering technology, or engineering at an institution approved by the board, and may accept six years' practical experience which, in the opinion of the board, is of satisfactory character to properly prepare the applicant for the examination in fundamental engineering subjects.

(d) For applicants who obtained an associate of science degree or a more advanced degree between July 1, 1983, and June 30, 1988, in lieu of compliance with subparagraph division

(a), the board shall only require compliance with the provisions of subparagraph division

(c) with regard to areas of study and practical experience. Applicants qualifying under this subparagraph division must meet the requirements of subparagraph (2), by June 30, 2001.

(2) Successfully passing an examination in fundamental engineering subjects which is designed to show the knowledge of general engineering principles. A person passing the examination in fundamental engineering subjects is entitled to a certificate as an engineer intern.

(3) In addition to any other requirement, a specific record of four years or more of practical experience in engineering work which is of a character satisfactory to the board.

(4) Successfully passing an examination designed to determine the proficiency and qualifications to engage in the practice of engineering.

b. As a professional land surveyor:

(1) Graduation from a college course of two years or more, which shall include mathematics, basic science courses, and practical experience, all of which, in the opinion of the board, will properly prepare the applicant for the examination in fundamental land surveying subjects.

(2) Successfully passing an examination in fundamental land surveying subjects which is designed to show the knowledge of general land surveying principles.

(3) In addition to any other requirement, a specific record of four years or more of practical experience in land surveying work which is of a character satisfactory to the board.

(4) Successfully passing examinations designed to determine the proficiency and qualifications to engage in the practice of land surveying.

2. The board may establish by rule a temporary permit and a fee to permit an engineer to practice for a period of time without applying for licensure..

542B.15 Examinations — report required.

Examinations for licensure shall be given as often as deemed necessary by the board, but no less than one time per year. The scope of the examinations and the methods of procedure shall be prescribed by the board. Any examination may be given by representatives of the board. The identity of the person taking the examination shall be concealed until after the examination has been graded. As soon as practicable after the close of each examination, a report shall be filed in the office of the secretary of the board by the board. The report shall show the action of the board upon each application and the secretary of the board shall notify each applicant of the result of the applicant's examination. Applicants who fail the examination once shall be allowed to take the examination at the next scheduled time.

Thereafter, the applicant shall be allowed to take the examination at the discretion of the board. An applicant who has failed the examination may request in writing information from the board concerning the applicant's examination grade and subject

areas or questions which the applicant failed to answer correctly, except that if the board administers a uniform, standardized examination, the board shall only be required to provide the examination grade and such other information concerning the applicant's examination results which are available to the board.

542B.16 Seal — certification of responsibility.

1. Each licensee, upon licensure, shall obtain a seal of a design approved by the board, bearing the licensee's name, Iowa license number, and the words "professional engineer" or "professional land surveyor" or both, as the case may be. A legible rubber stamp or other facsimile of the seal may be used and shall have the same effect as the use of the actual seal.
2. All engineering documents and land surveying documents shall be dated and shall contain all of the following:
 - a. The signature of the licensee in responsible charge.
 - b. A certification that the work was done by the licensee or under the licensee's direct personal supervision.
 - c. The Iowa legible seal of the licensee.
3. An agency, subdivision, or municipal corporation of this state, or an officer of the state, subdivision, or municipal corporation, shall not file for record or approve any engineering document or land surveying document which does not comply with this section.
4. A licensee shall not place the licensee's signature or seal on any engineering document or land surveying document unless the licensee was in responsible charge of the work, except that the licensee may do so if the licensee contributed to the work and the licensee in responsible charge has signed and certified the work.
5. Violation of this section by a licensee shall be deemed fraud and deceit in the licensee's practice.

542B.17 Engineer's certificate.

The board shall issue a certificate of licensure as a professional engineer to an applicant who has passed the examination as a professional engineer and who has paid an additional fee. The certificate shall be signed by the chairperson and secretary of the board under the seal of the board. The certificate shall authorize the applicant to engage in the practice of engineering. The certificate shall not carry with it the right to practice land surveying, unless specifically so stated on the certificate, which permission

shall be granted by the board without additional fee in cases where the applicant duly qualifies as a professional land surveyor as prescribed by the rules of the board.

542B.18 Expirations and renewals.

Certificates of licensure shall expire in intervals as determined by the board. Renewal may be effected by the payment of a fee the amount of which shall be determined by the board.

The failure on the part of any licensee to renew a certificate in the month of expiration as required above shall not deprive a person of the right of renewal. A person who fails to renew a certificate by the expiration date shall be allowed to do so within thirty days following its expiration, but the board may assess a reasonable penalty. For the duration of any war in which the United States is engaged the board may, in its discretion, defer the collection of renewal fees without penalty, which have or may become due from licensed professional engineers who are employed in the war effort, and residing outside the state, or who are members of the armed forces of the United States, and may renew the engineering certificates of licensed professional engineers.

542B.19 Land surveyor's certificate.

To any applicant who shall have passed the examination as a professional land surveyor and who shall have paid an additional fee as set by the board, the board shall issue a certificate of licensure signed by its chairperson and secretary under the seal of the board, which certificate shall authorize the applicant to practice land surveying as defined in this chapter and to administer oaths to assistants and to witnesses produced for examination, with reference to facts connected with land surveys being made by such professional land surveyor.

542B.20 Foreign licensees.

1. A person holding a certificate of licensure as a professional engineer or professional land surveyor issued to the person by a proper authority of a state, territory, or possession of the United States, the District of Columbia, or of any foreign country, based on requirements and qualifications, in the opinion of the board equal to or higher than the requirements of this chapter, may be licensed without further examination.
2. A temporary permit to practice engineering may be granted to a person licensed in another state, as prescribed by rule, provided that before practicing within the state the person shall have applied for licensure or for a temporary permit to practice without applying for licensure and shall have paid the fee prescribed by the board.

3. The application for licensure shall be accompanied by a fee as determined by the board.

After the board determines the applicant to be qualified under this section, a certificate of licensure shall be issued upon receipt of an additional fee as determined by the board. All fees collected shall be transmitted to the treasurer of state and deposited as provided by law.

542B.21 Suspension, revocation, or reprimand.

The board shall have the power by a five-sevenths vote of the entire board to suspend for a period not exceeding two years, or to revoke the certificate of licensure of, or to reprimand any licensee who is found guilty of the following acts or offenses:

1. Fraud in procuring a certificate of licensure.
2. Professional incompetency.
3. Knowingly making misleading, deceptive, untrue or fraudulent representations in the practice of the licensee's profession or engaging in unethical conduct or practice harmful to the public. Proof of actual injury need not be established.
4. Habitual intoxication or addiction to the use of drugs.
5. Conviction of a felony under the laws of the United States, of any state or possession of the United States, or of any other country. A copy of the record of conviction or plea of guilty is conclusive evidence.
6. Revocation or suspension of licensure to engage in the practice of engineering or land surveying, or other disciplinary action by the licensing authority of another state, territory, or country. A certified copy of the record or order of suspension, revocation, or other disciplinary action is prima facie evidence of such fact.
7. Fraud in representations as to skill or ability.
8. Use of untruthful or improbable statements in advertisements.
9. Willful or repeated violations of the provisions of this Act.*

542B.22 Procedure.

Proceedings for any action under section 542B.21 shall be begun by filing with the board written charges against the accused. Upon the filing of charges the board may request the department of inspections and appeals to conduct an investigation into the charges. The department of inspections and appeals shall report its findings to the

board, and the board shall designate a time and place for a hearing, and shall notify the accused of this action and furnish the accused a copy of all charges at least thirty days prior to the date of the hearing.

The accused has the right to appear personally or by counsel, to cross-examine witnesses, and to produce witnesses in defense..

542B.24 Injunction.

Any person who is not legally authorized to practice in this state according to the provisions of this chapter, and shall practice, or shall in connection with the person's name use any designation tending to imply or designate the person as a professional engineer or professional land surveyor, may be restrained by permanent injunction.

542B.25 Violations.

Any person who violates such permanent injunction or presents or attempts to file as the person's own the certificate of licensure of another, or who shall give false or forged evidence of any kind to the board, or to any member thereof, in obtaining a certificate of licensure, or who shall falsely impersonate another practitioner of like or different name, or who shall use or attempt to use a revoked certificate of licensure, shall be deemed guilty of a fraudulent practice.

542B.26 Applicability of chapter.

1. a. This chapter shall not apply to any full-time employee of any corporation while doing work for that corporation, except in the case of corporations offering their services to the public as professional engineers or professional land surveyors.

b. Corporations engaged in designing buildings or works for public or private interests not their own shall be deemed to be engaged in the practice of engineering within the meaning of this chapter. With respect to such corporations all principal designing or constructing engineers shall hold certificates of licensure issued under this chapter. This chapter shall not apply to corporations engaged solely in constructing buildings and works.
2. This chapter shall not apply to any professional engineer or professional land surveyor working for the United States government, nor to any professional engineer or professional land surveyor employed as an assistant to a professional engineer or professional land surveyor licensed under this chapter if such assistant is not placed in responsible charge of any work involving the practice of engineering or land surveying work, nor to the operation or maintenance of power and mechanical plants or systems.

542B.27 Civil penalty.

1. In addition to any other penalties provided for in this chapter, the board may by order impose a civil penalty upon a person who is not licensed under this chapter as a professional engineer or a professional land surveyor and who does any of the following:

- a. Engages in or offers to engage in the practice of professional engineering or professional land surveying.
- b. Uses or employs the words "professional engineer" or "professional land surveyor", or implies authorization to provide or offer professional engineering or professional land surveying services, or otherwise uses or advertises any title, word, figure, sign, card, advertisement, or other symbol or description tending to convey the impression that the person is a professional engineer or professional land surveyor or is engaged in the practice of professional engineering or professional land surveying.
- c. Presents or attempts to use the certificate of licensure or the seal of a professional engineer or professional land surveyor.
- d. Gives false or forged evidence of any kind to the board or any member of the board in obtaining or attempting to obtain a certificate of licensure.
- e. Falsely impersonates any licensed professional engineer or professional land surveyor.
- f. Uses or attempts to use an expired, suspended, revoked, or nonexistent certificate of licensure.
- g. Knowingly aids or abets an unlicensed person who engages in any activity identified in this subsection.

2. A civil penalty imposed shall not exceed one thousand dollars for each offense. Each day of a continued violation constitutes a separate offense.

3. In determining the amount of a civil penalty to be imposed, the board may consider any of the following:

- a. Whether the amount imposed will be a substantial economic deterrent to the violation.
- b. The circumstances leading to the violation.

- c. The severity of the violation and the risk of harm to the public.
 - d. The economic benefits gained by the violator as a result of noncompliance.
 - e. The interest of the public.
4. Before issuing an order under this section, the board shall provide the person written notice and the opportunity to request a hearing on the record. The hearing must be requested within thirty days of the issuance of the notice and shall be conducted in the same manner as provided in section 542B.22.
5. The board, in connection with a proceeding under this section, may issue subpoenas to compel the attendance and testimony of witnesses and the disclosure of evidence, and may request the attorney general to bring an action to enforce the subpoena.
6. A person aggrieved by the imposition of a civil penalty under this section may seek judicial review in accordance with section 17A.19.
7. If a person fails to pay a civil penalty within thirty days after entry of an order under subsection 1, or if the order is stayed pending an appeal within ten days after the court enters a final judgment in favor of the board, the board shall notify the attorney general. The attorney general may commence an action to recover the amount of the penalty, including reasonable attorney fees and costs.
8. An action to enforce an order under this section may be joined with an action for an injunction.

542B.30 Fees.

The board shall set the fees for application, licensure, and renewal of licensure based upon the administrative costs of sustaining the board. The fees shall include, but shall not be limited to, the costs for:

- 1. Per diem, expenses and travel for board members.
- 2. Office facilities, supplies, and equipment.
- 3. Legal, technical and clerical assistance.

542B.31 Public members.

The public members of the board shall be allowed to participate in administrative, clerical, or ministerial functions incident to giving the examination, but shall not determine the content of the examination or determine the correctness of the answers.

542B.32 Disclosure of confidential information.

1. The board shall not disclose information relating to the following:
 - a. The contents of the examination.
 - b. The examination results other than final score except for information about the results of an examination which is given to the person who took the examination.
2. A member of the board who willfully communicates or seeks to communicate such information, and any person who willfully requests, obtains, or seeks to obtain such information, is guilty of a simple misdemeanor.

542B.35 Exception — real property inspection report.

1. “Real property inspection report” means a report stating whether, after visual examination, a parcel of real property which is being collateralized is materially impaired.
2. A real property inspection report is not a property survey or an engineering document and is exempt from the provisions of this chapter and the rules adopted under this chapter which apply to property surveys. A real property inspection report shall not be filed or recorded with the county recorder. The real property inspection report shall include all of the following:
 - a. A clear and prominent statement of disclosure to the buyer that the real property inspection report is not a property survey or an engineering document and should not be relied upon as such, and that property boundaries shown may be approximate only.
 - b. A clear and prominent statement that the report is for the use of the mortgage lender or its assigns and determination of the actual placement of boundary lines should be addressed by a property survey in accordance with the provisions of this chapter.
3. A person who completes the real property inspection report shall not claim to be a licensed professional land surveyor or a licensed professional engineer for purposes of the report.

ADMINISTRATIVE RULES

CHAPTER 1 ADMINISTRATION

193C—1.1(542B) General statement.

The practices of engineering and land surveying affect the life, health, and property of the people in Iowa. The engineering and land surveying examining board's principal mandate is the protection of the public interest.

1.1(1) Administration. Administration of the board has not been separated into panels, divisions, or departments. While the expertise of a board member may be called upon to frame special examinations and evaluate applications for licensing in a specialized engineering branch, the board functions in a unified capacity on all matters that may come before it. The board maintains an office at 200 East Grand Avenue, Suite 350, Des Moines, Iowa 50309, and requests or submissions may be directed to the secretary of the board at that location.

1.1(2) Meetings. Regular meetings of the board are held in Des Moines, Iowa. Information concerning the location and dates for meetings may be obtained from the board's office at 200 East Grand Avenue, Suite 350, Des Moines, Iowa 50309, or by telephoning (515)725-9022.

193C—1.2(542B) Definitions.

For the purposes of these rules, the following definitions shall apply:

"Accredited" means a program accredited by the Accreditation Board for Engineering Technology, Inc. (ABET) or the Canadian Engineering Accreditation Board (CEAB) or another accrediting body accepted by the National Council of Examiners for Engineering and Surveying (NCEES).

"Board" means the engineering and land surveying examining board provided by chapter 542B of the Iowa Code.

"Design coordination," as used in the definition of the practice of engineering, includes the review and coordination of technical submissions prepared by others including, as appropriate and without limitation, consulting engineers, architects, landscape architects, land surveyors, and other professionals working under the direction of the engineer.

“Engineering documents” includes all plans, specifications, drawings, and reports (including supporting calculations), if the preparation of such documents constitutes or requires the practice of engineering.

“Engineering survey,” as used in the definition of the practice of engineering, includes all survey activities required to support the sound conception, planning, design, construction, maintenance, and operation of engineered projects, but excludes the survey of real property for the establishment of land boundaries, rights-of-way, easements, and the dependent or independent surveys or resurveys of the public land system.

“Engineer intern” means a person who passes an examination in the fundamental engineering subjects, but does not entitle the person to claim to be a professional engineer.

“In responsible charge” means having direct control of and personal supervision over any land surveying work or work involving the practice of engineering. One or more persons, jointly or severally, may be in responsible charge.

“Land surveying documents” includes all plats, maps, surveys, and reports, if the preparation thereof constitutes or requires the practice of land surveying.

“Practice of engineering” means any service or creative work, the adequate performance of which requires engineering education, training, and experience in the application of special knowledge of the mathematical, physical, and engineering sciences.

1. Engineering services include:

- Consultation, investigation, evaluation, planning, and design;
- Design coordination of engineering works and systems;
- Planning the use of natural resources such as land, water and air;
- Performing engineering surveys, calculations, and studies; and
- Review of construction for the purpose of monitoring compliance with drawings and specifications.

2. The practice of engineering includes:

- Such services or creative work as listed above, either public or private, in connection with any utilities, structures, buildings, machines, equipment,

processes, work systems, projects, and industrial or consumer products of a mechanical, electrical, hydraulic, pneumatic, or thermal nature insofar as they involve safeguarding life, health, or property;

- Such other professional services as may be necessary to the planning, progress, and completion of the services identified in this definition;
- Environmental engineering activities which may be involved in developing plans, reports, or actions to remediate an environmentally hazardous site;
- Design of fixturing devices for manufacturing machinery that must be performed by a licensed professional engineer or under the responsible charge and direct supervision of a professional engineer unless performed within the industrial exemption by a full-time employee of a corporation which constructs the fixtures.

3. Activities that the board will construe as the practice of engineering for which the board may by order impose a civil penalty upon a person who is not licensed as a professional engineer are set out in Iowa Code section 542B.27.

“Practice of land surveying” includes providing professional services such as consultation, investigation, testimony, evaluation, planning, mapping, assembling, and interpreting reliable scientific measurements and information relative to the location of property lines or boundaries and the utilization, development, and interpretation of these facts into an orderly survey, plat, or map.

1. The practice of land surveying includes, but is not limited to, the following:

- Locating, relocating, establishing, reestablishing, setting, or resetting of permanent monumentation for any property line or boundary of any tract or parcel of land. Setting permanent monuments constitutes an improvement to real property.
- Making any survey for the division or subdivision of any tract or parcel of land.
- Determination, by the use of the principles of land surveying, of the position for any permanent survey monument or reference point, or setting, resetting, or replacing any survey monument or reference point excluding the responsibility of engineers pursuant to Iowa Code section 314.8.
- Creating and writing metes and bounds descriptions as defined in Iowa Code section 354.2.

- Geodetic surveying for determination of the size and shape of the earth both horizontally and vertically for the precise positioning of permanent land survey monuments on the earth utilizing angular and linear measurements through spatially oriented spherical geometry.
- Creation, preparation, or modification of electronic or computerized data, including land information systems and geographical information systems, relative to the performance of the activities listed above.

2. Activities that the board will construe as the practice of land surveying and for which the board may by order impose a civil penalty upon a person who is not licensed as a professional land surveyor are set out in Iowa Code section 542B.27.

“Professional engineer” means a person, who, by reason of the person’s knowledge of mathematics, the physical sciences, and the principles of engineering, acquired by professional education or practical experience, is qualified to engage in the practice of engineering.

“Professional land surveyor” means a person who engages in the practice of land surveying as defined in this rule.

“Written,” when used to describe an examination, shall mean a computer-based format.

193C—1.3(542B) Declaratory orders.

The board’s rules regarding declaratory orders can be found in the uniform rules for the division of professional licensing and regulation at 193—Chapter 10.

193C—1.4(542B) Waivers and variances.

1.4(1) The board’s rules regarding waivers can be found in the uniform rules for the division of professional licensing and regulation at 193—Chapter 5.

1.4(2) Interim rulings. The board chairperson, or vice chairperson if the chairperson is not available, may rule on a petition for waiver when it would not be timely to wait for the next regularly scheduled board meeting for a ruling from the board.

a. The executive secretary shall, upon receipt of a petition meeting all applicable criteria established in 193—Chapter 5, present the request to the board chairperson or vice chairperson along with all pertinent information regarding established precedent for granting or denying such requests.

b. The chairperson or vice chairperson shall reserve the right to hold an electronic meeting of the board when:

- (1) Board precedent does not clearly resolve the request and the input of the board is deemed required; and
- (2) The practical result of waiting until the next regularly scheduled meeting would be a denial of the request due to timing issues.
- c. A waiver report shall be placed on the agenda of the next regularly scheduled board meeting and recorded in the minutes of the meeting.
- d. This subrule on interim rulings does not apply if the waiver was filed in a contested case.

193C—1.5(542B) Licensed professional engineers and building construction.

1.5(1) Purpose. This rule is intended to provide guidance to licensed professional engineers, other design professionals, unlicensed persons engaged in various aspects of building construction, building officials, owners, and others on when the services of a licensed professional engineer are required or may not be required in connection with new building construction and alterations to existing structures.

1.5(2) General guidelines. Given the wide range of buildings covered by this rule and the unique issues which may arise with respect to specific buildings, it is not possible to establish definitive criteria which will universally resolve when building construction or alterations will or will not implicate the practice of professional engineering, as defined in Iowa Code sections 542B.2(8) and 542B.27(1). For example, while the construction of a single-family residence would not generally require the services of a licensed professional engineer, unique or unconventional features of a particular site or design may necessitate complex structural calculations or other services which fall within the definition of professional engineering. As a result, this rule should be interpreted as providing only general guidelines on when a licensed professional engineer is required or may not be required.

1.5(3) Applicability. The board will consider the guidelines provided in this rule when enforcing Iowa Code chapter 542B, including when determining whether an unlicensed person has engaged in the practice of professional engineering. This rule is not intended to constrain building officials or other public officials in their enforcement of other laws, rules, regulations or ordinances. A building code official, for example, may require that certain documents be prepared by a licensed professional engineer or that certain construction inspections be performed by a licensed professional engineer whether or not the guidelines in this rule would so require. This rule only addresses the practice of professional engineering and does not address the practice of architecture.

Similar guidelines with respect to the practice of architecture may be found at 193B—Chapter 5.

1.5(4) Definitions. The definitions set forth in 193B—5.1(544A) shall apply to this rule.

1.5(5) Guidelines for new construction. The following matrix describes by building type and use when the services of a licensed professional engineer are required or may not be required in connection with new building construction:

BUILDINGS NEW CONSTRUCTION			
Building Use Type	Description	Engineer Required	Engineer May Not Be Required
Agricultural Use	Facilities for private use only and individually owned and operated facilities including grain elevators and feed mills		X
	Corporate-owned facilities or publicly owned facilities including grain elevators and feed mills	X	
Churches and accessory buildings whether attached or separate	One or two stories in height, up to a maximum of 2,000 square feet in gross floor area		X
	Any number of stories in height, greater than 2,000 square feet in gross floor area	X	
	More than two stories in height	X	
Commercial Use	One story in height, up to a maximum of 10,000 square feet in gross floor area		X
	One story in height, greater than 10,000 square feet in gross floor area	X	
	Two stories in height, up to a maximum of 6,000 square feet in gross floor area		X
	Two stories in height, greater than 6,000 square feet in gross floor area	X	
	More than two stories in height	X	
Detached Residential Use	One, two or three stories in height, containing 12 or fewer family dwelling units		X
	More than 12 family dwelling units	X	
	More than three stories in height	X	
	Outbuildings in connection with detached residential buildings		X
Educational Use		X	
Governmental Use	When the occupancy is of another building use type listed herein, those provisions shall apply	X	
Industrial Use		X	
Institutional Use		X	
Light Industrial Use			X
Places of assembly		X	
Warehouse Use	One story in height, up to a maximum of 10,000 square feet in gross floor area		X

	One story in height, greater than 10,000 square feet in gross floor area	X	
	More than one story in height	X	
Factory-Built Buildings	One or two stories in height, up to a maximum of 20,000 square feet in gross floor area		X
	One or two stories in height, greater than 20,000 square feet in gross floor area	X	
	More than two stories in height	X	
	More than 20,000 square feet in gross floor area	X	

1.5(6) Guidelines for alterations to existing buildings. The following matrix describes by alteration type when the services of a licensed professional engineer are required or may not be required in connection with alterations to existing buildings:

ALTERATIONS TO EXISTING BUILDINGS			
Alteration Type	Description		Engineer May Not Be Required
Structural alterations to exempt buildings under Iowa Code section 544A.18	Modifications which change the structural members, means of egress, handicap accessible path, fire resistivity or other life safety concerns		X
Structural alterations to buildings that are not exempt	Modifications which change the structural members, means of egress, handicap accessible path, fire resistivity or other life safety concerns		X
Nonstructural alteration	Which does not modify means of egress, handicap accessible path, fire resistivity or other life safety concerns		X
	Which maintains the previous type of use		X
Nonstructural alteration which changes the use of the building from any other use to:	A place of assembly of people or public gathering		X
	Governmental use		X
	Educational use		X
	Hazardous use		X
	A place of residence exempted	and is one, two or three stories in height and contains not more than 12 family dwelling units	X
	A place of residence not exempted otherwise	and is more than three stories in height	X
		and containing more than 12 family dwelling units	X
Nonstructural alterations which change the use of the building from industrial or warehouse to:	Commercial or office use	and is one story in height and not greater than a maximum of 10,000 square feet in gross floor area	X
		and is one story in height and greater than 10,000 square feet in gross floor area	X
		and is two stories in height and not greater than a maximum of 6,000 square feet in gross floor area	X
		and is two stories in height and greater than 6,000 square feet in gross floor area	X
		and is more than two stories in height	X
		and is greater than 10,000 square feet of gross floor area	X

ALTERATIONS TO EXISTING BUILDINGS				
Alteration Type	Description		Engineer Required	Engineer May Not Be Required
Nonstructural alterations to:	Agricultural Use	Including grain elevators and feed mills		X
	Churches and Accessory Building Uses	One or two stories in height, up to a maximum of 2,000 square feet in gross floor area		X
		Any number of stories in height, greater than 2,000 square feet in gross floor area	X	
		More than two stories in height	X	
	Commercial Use	One story in height, up to a maximum of 10,000 square feet in gross floor area		X
		One story in height, greater than 10,000 square feet in gross floor area	X	
		Two stories in height, up to a maximum of 6,000 square feet in gross floor area		X
		Two stories in height, greater than 6,000 square feet in gross floor area	X	
		More than two stories in height	X	
	Detached Residential Buildings	One, two or three stories in height, containing 12 or fewer family dwelling units		X
		More than 12 family dwelling units	X	
		More than three stories in height	X	
		Outbuildings in connection with detached residential buildings		X
	Educational Use		X	
	Governmental Use	When the occupancy is of another building use type listed herein, those provisions shall apply	X	
	Industrial Use		X	
	Institutional Use		X	
	Light Industrial Use			X
	Places of Assembly		X	
	Warehouse Use	One story in height, up to a maximum of 10,000 square feet in gross floor area		X
		One story in height, greater than 10,000 square feet in gross floor area	X	
		More than one story in height	X	
	Factory-Built Buildings	One or two stories in height, up to a maximum of 20,000 square feet of gross floor area		X
		One or two stories in height, greater than 20,000 square feet in gross floor area	X	
		More than two stories in height	X	

		More than 20,000 square feet in gross floor area	X	
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1.5(7) Architectural exceptions do not apply. The statutory exemptions in Iowa Code section 544A.18 do not apply to the practice of engineering. The construction of a building that falls within an exception in Iowa Code section 544A.18 may require the services of an engineer if, for example: (a) there are structural elements which do not fall within building code definitions of conventional light frame construction, (b) the use of certain structural materials, members or components requires special inspections by engineers, or (c) HVAC, plumbing or electrical systems exceed certain building code standards. However, the matrix guidelines in this rule are generally compatible with the exceptions in Iowa Code section 544A.18 because the construction of buildings that fall outside the exceptions in Iowa Code section 544A.18 generally does implicate the practice of professional engineering in such disciplines as structural, electrical or mechanical engineering. The construction of buildings that fall within one of the exceptions described in Iowa Code section 544A.18 would not typically require the services of a licensed professional engineer, but may require those services in specific circumstances.

These rules are intended to implement Iowa Code sections 17A.9A, 542B.2 and 542B.3.

CHAPTER 2 FEES AND CHARGES

193C—2.1(542B) General statement.

Fees are fixed in such an amount as will defray the expense of administering board responsibilities. Fees are charged in accordance with the following table:

Type of fee	Amount
Renewal	
Active license renewal	\$100
Inactive license renewal	\$40
Reinstatement of lapsed license (In addition to the reinstatement fee, the applicant for reinstatement must also pay the appropriate prorated reinstated license fee below.)	\$100
Reinstatement of inactive to active license	\$60
New or reinstated license (In addition to the appropriate prorated reinstated license fee, the applicant for reinstatement must also pay the reinstatement fee above.)	\$100 Prorated at six-month intervals
Application for examinations	

Principles and Practice of Engineering	\$100
Principles and Practice of Land Surveying	\$100
Examinations	
Fees for NCEES examinations are paid directly to the examination service at the rate established by contract based upon cost of the examination materials and processing expenses.	Variable
Iowa State Specific Land Surveying Examination	\$30
Application for licensure by comity as a professional engineer or professional land surveyor	\$150
Certificates	
Initial professional engineer or professional land surveyor certificate	\$15
Additional or duplicate certificate	\$25
Engineer or land surveyor intern certificate	No charge
Check returned for insufficient funds	\$15
Verification of records for lapsed licensees	\$15 per verification
Late renewal fee (for renewals postmarked after December 31 and before February 1)	\$25

193C—2.2(542B) Nonrefundable fees.

Application fees submitted with applications for the Fundamentals of Engineering examination, the Fundamentals of Land Surveying examination, the Principles and Practice of Engineering examination, the Principles and Practice of Land Surveying examination, comity licensure, or for renewal of licensure are not refundable for any reason.

These rules are intended to implement Iowa Code sections 542B.13, 542B.15, 542B.20 and 542B.30.

CHAPTER 3 APPLICATION AND RENEWAL PROCESS

193C—3.1(542B) General statement.

A person requesting to be licensed as a professional engineer or professional land surveyor shall submit a completed, standardized, notarized application form, which may be obtained from the board's office or electronically from the board's Internet web page.

3.1(1) Application expiration. On the examination and comity applications due date, the applications are considered current if it has been one year or less since the applications were received by the board office.

3.1(2) Branch licensure. A list of engineering branches in which licensure is granted can be obtained from the board's office. Branches conform to those branches generally included in collegiate curricula. An applicant for licensure in Iowa shall be licensed first in the branch or branches indicated by the applicant's education and experience. A minimum of 50 percent of the required practical experience in which the individual is to be examined shall have been in that same branch of engineering.

3.1(3) Academic transcripts.

- a. United States institutions. Completion of post-high school education shall be evidenced by the board's receipt of an applicant's transcripts directly from the office of the registrar of each institution attended.
- b. Institutions outside the United States. Transcripts from institutions located outside the boundaries of the United States of America shall be sent directly from the institution to an evaluation service and shall be evaluated for authenticity and substantial equivalency with Accreditation Board for Engineering and Technology, Inc. (ABET) or Engineering Accreditation Commission (EAC) accredited engineering programs. To be readily acceptable, such evaluations shall be from the National Council of Examiners for Engineering and Surveying (NCEES). However, the board may accept evaluations from other recognized foreign credential evaluators satisfactory to the board. The expense of the evaluation is the responsibility of the applicant. Each evaluation shall be sent directly to the board from the evaluation service and shall include a copy of the transcript in the form sent to the evaluation service directly from the educational institution. Each evaluation must address both whether the transcript is authentic and whether the engineering program is equivalent to those accredited by ABET or EAC.

193C—3.2(542B) Examination application components and due dates.

3.2(1) Fundamentals of Engineering examination application components and due dates. Applications for the Fundamentals of Engineering examination are submitted directly to the examination service selected by the board to administer the examinations.

3.2(2) Fundamentals of Land Surveying examination application components and due dates. The components of this application include: the completed application form, references pursuant to 193C—paragraph 5.1(5)"b" and transcripts. Fundamentals of Land Surveying examination applications must be submitted to the board office.

Applications submitted by the first day of each month will be reviewed by the board at the next regularly scheduled board meeting.

3.2(3) Principles and Practice examination application components and due dates. Principles and Practice of Engineering and Principles and Practice of Land Surveying examination applications require a detailed review and must, therefore, be submitted to the board office. To facilitate the transition to computer-based testing offered throughout the year, application files with all required components submitted to the board office by the first day of each month will be reviewed at the next regularly scheduled board meeting. The Principles and Practice examination application packet includes the following components: (1) the completed online application form, (2) the required number of references, (3) the project statement, and (4) the ethics questionnaire. In addition, a complete application file must include verification of examination records and transcripts. Examination applications will not be reviewed by the board until the application file is complete. Since the verification of examination records must be sent directly from the jurisdiction where the applicant took the Fundamentals of Engineering examination, the applicant should contact the other jurisdiction well in advance of the deadline for submittal of the application to request this verification. For transcripts, the applicant should contact the university well in advance to ensure that the transcripts are received by the deadline.

193C—3.3(542B) Comity applications.

3.3(1) The components of a comity application include: the completed, notarized application form; the ethics questionnaire; references; transcripts; and verification of examinations, as appropriate. Comity applicants may submit the NCEES record in lieu of providing references, verifications, transcripts, and employment history. Since the verification of examination records must, in most cases, be sent directly from the jurisdiction where the applicant took the Fundamentals of Engineering and Principles and Practice Engineering examinations, the applicant should contact the other jurisdiction in advance of submitting the application to request this verification and make every effort to have the verification sent to the board at the time that the application is submitted. Likewise, for transcripts the applicant should contact the university in advance of submitting the application to make every effort to have the transcripts transmitted to the board at the time that the application is submitted.

3.3(2) Comity applications will be reviewed as they are completed. Comity applications will not be reviewed until all components have been received.

3.3(3) Comity applicants will be notified in writing via regular mail or email regarding the results of the review of their applications.

3.3(4) Temporary permits. The board does not issue temporary permits. Based upon review by a board member, temporary permits were previously issued to applicants whose applications met all requirements and who were expected to qualify for approval by the full board at the next regularly scheduled board meeting. Since applications that meet these criteria are now routinely processed as they are completed and reviewed, temporary permits are no longer necessary.

193C—3.4(542B) Renewal applications.

3.4(1) Expiration dates. Certificates of licensure expire biennially on December 31. Certificates that were initially issued in even-numbered years expire in odd-numbered years and certificates that were initially issued in odd-numbered years expire in even-numbered years. In order to maintain authorization to practice engineering or land surveying in Iowa, licensees are required to renew their certificates of licensure on or prior to the expiration date. A licensee who fails to renew prior to the date the certificate expires shall not be authorized to practice in Iowa unless the certificate is reinstated as provided in these rules. However, the board will accept an otherwise sufficient renewal application which is untimely if the board receives the application and late fee within 30 days of the date of expiration.

3.4(2) Renewal notification. The board typically mails a renewal notification to a licensee's last-known address at least one month prior to the license expiration date. Neither the board's failure to mail a renewal notification nor the licensee's failure to receive a renewal notification shall affect in any way the licensee's duty to timely renew if the licensee intends to continue practicing in Iowa. Licensees need to contact the board office if they do not receive a renewal notification prior to the expiration date.

3.4(3) Renewal process. Upon receipt of a timely and sufficient renewal application, with the proper fee, the board's executive secretary shall issue a new license reflecting the next expiration date, unless grounds exist for denial of the application.

3.4(4) Notification of expiration. The board shall notify licensees whose certificates of licensure have expired. This notification may be provided through publication in the division's newsletter. The failure of the board to provide this courtesy notification, or the failure of the licensee to receive the courtesy notification, shall not extend the date of expiration.

3.4(5) Sanction for practicing after license expiration. A licensee who continues to practice in Iowa after the license has expired shall be subject to disciplinary action. Such unauthorized activity may also provide grounds to deny a licensee's application to reinstate.

3.4(6) Timely and sufficient renewal application. Within the meaning of Iowa Code section 17A.18(2), a timely and sufficient renewal application shall be:

- a. Received by the board in paper or electronic form, or postmarked with a nonmetered United States Postal Service postmark on or before the expiration date of the certificate;
- b. Fully completed; and
- c. Accompanied by the proper fee. The fee shall be deemed improper if, for instance, the amount is incorrect, the fee was not included with the application, the credit card number provided by the applicant is incorrect, the date of expiration of a credit card is left off the application or is incorrect, the attempted credit card transaction is rejected, or the applicant's check is returned for insufficient funds.

3.4(7) Responsibility for accuracy of renewal application. The licensee is responsible for verifying the accuracy of the information submitted on the renewal application regardless of how the application is submitted or by whom it is submitted. For instance, if the office manager of a licensee's firm submits an application for renewal on behalf of the licensee and that information is incorrect, the licensee will be held responsible for the information and may be subject to disciplinary action.

3.4(8) Denial of renewal application. If the board, upon receipt of a timely, complete and sufficient application to renew a certificate of licensure, accompanied by the proper fee, denies the application, the executive secretary shall send written notice to the applicant by restricted, certified mail, return receipt requested, identifying the basis for denial. Grounds may exist to deny an application to renew a license if, for instance, the licensee has failed to satisfy the continuing education required as a condition for licensure. If the basis for the denial is a pending disciplinary action or a disciplinary investigation which is reasonably expected to culminate in a formal disciplinary action, the board shall utilize the procedures applicable to disciplinary actions, including the initiation of a contested case. If the basis for denial is not related to a pending or imminent disciplinary action, the applicant may contest the board's decision as provided in 193—7.40(546,272C).

3.4(9) Continuing education requirement. A licensee who does not satisfy the continuing education requirements for licensure renewal will be denied renewal of licensure in accordance with subrule 3.4(8). 3.4(10) Consent order option. When a licensee appears to be in violation of mandatory continuing education requirements of 193C—Chapter 7, the board may, in lieu of proceeding to a contested case hearing on the denial of renewal as provided in uniform division rule 193—7.40(546,272C), offer

the licensee the opportunity to sign a consent order. While the terms of a consent order will be tailored to the specific circumstances at issue, the consent order will typically impose a penalty between \$50 and \$250, depending on the severity of the violation, and establish deadlines for compliance, and the consent order may impose additional educational requirements upon the licensee. A licensee is free to accept or reject the offer. If the offer of settlement is accepted, the licensee will be issued a renewed certificate of licensure and, if the terms of the consent order are not complied with, will be subject to disciplinary action. If the offer of settlement is rejected, the matter will be set for hearing, if timely requested by the applicant pursuant to uniform division rule 193—7.40(546,272C).

3.4(11) Inactive status. Licensees who are not engaged in engineering or land surveying practices that require licensure in Iowa may be granted inactive status. No inactive licensee may practice in Iowa unless otherwise exempted in Iowa Code chapter 542B.

193C—3.5(542B) Reinstatement of licensure.

3.5(1) To reinstate a license that has lapsed for one year or more, the applicant for reinstatement must pay the fee required by 193C—2.1(542B) and must satisfy one of the following requirements:

- a. Provide documentation of 45 professional development hours achieved within the current and previous biennium (dual licensees must provide documentation of 30 professional development hours for each profession); or
- b. Successfully complete the principles and practice examination within one year immediately prior to application for reinstatement; or
- c. For an applicant for reinstatement who is an out-of-state resident, submit a statement from the resident state's licensing board as documented evidence of compliance with the resident state's mandatory continuing education requirement during the period that the licensee's Iowa license was lapsed. The statement shall bear the seal of the licensing board. An applicant for reinstatement whose resident state has no mandatory continuing education requirement shall comply with the documented evidence requirement as outlined in this subrule and at 193C—subrule 7.8(2).

3.5(2) To reinstate a license that has lapsed for less than one year, the applicant for reinstatement must pay the fee required by 193C—2.1(542B) and must satisfy one of the following requirements:

- a. Provide documentation of 30 professional development hours achieved within the current and previous biennium (dual licensees must provide documentation of 20 professional development hours for each profession); or
- b. Successfully complete the principles and practice examination within one year immediately prior to application for reinstatement; or
- c. For an applicant for reinstatement who is an out-of-state resident, submit a statement from the resident state's licensing board as documented evidence of compliance with the resident state's mandatory continuing education requirement during the period that the licensee's Iowa license was lapsed. The statement shall bear the seal of the licensing board. An applicant for reinstatement whose resident state has no mandatory continuing education requirement shall comply with the documented evidence requirement as outlined in this subrule and at 193C—subrule 7.8(2).

3.5(3) A lapsed license may not be reinstated to inactive status.

3.5(4) To reinstate from inactive status to active status, the applicant for reinstatement must pay the fee required by 193C—2.1(542B) and must provide documentation of 45 professional development hours achieved within the current and previous biennium (dual licensees must provide documentation of 30 professional development hours for each profession).

These rules are intended to implement Iowa Code sections 542B.2, 542B.6, 542B.13, 542B.14, 542B.15, 542B.20, 542B.30, 272C.2 and 272C.3.

CHAPTER 4 ENGINEERING LICENSURE

193C—4.1(542B) Requirements for licensure by examination.

The specific requirements for initial licensing in Iowa are established in Iowa Code section 542B.14, and it is the board's intention to issue initial licensure only when those requirements are satisfied chronologically as set forth in the statute.

4.1(1) First, the applicant for initial licensure in Iowa must satisfy the educational requirements as follows:

- a. Graduation from an engineering program of four years or more.

(1) If an applicant did not graduate from an Accreditation Board of Engineering and Technology/Engineering Accreditation Commission (ABET/EAC)- or Canadian Engineering Accreditation Board (CEAB)-accredited curriculum, the applicant must also complete, in addition to the engineering degree, one extra year of practical experience satisfactory to the board after receiving the engineering degree.

(2) An engineering technology curriculum does not constitute an engineering program of four years or more.

b. If an applicant obtained an associate of science degree or a more advanced degree between July 1, 1983, and June 30, 1988, the board shall only require satisfactory completion of a minimum of two years of postsecondary study in mathematics, physical sciences, engineering technology, or engineering at an institution approved by the board and six years of practical experience which, in the opinion of the board, is of satisfactory character to properly prepare the applicant for the Fundamentals of Engineering examination. (Applicants qualifying under this subrule must successfully complete the Fundamentals of Engineering examination by June 30, 2001.)

4.1(2) Second, the applicant must successfully complete the Fundamentals of Engineering examination (FE exam).

a. An applicant may take the FE exam any time after the educational requirements as specified above are completed, but the applicant must successfully complete the FE exam prior to taking the Principles and Practice of Engineering examination.

b. College seniors studying an ABET/EAC- or CEAB-accredited curriculum may take the FE exam during the final academic year. Applicants will be permitted to take the examination during the testing period which most closely precedes anticipated graduation.

c. An applicant who graduated from a satisfactory engineering program and has 10 years or more of work experience satisfactory to the board shall not be required to take the FE exam.

d. An applicant who has earned a Doctor of Philosophy degree from an institution in the United States of America with an accredited Bachelor of Science engineering degree program in the same discipline, or a similar doctoral degree in a discipline approved by the board, shall not be required to take the FE exam.

e. All FE exam candidates will apply directly to the National Council of Examiners for Engineering and Surveying (NCEES) and will self-attest as to the candidate's eligibility to sit for the FE exam. The board will verify acceptable education and experience at the time an applicant applies to sit for the Principles and Practice of Engineering examination or applies for an Engineer Intern (EI) number. The board shall apply the education and experience standards set forth in this rule but will allow reasonable flexibility in timing in the event an applicant sat for and passed the FE exam at a point earlier than provided in this rule. The board will not, however, issue an EI number unless all experience required for candidates who hold engineering degrees from nonaccredited programs has been satisfied at the time of the EI application.

4.1(3) Third, the applicant must satisfy the qualifying experience requirements. The purpose of this provision is to ensure that the applicant has acquired the professional judgment, capacity and competence to design engineering works, structures, and systems. The following criteria will be considered by the board in determining whether an applicant's experience satisfies the statutory requirements.

a. Oversight. All applicants must have direct supervision or professional tutelage (instruction, guidance, mentoring, review, and critique) from one or more licensed professional engineers. This experience must be verified by one or more licensed professional engineers who are familiar with the applicant's work and can attest that the experience was of the required quality and was accurately described. Verification of the qualifying experience is provided through the reference forms. It is the responsibility of the applicant to provide reference forms to the licensed professional engineers to complete and return directly to the board.

(1) To be readily acceptable, all of the qualifying experience shall be under the direct supervision and tutelage of one or more licensed professional engineers.

(2) To be considered, a portion of the qualifying experience shall be under the direct supervision or tutelage of one or more licensed professional engineers. In this case, the rest of the qualifying experience shall be under the direct supervision or tutelage of an unlicensed graduate engineer.

b. Documentation of experience. All applicants must submit references and a work project description. Applicants who did not have all of their qualifying experience under the direct supervision and tutelage of one or more licensed professional engineers (see subparagraph 4.1(3)"a"(2)) must also submit the additional supporting documentation described in subparagraph 4.1(3)"b"(3). The board

reserves the right to contact the employer and the person providing tutelage on the project for information about the project experience acquired by the applicant.

(1) References. An applicant for the Principles and Practice of Engineering examination shall submit five references on forms provided by the board.

1. At least three of the five references shall be from licensed professional engineers.
2. At least one of the licensed professional engineers who provide a reference for the applicant shall have provided direct supervision or professional tutelage in the course of a mentoring relationship on such matters as technical skills; professional development; the exercise of professional judgment, ethics, and standards in the application of engineering principles and in the review of such matters by others; and the professional obligations of assuming responsible charge of professional engineering works and services.
3. At least one reference shall be from a supervisor. If the applicant has had more than one supervisor, at least two of the references shall be from a supervisor of the applicant. An applicant shall submit supervisor references to verify at least four years of qualifying experience.
4. If an applicant has had professional experience under more than one employer, the applicant shall provide references from individuals with knowledge of the work performed under a minimum of two employers.
5. The board reserves the right to contact references, supervisors, or employers for information about the applicant's professional experience and competence or to request additional references.
6. All licensed professional engineers who submit references for an applicant shall be sufficiently familiar with the applicant's work product to formulate credible opinions on the applicant's capacity to assume responsible charge of professional engineering works and services.
7. Applicants who have not been supervised or provided tutelage by a licensed professional engineer for at least four years of qualifying experience shall submit one or more references to verify tutelage by one or more unlicensed graduate engineers, as provided in subparagraph 4.1(3)"a"(2).

8. The board uses references partially as a means of verifying an applicant's record of experience. The applicant must distribute a reference form to individuals who are asked to submit references for the applicant. To each reference form, the applicant shall attach a copy of the portion of the applicant's experience record that is being addressed by the referring individual.

9. An applicant for the Fundamentals of Engineering examination whose engineering degree is not from an ABET/EAC or CEAB accredited engineering program must provide a reference from a supervisor on a form provided by the board.

10. The board may require the applicant to submit additional letters of reference or other evidence of suitable tutelage and supervision.

11. The board may require an oral interview with the applicant or other evidence to verify the applicant's knowledge and experience in the principles and practice of engineering.

12. The board may conduct interviews with persons providing tutelage or supervision to the applicant.

(2) Work project description. An applicant for initial licensure as a professional engineer must include with the application a work project statement describing a significant project on which the applicant worked during the previous 12 months. The board will review all work project statements and will approve only those that include all of the components listed below in paragraphs 4.1(3)"b"(2)"1" to "4" and meet the criteria listed in paragraph 4.1(3)"b"(2)"5."

1. The statement shall describe the applicant's degree of responsibility for the project.

2. The statement shall identify the project's owner and location.

3. The statement shall include the name of the supervisor in charge of the project and, if the supervisor is a professional engineer, the license number of the supervisor.

4. The statement shall be signed and dated by the applicant.

5. Criteria the board shall use in evaluating the acceptability of the project as qualifying experience for the applicant shall include, but not be limited to, the following:

- The degree to which the project and the experience described have progressed from assignments typical of initial assignments to those more nearly expected of a licensed professional;
- The scope and quality of the professional tutelage experienced by the applicant;
- The technical decisions required of the applicant in the project; and
- The professional decisions required of the applicant.

(3) Additional supporting documentation. Applicants who did not have all of their qualifying experience under the direct supervision and tutelage of one or more licensed professional engineers (see subparagraph 4.1(3)"a"(2)) must also submit the following additional supporting documentation.

1. Cover letter to the board requesting consideration.
2. Reference from the unlicensed engineer who provided direct supervision or tutelage on forms provided by the board, to include:
 - Assessment of the applicant's performance, development, integrity, and ability to assume responsible charge.
 - Description of the engineer's background in education and experience.
 - Nature of the tutelage provided to the applicant.

c. Quality. Qualifying experience shall be of such quality as to demonstrate that the applicant has developed technical skill and initiative in the correct application of engineering principles. Such experience should demonstrate the applicant's capacity to review the application of these principles by others and to assume responsibility for engineering work of professional character.

d. Scope. Experience shall be of sufficient breadth and scope to ensure that the applicant has attained reasonably well-rounded professional competence in a basic engineering field, rather than highly specialized skill in a narrow and limited field.

e. Progression. The record of experience shall indicate successive and continued progress from initial, subprofessional work of simpler character to recent,

professional work of greater complexity and a higher degree of responsibility, as well as continued interest and effort on the part of the applicant toward further professional development and advancement. In evaluating this progression, the board will consider both subprofessional and professional activity as reported by the applicant. However, only work experience obtained after the applicant's receipt of the qualifying degree will be considered, except as described in paragraph 4.1(3)"f." Subprofessional work includes the time spent as an engineering technician, engineering assistant, inspector, or similar under the direct supervision of a licensed professional engineer. Professional work includes the time during which the applicant was occupied in engineering work of higher grade and responsibility than that defined above as subprofessional work. Time spent in teaching engineering subjects in a college or university at the level of assistant professor or higher may be listed as professional work.

f. Special work experience. Work experience prior to graduation from college may be accepted toward satisfaction of qualifying experience requirements only as follows: Cooperative work programs administered by engineering colleges and verified on the transcript and internships administered by engineering colleges with a verifying reference from the internship supervisor will be considered as half-time credit, with a maximum allowance of 6 months (12 months of cooperative work experience or internship) applicable toward the satisfaction of qualifying experience requirements. An applicant's advanced education, military experience, or both will be reviewed in order to determine if they are applicable toward the statutory requirements for experience.

g. Advanced education. An applicant who has earned a master of science degree that includes research experience, in addition to writing an associated thesis, from an institution in the United States of America with an accredited bachelor of science engineering degree program in the same discipline and who has fulfilled the requirements for a bachelor of science degree may be granted a maximum of one-half year's experience credit. An applicant who has earned a doctor of philosophy degree from an institution in the United States of America with an accredited bachelor of science engineering degree program in the same discipline may be granted a maximum of one year's experience credit in addition to the one-half year's credit for the master of science degree.

h. Teaching experience. Teaching of engineering subjects at the level of assistant professor or higher in an accredited engineering program may be considered as experience, provided the applicant's immediate supervisor is a licensed professional engineer in the jurisdiction in which the college or university is located. If the

applicant's immediate supervisor is not a licensed professional engineer, a program of mentoring or peer review by a licensed professional engineer acceptable to the board must be demonstrated. Applicants using teaching or research as experience must have a minimum of four years of acceptable experience in research, industry, or consulting. The board shall consider the complexity of the project(s) presented, the degree of responsibility of the applicant within the project, and other factors the board deems relevant. Academic experience must demonstrate increasing levels of responsibility for the conduct and management of projects involving engineering research, development or application. The board reserves the right to contact employers for information about the applicant's professional experience and competence.

i. Joint applications. Applicants requesting licensure both as a professional engineer and a land surveyor must submit a history of professional experience in both fields. Such histories will be considered separately on a case-by-case basis. The board does not grant full credit for concurrent experience in both professions.

j. Corporate exemption. The purpose of the provisions on qualifying experience which authorize the board to consider some experience that was not acquired under the direct supervision and tutelage of a licensed professional engineer is to provide a path toward licensure for those applicants who gain experience in settings where licensure is not required under the corporate exemption set forth in Iowa Code section 542B.26 or under similar statutory provisions in other jurisdictions. Such applicants may lawfully gain professional engineering experience under the supervision or tutelage of graduate engineers who are not licensed. To aid such applicants, the following guidelines are provided:

(1) The board shall not consider any experience gained under circumstances where the applicant could not lawfully have practiced professional engineering.

(2) The board shall not consider any experience the applicant may have attained in compliance with the law but that was not under the supervision or tutelage of a graduate engineer. The fundamental purpose of qualifying experience is professionally guided training to expand and complement engineering education. Self-guided experience does not qualify.

(3) Persons who desire licensure as professional engineers who are not directly supervised by licensed professional engineers should form tutelage relationships with licensed professional engineers as early in the process of gaining experience as is feasible. Unlicensed graduate engineers are not authorized to offer professional engineering services to the public or to be in

responsible charge of such services; nor are they subject to the examinations required for licensure, the professional and ethical standards applicable to licensees, or the regulatory oversight of a licensing authority. Qualifying experience is intended to address both technical competence and the obligations to the public of a licensed professional engineer.

(4) Because the circumstances of individual applicants in corporate exemption settings are diverse, it is not possible to identify the minimum period of time during which the applicant must receive supervision or tutelage from one or more licensed professional engineers to be eligible for licensure.

The board shall take into consideration both the quantity and quality of such experience. In general, an applicant's exposure to supervision or tutelage by one or more licensed professional engineers should reflect a sustained period of in-depth interaction from which the licensed engineers are in a position to form credible opinions on the applicant's qualifications to be in responsible charge of engineering services offered to the public as a licensed professional engineer.

(5) The burden is on the applicant to demonstrate to the board's satisfaction that the combination of unlicensed and licensed supervision and tutelage satisfies the requirements of qualifying experience described in this rule.

4.1(4) Fourth, the applicant must successfully complete the Principles and Practice of Engineering examination.

- a. To qualify to take this examination, the applicant must present a record of four years or more of practical experience in engineering work which is of a character satisfactory to the board. This experience must have been obtained after the receipt of the qualifying education and prior to the application due date for the examination.
- b. An applicant for the Principles and Practice of Engineering examination shall have a minimum of one year of practical experience in the United States of America or a territory under its jurisdiction.

4.1(5) Education and experience requirements. The board will require the minimum number of years set forth on the following chart before an applicant will be permitted to take either the Fundamentals of Engineering or the Principles and Practice of Engineering examination. Column 1 indicates the years of practical experience required prior to the Fundamentals of Engineering examination in addition to the completion of the required educational level. To determine the total years of practical experience

required prior to taking the Principles and Practice of Engineering examination, column 2 is added to column 1.

EXPERIENCE REQUIREMENTS FOR EXAMINATION APPLICANTS		
If the applicant's educational level is:	1 The applicant must have the following additional years of experience prior to taking the Fundamentals of Engineering examination:	2* The applicant must have the following years of experience after receipt of the qualifying degree and prior to taking the Principles and Practice of Engineering examination:
A 4-year bachelor's degree in an accredited engineering program	0	4
A 4-year bachelor's degree in mathematics or physical sciences plus a master's degree* in engineering	0	4
A 4-year bachelor's degree in technology or architecture plus a master's degree* in engineering	0	4
A 4-year bachelor's degree in engineering from a nonaccredited engineering program	1	4
A 4-year bachelor's degree in engineering from a nonaccredited engineering program plus a master's degree* in engineering	0	4

*For purposes of this subrule, an applicant's master's degree in engineering must be from an institution in the United States of America with an accredited bachelor's degree in the same curriculum, and the master's degree candidate must be required to fulfill the requirements for the bachelor's degree in the same area of specialization.

4.1(6) Required examinations. All examinations are uniform examinations prepared and graded by the National Council of Examiners for Engineering and Surveying (NCEES). The board may negotiate an agreement with an examination service to administer the examinations to applicants approved by the board, in which case applicants shall pay examination fees directly to the service.

- a. Fundamentals of Engineering examination. The Fundamentals of Engineering examination is a computer-based examination covering general engineering principles and other subjects commonly taught in accredited engineering programs.
- b. Principles and Practice of Engineering examination. The Principles and Practice of Engineering examination is a computer-based examination designed to determine proficiency and qualification to engage in the practice of professional engineering only in a specific branch. The Principles and Practice of Engineering two-module Structural examination is a computer-based examination designed to determine proficiency and qualification to engage in the practice of structural engineering. A separate examination shall be required for each branch in which licensure is granted.

An applicant may obtain a Structural branch license by passing either the Principles and Practice of Engineering Civil (Structural) examination or the Principles and Practice of Engineering two-module Structural examination.

c. Passing scores. The board reviews test results for each examination and determines what level shall constitute a minimum passing score for that examination. In making its determination, the board generally is guided by the passing score recommended by the NCEES. The board fixes the passing score for each examination at a level which it concludes is a reasonable indication of minimally acceptable professional competence.

d. Reexamination. An applicant who fails an examination may request reexamination at the next examination period without reapplication to the board. If the applicant intends to retake the examination, the applicant must notify the examination service selected by the board to administer the examinations prior to the application due date for the examination.

e. Failure to appear. An applicant who fails to appear for an examination may sit for the examination the next time it is offered without reapplication provided the application will not be more than one year old at the time of the application due date for the examination and the applicant notifies the examination service selected by the board to administer the examinations prior to the application due date for the examination.

f. Materials permitted in examination room. For security reasons, applicants shall comply with requirements regarding materials permitted in the examination room as issued by the National Council of Examiners for Engineering and Surveying and provided to candidates prior to the examination.

g. Release of examination results. Results of any examination shall only be reported as pass or fail except that the candidate who fails an examination may be provided with the candidate's converted score and a diagnostic report indicating areas of weakness, as available.

4.1(7) Examination subversion. Any individual who subverts or attempts to subvert the examination process may, at the discretion of the board, have the individual's examination scores declared invalid for the purpose of licensure in Iowa, be barred from engineering licensure and examinations in Iowa, or be subject to the imposition of other sanctions the board deems appropriate.

a. Conduct that subverts or attempts to subvert the examination process includes, but is not limited to:

(1) Conduct that violates the security of the examination materials, such as removing from the examination room any of the examination materials; reproducing or reconstructing any portion of the licensing examination; aiding by any means in the reproduction or reconstruction of any portion of the licensing examination; or selling, distributing, buying, receiving, or having unauthorized possession of any portion of a future, current, or previously administered licensing examination.

(2) Conduct that violates the standards of test administration, such as communicating with any other examination candidate during the administration of the licensing examination; communicating with others outside of the examination site during the administration of the examination; copying answers from another candidate or permitting one's answers to be copied by another candidate during the administration of the examination; or having in one's possession during the administration of the licensing examination any device or materials that might compromise the security of the examination or examination process, such as calculating and computing devices not on the list of devices approved by the examination provider or provided by the examination provider.

(3) Conduct that violates the examination process, such as falsifying or misrepresenting educational credentials or other information required for admission to the licensing examination or impersonating an examination candidate or having an impersonator take the licensing examination on one's behalf.

b. Any examination candidate who wishes to appeal a decision of the board under this subrule may request a contested case hearing. The request for hearing shall be in writing, shall briefly describe the basis for the appeal, and shall be filed in the board's office within 30 days of the date of the board decision that is being appealed. Any hearing requested under this subrule shall be governed by the rules applicable to contested case hearings under 193—Chapter 7.

193C—4.2(542B) Requirements for licensure by comity.

A person holding a certificate of licensure to engage in the practice of engineering issued by a proper authority of a jurisdiction or possession of the United States, the District of Columbia, or any foreign country, based on requirements that do not conflict with the provisions of Iowa Code section 542B.14 and who has met standards

determined by the board to be substantially equivalent to those required of applicants for initial licensure in this state may, upon application, be licensed without further examination. When determining whether the licensing standards satisfied by a comity applicant are substantially equivalent to those required in Iowa, the board considers each of the four licensing prerequisites in Iowa Code section 542B.14(1) individually. The licensing standards satisfied by the comity applicant must accordingly be equal or superior to those required in Iowa for education, fundamentals examination, experience, and professional examination. Unless expressly stated in this chapter, the board will not consider an applicant's superior satisfaction of one licensing prerequisite, such as a higher level of education than is required in Iowa, as resolving an applicant's lack of compliance with another prerequisite, such as professional examination. Comity applicants are governed by the same standards as are required of applicants for initial licensure in Iowa. 4.2(1) References. An applicant for licensure by comity shall submit references on forms provided by the board to verify at least four years of satisfactory experience after the receipt of the qualifying degree. This experience must be under the supervision of a licensed professional engineer, or the applicant must provide unlicensed tutelage references verifying at least four years of satisfactory engineering experience, as provided in paragraph 4.1(3)"a." The board reserves the right to contact employers for information about the applicant's professional experience and competence.

4.2(2) Basis for evaluation of applications. Applications for licensure by comity will be evaluated on the following basis:

- a. The applicant's record of education, references, practical experience, and successful completion of approved examinations will be reviewed to determine if it currently satisfies the substantive requirements of Iowa Code section 542B.14. In reviewing the education, references, and practical experience of comity applicants, the board will use the same criteria used by the board to determine the eligibility of a candidate for the Principles and Practice of Engineering examination; or
- b. The applicant's licensure in a jurisdiction other than Iowa will be reviewed to determine if it was granted only after satisfaction of requirements substantially equivalent to those that are required of applicants for initial licensure in Iowa by Iowa Code section 542B.14.

4.2(3) Evaluation of comity application process.

- a. First, the applicant for licensure by comity from a jurisdiction other than Iowa must meet or exceed the education requirements set forth in Iowa Code section 542B.14. In addition, if the applicant did not graduate from an Accreditation Board of

Engineering and Technology (ABET)/Engineering Accreditation Commission (EAC) or Canadian Engineering Accreditation Board (CEAB) approved curriculum, the applicant must have completed a year of practical experience satisfactory to the board. This year of experience must be in addition to the four years of practical experience in engineering work as required in paragraph 4.2(3)"d."

b. Second, the applicant must have successfully completed the Fundamentals of Engineering examination.

(1) An applicant who graduated from a satisfactory engineering program and who has 10 years or more of work experience satisfactory to the board shall not be required to take the Fundamentals of Engineering examination.

(2) An applicant who has earned a Doctor of Philosophy degree from an institution in the United States of America with an accredited Bachelor of Science engineering degree program in the same discipline, or a similar doctoral degree in a discipline approved by the board, shall not be required to take the Fundamentals of Engineering examination.

c. Third, the applicant must have successfully completed the Principles and Practice of Engineering examination.

d. Fourth, the applicant must have a record of four years or more of practical experience in engineering work which is of a character satisfactory to the board. This experience must have been obtained after the receipt of the appropriate education and must meet the requirements for practical experience found at paragraph 4.1(3)"a."

e. While the board will consider evidence presented by a comity applicant on non-NCEES examinations successfully completed in a foreign country, the non-NCEES examination will be compared with the appropriate NCEES examination. A non-NCEES professional examination, for instance, must be designed to determine whether a candidate is minimally competent to practice professional engineering in a specific branch of engineering, such as civil, structural, electrical, or mechanical engineering. The examination must be written, objectively graded, verifiable, and developed and validated in accordance with the testing standards of the American Psychological Association or equivalent testing standards. Free-form essays and oral interviews, while valuable for certain purposes, are not equal or superior to NCEES examinations for reasons including the subjective nature of such procedures, lack of verifiable grading standards, and heightened risk of inconsistent treatment.

4.2(4) Education and experience requirements.

a. For applicants who were originally licensed in a jurisdiction other than Iowa prior to July 1, 1988, the board will employ the following chart to determine if the applicant's licensure was granted after satisfaction of requirements substantially equivalent to those which were required by Iowa Code section 542B.14 at the time of the applicant's original licensure. Column 1 indicates the years of practical experience that were required prior to the Fundamentals of Engineering examination in addition to the completion of the required educational level. To determine the total years of practical experience that were required prior to taking the Principles and Practice of Engineering examination, column 2 is added to column 1.

EXPERIENCE REQUIREMENTS FOR COMITY APPLICANTS Who were licensed prior to July 1, 1988		
If the applicant's educational level was:	The applicant must have had the following additional years of experience prior to taking the Fundamentals of Engineering examination:	The applicant must have had the following years of experience after receipt of the qualifying degree and prior to taking the Principles and Practice of Engineering examination:
No post-high school education	8	4
Postsecondary study in mathematics or physical sciences		
One year	7	4
Two years	6	4
Three years	5	4
Four years	3	4
Four-year BS degree in mathematics or physical sciences plus master's degree in engineering	0	4
Postsecondary study in engineering technology programs and architecture		
One year	7	4
Two years	5.5	4
Three years	4	4
Four-year degree in a nonaccredited engineering technology program or BA in architecture	2.5	4
Four-year degree in an accredited engineering technology program	2	4
Bachelor of architecture, four years or more	2	4
Four-year degree in engineering technology or architecture plus master's degree in engineering	0	4
Postsecondary study in a nonaccredited engineering program		
One year	7	4
Two years	5	4
Three years	3	4
Four-year BS degree	1	4
Four-year degree in a nonaccredited engineering program plus master's degree in engineering	0	4
Postsecondary study in an accredited engineering program		

Two years	6	4
Three years	3	4
Four-year degree in an accredited engineering program	0	4

b. For applicants who were originally licensed in another jurisdiction and who meet the requirements of Iowa Code section 542B.14(1)"a"(1)(c), the board will employ the following chart to determine if the applicant's licensure was granted after satisfaction of requirements substantially equivalent to those which were required by Iowa Code section 542B.14 at the time of the applicant's original licensure. Column 1 indicates the years of practical experience that were required prior to the Fundamentals of Engineering examination in addition to the completion of the required educational level. To determine the total years of practical experience that were required prior to taking the Principles and Practice of Engineering examination, column 2 is added to column 1.

EXPERIENCE REQUIREMENTS FOR COMITY APPLICANTS Who meet the requirements of Iowa Code section 542B.14(1)"a"(1)(c)		
If the applicant's educational level was:	The applicant must have had the following additional years of experience prior to taking the Fundamentals of Engineering examination:	The applicant must have had the following years of experience after receipt of the qualifying degree and prior to taking the Principles and Practice of Engineering examination:
College or junior college (mathematics or physical sciences)		
Two years	6	4
Three years	5	4
Four-year BS degree	3	4
Four-year BS degree plus master's degree in engineering	0	4
All engineering technology programs and architecture		
Two years	6	4
Three years	5	4
Four-year degree, nonaccredited technology or BA in architecture	3	4
Four-year degree, accredited technology	2	4
Four-year degree or more, bachelor of architecture	2	4
Four-year BS degree, technology or architecture plus master's degree in engineering	0	4
Engineering program, nonaccredited		
Two years	6	4
Three years	3	4
Four-year BS degree	1	4
Four-year BS degree plus master's degree in engineering	0	4
Engineering program, accredited		
Two years	6	4
Three years	3	4

Four-year BS degree	0	4
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c. For all other applicants who were originally licensed in a jurisdiction other than Iowa on or after July 1, 1988, the board will employ the chart found at subrule 4.1(5) to determine if the applicant's licensure was granted after satisfaction of requirements substantially equivalent to those which are required by Iowa Code section 542B.14.

d. For purposes of this subrule, an applicant's master's degree in engineering must be from an institution in the United States of America with an accredited bachelor's degree in the same curriculum, and the master's degree candidate must be required to fulfill the requirements for the bachelor's degree in the same area of specialization.

193C—4.3(542B) Requirements for a licensee requesting additional examination.

A person holding an active certificate of licensure to engage in the practice of engineering issued by the state of Iowa may, upon written request and payment of the application and examination fees, take additional examinations in other branches of engineering without submitting a formal application to the board as described for initial or comity licensure.

These rules are intended to implement Iowa Code sections 542B.2, 542B.13, 542B.14, 542B.15, 542B.17 and 542B.20.

CHAPTER 5 LAND SURVEYING LICENSURE

193C—5.1(542B) Requirements for licensure by examination.

The specific requirements for initial licensing in Iowa are established in Iowa Code section 542B.14, and it is the board's intention to issue initial licensure only when those requirements are satisfied chronologically as set forth in the statute.

5.1(1) First, the applicant for initial licensure in Iowa must satisfy the education plus experience requirements as follows: graduation from a course of two years or more in mathematics, physical sciences, mapping and surveying, or engineering in a school or college and six years of practical experience, all of which, in the opinion of the board, will properly prepare the applicant for the examination in fundamental land surveying subjects.

- a. The six-year experience requirement above may be reduced based upon the number of years of the degree program from which the applicant graduated. Refer to the chart at 5.1(6).
- b. Internet or on-line degrees will only be considered as qualifying degrees if the institution issuing the degree is accredited by a recognized accreditation board.

5.1(2) Second, the applicant must successfully complete the Fundamentals of Land Surveying examination.

- a. The applicant may take the Fundamentals of Land Surveying examination anytime after the education and experience requirements described above are completed, but the applicant must successfully complete the Fundamentals of Land Surveying examination prior to taking the Principles and Practice of Land Surveying examination.
- b. College seniors studying an Accreditation Board of Engineering and Technology (ABET) or Canadian Engineering Accreditation Board (CEAB) approved curriculum may take the Fundamentals of Land Surveying examination during the final academic year; applicants will be permitted to take the examination during the testing period which most closely precedes anticipated graduation. However, an official transcript from the applicant's college or university verifying that the applicant graduated must be sent by the registrar to the board office before an applicant's examination results will be released.

5.1(3) Third, the applicant must successfully complete the Principles and Practice of Land Surveying examination.

- a. To qualify to take this examination, the applicant must present a record of four years or more of practical experience in land surveying work which is of a character satisfactory to the board. This experience must have been obtained after the receipt of the qualifying education and prior to the application due date for the examination. This practical experience is in addition to the initial experience required prior to taking the Fundamentals of Land Surveying examination.
- b. An applicant for the Principles and Practice of Land Surveying examination shall have a minimum of one year of practical experience in the United States of America or a territory under its jurisdiction.

5.1(4) Work project description. An applicant for initial licensure as a professional land surveyor must include with the application a statement of approximately 200 words describing a significant project on which the applicant worked closely during the last 12

months. The statement shall describe the applicant's degree of responsibility for the project and shall identify the project's owner and its location. The statement shall be signed and dated. Criteria the board shall use in evaluating the acceptability of the project as qualifying experience for the applicant shall include, but not be limited to, the following:

- a. The degree to which the project and the experience described has progressed from assignments typical of initial assignments to those more nearly expected of a licensed professional;
- b. The scope and quality of the professional tutelage experienced by the applicant;
- c. The technical decisions required of the applicant in the project; and
- d. The professional decisions required of the applicant.

The board reserves the right to contact the employer and the person providing tutelage on the project for information about the project experience presented to the applicant.

5.1(5) References. References are required for any applicant that must meet an experience requirement prior to taking an examination.

- a. An applicant for the Principles and Practice of Land Surveying examination shall submit five references on forms provided by the board.
 - (1) At least three of the five references shall be from licensed professional land surveyors.
 - (2) If the applicant has had more than one supervisor, at least two of the references shall be from a supervisor of the applicant.
 - (3) If an applicant has had professional experience under more than one employer, the applicant shall provide references from individuals with knowledge of the work performed under a minimum of two employers.
 - (4) The board reserves the right to contact employers for information about the applicant's professional experience and competence or to request additional references.
- b. An applicant for the Fundamentals of Land Surveying examination must provide three references on forms provided by the board except that: (1) individuals applying with an ABET/EAC or CEAB accredited engineering or surveying and mapping degree with at least six semester hours of surveying or mapping do not have an experience

requirement and, therefore, do not need to provide references; and (2) individuals applying with a non-ABET/EAC four-year surveying and mapping degree must submit only one reference.

5.1(6) Education and experience requirements. The board will require the minimum number of years set forth on the following chart before an applicant will be permitted to take either the Fundamentals of Land Surveying or the Principles and Practice of Land Surveying examination. Column 1 indicates the years of practical experience required prior to the Fundamentals of Land Surveying examination in addition to the completion of the required educational level. To determine the total years of practical experience required prior to taking the Principles and Practice of Land Surveying examination, column 2 is added to column 1.

EXPERIENCE REQUIREMENTS FOR EXAMINATION APPLICANTS		
If the applicant's educational level was:	The applicant must have had the following additional years of experience prior to taking the Fundamentals of Land Surveying examination:	The applicant must have had the following years of experience after receipt of the qualifying degree and prior to taking the Principles and Practice of Land Surveying examination:
A college or technology program with fewer than 6 semester hours of surveying		
Two-year degree	6	4
Four-year degree	4	4
A college or technology program with 6 or more semester hours of surveying		
Two-year degree	6	4
Four-year degree	2	4
Engineering program and 6 semester hours of surveying		
Two-year degree	6	4
Four-year BS degree	0	4
Engineering program with fewer than 6 semester hours of surveying		
Two-year degree	6	4
Four-year BS degree	2	4
Nonaccredited surveying and mapping program		
Two-year degree	6	4
Four-year BS degree	1	4
Accredited surveying and mapping program		
Two-year degree	6	4
Four-year BS degree	0	4

5.1(7) Practical experience requirements. Practical land surveying experience, of which a minimum of 25 percent is field experience, is required prior to licensing. The purpose of this requirement is to ensure that the applicant has acquired the professional

judgment, capacity and competence to determine land boundaries. The following criteria will be considered by the board in determining whether an applicant's experience satisfies the statutory requirements.

- a. **Quality.** Experience shall be of such quality as to demonstrate that the applicant has developed technical skill and initiative in the correct application of surveying principles. Such experience should demonstrate the capacity to review the applications of these principles by others and to assume responsibility for surveying work of a professional character. Up to three years of practical experience obtained after high school graduation and prior to satisfying the education requirement, if under the tutelage of a professional land surveyor, may be accepted toward the additional experience requirement for qualification to take the Fundamentals of Land Surveying examination. A minimum of four years of an applicant's experience after satisfying the education requirement shall be under the tutelage of a professional land surveyor.
- b. **Scope.** Experience shall be of sufficient breadth and scope to ensure that the applicant has attained reasonably well-rounded professional competence in land surveying.
- c. **Progression.** The record of experience shall indicate successive and continued progress from initial work of simpler character to recent work of greater complexity and higher degree of responsibility, as well as continued interest and effort on the part of the applicant toward further professional development and advancement.
- d. **Advanced education and military experience.** An applicant's advanced education, military experience, or both will be reviewed in order to determine if they are applicable toward the statutory requirements for experience.
- e. **Joint applications.** Applicants requesting licensure both as professional engineers and professional land surveyors must submit a history of professional experience in both fields. Such histories will be considered separately on a case-by-case basis. The board does not grant full credit for concurrent experience in both professions.

5.1(8) **Required examinations.** The board prepares and grades the Iowa State Specific Land Surveying examination administered to professional land surveyor candidates. All other examinations are uniform examinations prepared and graded by the National Council of Examiners for Engineering and Surveying (NCEES). The board may negotiate an agreement with an examination service to administer the examinations to applicants approved by the board, in which case applicants shall pay examination fees directly to the service.

- a. Fundamentals examination. The Fundamentals of Land Surveying examination is a computer-based examination covering general surveying principles.
- b. Professional land surveying examinations. The Principles and Practice of Land Surveying examination consists of two examinations. The first is a six-hour examination designed to determine general proficiency and qualification to engage in the practice of land surveying. The second part is a two-hour Iowa State Specific closed-book examination that is designed to determine an applicant's proficiency and qualification to practice land surveying specifically in Iowa. Each of the two examinations shall be scored separately.
- c. Passing scores. The board reviews test results for each examination and determines what level shall constitute a minimum passing score for that examination. In making its determination, the board generally is guided by the passing score recommended by the NCEES. The board fixes the passing score for each examination at a level which it concludes is a reasonable indication of minimally acceptable professional competence.
- d. Reexamination. An applicant who fails an examination may request reexamination at the next examination period without reapplication.
 - (1) If the applicant intends to retake the examination, the applicant must notify the examination service selected by the board to administer the examinations prior to the application due date for the examination.
 - (2) Applicants failing one or both parts of the professional land surveying examination will be required to retake only the failed portions. An applicant successful in passing one portion of the land surveying examination need not be reexamined for that portion regardless of how much time elapses between the successfully passed portion and any future appearance to retake the failed portion of the examination. A satisfactory score must be obtained on each portion of the examination before the board will grant licensure as a professional land surveyor.
 - (3) An applicant for licensure as a professional land surveyor in Iowa (by comity or examination) who needs to be examined only for the state-specific portion of the professional land surveying examination may take the examination at the board office by appointment in accordance with all other requirements.
 - (4) An applicant who has failed two consecutive examinations of the state-specific portion of the professional land surveying examination shall not be

allowed to retake the state-specific portion for one year in order for the applicant to acquire the necessary skill and knowledge to successfully pass the examination.

e. Failure to appear. An applicant who fails to appear for an examination may sit for the examination the next time it is offered without reapplication provided the application will not be more than one year old at the time of the application due date for the examination and the applicant notifies the board office prior to the application due date for the examination.

f. Materials permitted in examination room. For security reasons, applicants shall comply with requirements regarding materials permitted in the examination room as issued by the National Council of Examiners for Engineering and Surveying and provided to candidates prior to the examination.

g. Release of examination results. Results of any examination shall only be reported as pass or fail except that the candidate who fails an examination may be provided with the candidate's converted score and a diagnostic report indicating areas of weakness, as available.

5.1(9) Examination subversion. Any individual who subverts or attempts to subvert the examination process may, at the discretion of the board, have the individual's examination scores declared invalid for the purpose of licensure in Iowa, be barred from land surveying licensure and examinations in Iowa, or be subject to the imposition of other sanctions the board deems appropriate.

a. Conduct that subverts or attempts to subvert the examination process includes, but is not limited to:

(1) Conduct that violates the security of the examination materials, such as removing from the examination room any of the examination materials; reproducing or reconstructing any portion of the licensing examination; aiding by any means in the reproduction or reconstruction of any portion of the licensing examination; or selling, distributing, buying, receiving, or having unauthorized possession of any portion of a future, current, or previously administered licensing examination.

(2) Conduct that violates the standards of test administration, such as communicating with any other examination candidate during the administration of the licensing examination; communicating with others outside of the examination site during the administration of the examination; copying answers

from another candidate or permitting one's answers to be copied by another candidate during the administration of the examination; or having in one's possession during the administration of the licensing examination any device or materials that might compromise the security of the examination or examination process, such as calculating and computing devices not on the list of devices approved by the examination provider or provided by the examination provider.

(3) Conduct that violates the examination process, such as falsifying or misrepresenting educational credentials or other information required for admission to the licensing examination or impersonating an examination candidate or having an impersonator take the licensing examination on one's behalf.

b. Any examination candidate who wishes to appeal a decision of the board under this subrule may request a contested case hearing. The request for hearing shall be in writing, shall briefly describe the basis for the appeal, and shall be filed in the board's office within 30 days of the date of the board decision that is being appealed. Any hearing requested under this subrule shall be governed by the rules applicable to contested case hearings under 193—Chapter 7.

193C—5.2(542B) Requirements for licensure by comity.

A person holding a certificate of licensure to engage in the practice of land surveying issued by a proper authority of a jurisdiction or possession of the United States, the District of Columbia, or any foreign country, based on requirements that do not conflict with the provisions of Iowa Code section 542B.14 and of a standard not lower than that specified in the applicable licensure Act in effect in this jurisdiction at the time such certificate was issued may, upon application and successful completion of the Iowa State Specific Land Surveying examination, be licensed without further examination. When determining whether the licensing standards satisfied by a comity applicant at time of foreign licensure are equal or superior to those required in Iowa, the board considers each of the four licensing prerequisites in Iowa Code section 542B.14(1) individually. The licensing standards satisfied by the comity applicant must accordingly have been equal or superior to those required in Iowa for education, fundamentals examination, experience, and professional examination. Unless expressly stated in this chapter, the board will not consider an applicant's superior satisfaction of one licensing prerequisite, such as a higher level of education than is required in Iowa, as resolving an applicant's lack of compliance with another prerequisite, such as professional examination. Comity applicants are governed by the same standards as are required of Iowa applicants.

5.2(1) References. An applicant for licensure by comity shall submit one or more professional land surveyor references on forms provided by the board to verify the number of years of satisfactory experience required with the applicant's level of education. The board reserves the right to contact employers for information about the applicant's professional experience and competence.

5.2(2) Basis for evaluation of applications. Applications for licensure by comity will be evaluated on the following basis:

- a. The applicant's record of education, references, practical experience, and successful completion of approved examinations will be reviewed to determine if it currently satisfies the substantive requirements of Iowa Code section 542B.14. In reviewing the education, references, and practical experience of comity applicants, the board will use the same criteria used by the board to determine the eligibility of a candidate for the Principles and Practice of Land Surveying examination; or
- b. The applicant's licensure in a jurisdiction other than Iowa will be reviewed to determine if it was granted only after satisfaction of requirements equal to or more stringent than those that were required by Iowa Code section 542B.14 at the time the applicant was licensed in the other jurisdiction.

5.2(3) Evaluation of comity application process.

- a. First, the applicant for licensure by comity from a jurisdiction other than Iowa must have satisfied the education and experience requirements as set forth in Iowa Code section 542B.14 that were in effect at the time that the applicant was licensed initially.
- b. Second, the applicant must have successfully completed the Fundamentals of Land Surveying examination. The applicant may take the Fundamentals of Land Surveying examination anytime after the practical experience and educational requirements are completed.
- c. Third, the applicant must have successfully completed the Principles and Practice of Land Surveying examination. Prior to taking this examination, the applicant shall have had a record of four years or more of practical experience in land surveying which is of a character satisfactory to the board.
- d. While the board will consider evidence presented by a comity applicant on non-NCEES examinations successfully completed in a foreign country, the non-NCEES examination will be compared with the appropriate NCEES examination. A non-NCEES professional examination, for instance, must be designed to determine

whether a candidate is minimally competent to practice professional land surveying. The examination must be written, objectively graded, verifiable, and developed and validated in accordance with the testing standards of the American Psychological Association or equivalent testing standards. Free-form essays and oral interviews, while valuable for certain purposes, are not equal or superior to NCEES examinations for reasons including the subjective nature of such procedures, lack of verifiable grading standards, and heightened risk of inconsistent treatment.

5.2(4) Education and experience requirements. The board will employ the following chart to determine if the applicant's licensure in a jurisdiction other than Iowa was granted after satisfaction of requirements equal to or more stringent than those that were required by Iowa Code section 542B.14 at the time the applicant was licensed in the other jurisdiction. Column 1 indicates the years of practical experience that were required prior to the Fundamentals of Land Surveying examination in addition to the completion of the required educational level. To determine the total years of practical experience that were required prior to taking the Principles and Practice of Land Surveying examination, column 2 is added to column 1.

EXPERIENCE REQUIREMENTS FOR COMITY APPLICANTS Who were licensed prior to July 1, 1988		
If the applicant's educational level was:	The applicant must have had the following additional years of experience prior to taking the Fundamentals of Land Surveying examination:	The applicant must have had the following years of experience after receipt of the qualifying degree and prior to taking the Principles and Practice of Land Surveying examination:
No post-high school education	8	4
College or technology program with fewer than 6 semester hours of surveying		
One year	7	4
Two years	6	4
Three years	5	4
Four-year degree	4	4
College or technology program with 6 or more semester hours of surveying		
One year	7	4
Two years	5.5	4
Three years	4	4
Four-year degree	2.5	4
Engineering program with 6 semester hours of surveying		
One year	7	4
Two years	5.5	4
Three years	4	4
Four-year BS degree	1.5	4

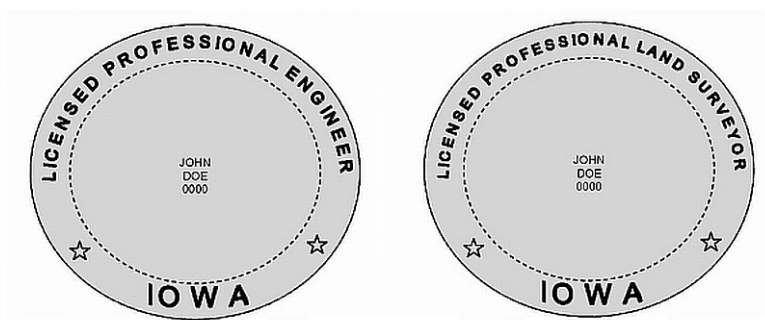
5.2(5) Substantial equivalency. Pursuant to Iowa Code section 546.10(8), the board may grant a comity application for licensure as a professional land surveyor if the board concludes that the applicant has met or exceeded all requirements for licensure applicable to initial applicants in Iowa, other than the sequence in which experience must be attained.

CHAPTER 6 SEAL AND CERTIFICATE OF RESPONSIBILITY

193C—6.1(542B) Seal and certificate of responsibility.

6.1(1) Each licensee shall procure a seal with which to identify all engineering and land surveying documents issued by the licensee for use in Iowa as provided in Iowa Code section 542B.16.

6.1(2) Description of seal. The seal shall include: the name of the licensee, the Iowa license number, the word "Iowa" and the words "Professional Engineer" or "Professional Land Surveyor" or "Professional Engineer and Professional Land Surveyor," as appropriate. The word "licensed" may be added but is not required on the seal. Neither the word "registrant" nor "registered" shall be used on the seal. The seal shall substantially conform to the samples shown below:



6.1(3) A legible rubber stamp or other facsimile of the seal may be used.

6.1(4) Each engineering or land surveying document submitted to a client or any public agency, hereinafter referred to as the official copy (or official copies), shall contain a certification block on the first page or attached cover sheet for application of a seal by the licensee in responsible charge and a certification block for application of a seal by each professional consultant contributing to the submission. In lieu of each contributing professional consultant providing a certification block on the front page or attached cover sheet for application of a seal, a table shall be provided that identifies the contributing professionals and where their respective certification blocks can be found

within the document. The seal and original signature shall be applied only to a final submission. Each official copy (or official copies) of a submission shall be stapled, bound or otherwise attached together so as to clearly establish the complete extent of the submission. Each certification block shall display the seal of the licensee and shall designate the portion of the submission for which that licensee is responsible, so that responsibility for the entire submission is clearly established by the combination of the stated seal responsibilities. Any nonfinal submission of an engineering or land surveying document to a client or public agency shall be clearly labeled "preliminary" or "draft."

The engineering certification block shall conform to the wording in the sample shown below:

SEAL	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.	
	(signature)	(date)
	Printed or typed name	
	License number _____	
	My license renewal date is December 31, _____	
	Pages or sheets covered by this seal:	
	_____ _____ _____	

The land surveying certification block shall conform to the wording in the sample shown below. For maps or acquisition plats prepared from public records or previous measurements by others, the following land surveying certification block may be modified by removing the phrase "and the related survey work was performed."

SEAL	I hereby certify that this land surveying document was prepared and the related survey work was performed by me or under my direct personal supervision and that I am a duly licensed Professional Land Surveyor under the laws of the State of Iowa.	
	(signature)	(date)
	Printed or typed name	
	License number _____	
	My license renewal date is December 31, _____	
	Pages or sheets covered by this seal:	
	_____ _____ _____	

6.1(5) The information requested in each certification block must be typed or legibly printed in permanent ink except for the signature and date of signature, which shall be an original signature and handwritten date in contrasting ink color on each official copy. The seal implies responsibility for the entire submission unless the area of responsibility is clearly identified in the information accompanying the seal.

6.1(6) It shall be the responsibility of the licensee to forward copies of all revisions to the submission, which shall become a part of the official copy of the submission. Such revisions shall be identified as applicable on a certification block or blocks with professional seals applied so as to clearly establish professional responsibility for the revisions.

6.1(7) The licensee is responsible for the custody and proper use of the seal. Improper use of the seal shall be grounds for disciplinary action.

6.1(8) Computer-generated seals may be used on final original documents.

6.1(9) Secure electronic signature. An electronic signature as defined in or governed by Iowa Code chapter 554D meets the signature requirements of this rule if it is protected by a security procedure, as defined in Iowa Code section 554D.103(14), such as digital signature technology. It is the licensee's responsibility to ensure, prior to affixing an electronic signature to an engineering or land surveying document, that security procedures are adequate to (1) verify the signature is that of a specific person and (2) detect any changes that may be made or attempted after the signature of the specific person is affixed.

This rule is intended to implement Iowa Code sections 542B.13, 542B.15, 542B.20 and 542B.30.

CHAPTER 7 PROFESSIONAL DEVELOPMENT

193C—7.1(542B,272C) General statement.

Each licensee is required to meet the continuing education requirements of this chapter for professional development as a condition of licensure renewal.

193C—7.2(542B,272C) Definitions.

As used in these rules, the following definitions apply:

“College or unit semester or quarter hour” means the unit of credit given for advanced technical and graduate courses from universities with programs accredited by the

Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology, Inc. or other related college course qualified in accordance with this chapter.

“Continuing education” means education obtained by a licensee in order to maintain, improve, or expand skills and knowledge obtained prior to initial licensure or to develop new and relevant skills and knowledge.

“Continuing education unit (CEU)” means the unit of credit customarily granted for continuing education courses. One continuing education unit is given for ten hours of class in an approved continuing education course.

“Course or activity” means any qualifying course or activity with a clear purpose and objective which will maintain, improve, or expand the skills and knowledge relevant to the licensee’s field of practice.

“Independent study” means any course or activity in which there is no real-time interaction between the training provider and the licensee, such as courses offered on the Internet.

“Professional development hour (PDH)” means a contact hour of instruction or presentation and is the common denominator for other units of credit.

193C—7.3(542B,272C) Professional development hours.

7.3(1) Allowable activities. Licensees may earn professional development hours by participating in a variety of activities. The following is a sample list of allowable activities and is not all-inclusive:

- a. Successful completion of college courses;
- b. Successful completion of continuing education courses;
- c. Successful completion of correspondence, televised, videotaped, and other short courses or tutorials;
- d. Successful completion of courses on-line via the Internet;
- e. Active participation in seminars, in-house courses, workshops, technical committees of professional engineering organizations, and professional conventions;
- f. Teaching or instructing in the activities set forth above if such teaching or instruction is outside of the licensee’s regular employment duties and if the licensee

can document such teaching activity or instruction was newly developed and presented for the first time;

- g. Authoring published papers, articles or books;
- h. Obtaining patents;
- i. Attendance at online video courses;
- j. Participation on an NCEES examination development committee;
- k. Attendance at engineering college graduate research seminars.

All of the allowable activities listed above must meet the requirements and restrictions set forth in this chapter to be accepted by the board.

7.3(2) PDH conversion.

The following chart illustrates the conversion from other units to PDH:

ACTIVITY	PDH
1 College or unit semester hour Credit for qualifying college or community college courses will be based upon course credit established by the college.	45 PDH per semester hour
1 College or unit quarter hour Credit for qualifying college or community college courses will be based upon course credit established by the college.	30 PDH per quarter hour
1 Continuing Education Unit as defined in 193C—7.2(542B,272C)	10 PDH
1 Contact hour attendance in a class, course, seminar, or professional or technical presentation made at a meeting, in-house training session, convention or conference. Credit for qualifying seminars and workshops will be based on 1 PDH unit for each hour of attendance. Attendance at qualifying programs presented at professional or technical society meetings will earn PDH units for the actual time of each program, excluding time for breaks and meals.	1 PDH per hour
1 Contact hour teaching a class, course, seminar, or a professional or technical presentation a. Teaching credit is valid for teaching a course or seminar for the first time only. b. Teaching credit does not apply to full-time faculty. c. Teaching credit is limited to 10 PDH per biennial renewal period.	2 PDH per hour
Each published paper, article, or book Credit for published material is earned in the biennium of publication.	10 PDH per publication
Active participation in a professional or technical society. Credit for active participation in professional and technical societies is limited to 2 PDH per renewal period per organization and requires that a licensee serve as an officer or actively participate in a committee of the organization. PDH credits are earned for a minimum of one year's service.	2 PDH per organization per renewal period
Each patent Credit for patents is earned in the biennium the patent is issued.	10 PDH per patent
Participation on an NCEES examination development committee or Iowa state specific land surveying examination development committee, including the writing and grading of examination questions, writing reference materials for examinations, and evaluating past examination question performance. Licensees may claim a maximum of 30 PDH per biennial renewal period for participation in this activity.	2 PDH per hour of committee participation

7.3(3) Determination of credit. The board has final authority with respect to approval of courses, credit, PDH value for courses, and other methods of earning credit. No preapproval of offerings will be issued. The board may deny any renewal or reinstatement upon a determination of insufficient or unsatisfactory continuing education.

193C—7.4(542B,272C) Professional development guidelines.

Continuing education activities that satisfy the professional development criteria are those that relate to engineering or land surveying practice or management. It is recognized that an engineer's specialized skills must have as their foundation a fundamental knowledge of chemistry, physics, mathematics, graphics, computations, communication, and humanities and social sciences. However, continuing education in the fundamentals alone will not be sufficient to maintain, improve, or expand engineering skills and knowledge. For that reason, licensees will be limited in their use of fundamental courses in proportion to ABET criteria for accreditation of engineering curricula. Continuing education activities are classified as:

7.4(1) Group 1 activities. Group 1 activities are intended to maintain, improve, or expand skills and knowledge obtained prior to initial licensure. The following chart illustrates the maximum PDH allowable per renewal period for Group 1 activities:

Type of course/activity	Number of PDH allowed per renewal period
Mathematics and basic sciences Math beyond Trigonometry Basic sciences: Chemistry, Physics, Life sciences, Earth sciences	10 PDH
Engineering sciences Mechanics, Thermodynamics, Electrical and electrical circuits, Materials science, *Computer science *Courses in computer science will generally be considered a part of the Engineering Sciences category in the ABET criterion and, therefore, limited to a maximum of 10 PDH per renewal period.	10 PDH
Humanities and social sciences Philosophy, Religion, History, Literature, Fine arts, Sociology, Psychology, Political science, Anthropology, Economics, Foreign languages, Professional ethics, Social responsibility	5 PDH
Engineering-related courses Accounting, Industrial management, Finance, Personnel administration, Engineering economy, English, Speech, *Computer applications *The computer is considered a tool available to engineers and land surveyors. Courses related to computer drafting and general computer applications are generally not applicable to either Group 1 or Group 2 activities. Computer courses that relate to engineering or land surveying design applications, such as structural design/analysis software, are considered acceptable.	10 PDH

*The computer is considered a tool available to engineers and land surveyors. Courses related to computer drafting and general computer applications are generally not applicable to either Group 1 or Group 2 activities. Computer courses that relate to

engineering or land surveying design applications, such as structural design/analysis software, are considered acceptable. 10 PDH

7.4(2) Group 2 activities. Group 2 activities are intended to develop new and relevant skills and knowledge. Credit for participation in activities in the group is unlimited, subject to maximum carryover. Typical areas include postgraduate level engineering science or design, new technology, environmental regulation and courses in management of engineering or land surveying activity (regular work duties do not qualify).

7.4(3) Independent study. To be readily acceptable by the board, independent study as defined in rule 193C—7.2(542B,272C) must meet all of the following criteria:

- a. A written evaluation process is completed by the independent study provider; and
- b. A certificate of satisfactory completion is issued by the provider; and
- c. An evaluation assessment is issued to the licensee by the provider; and
- d. Documentation supporting such independent studies is maintained by the licensee and provided to the board as required by subrule 7.8(2).

A maximum of ten professional development hours of independent study activity will be allowed per biennium per licensee.

7.4(4) Exclusions. Types of continuing education activities which will be excluded from allowable continuing education are those in which it is not evident that the activity relates directly to the licensee's practice of professional engineering or land surveying or the management of the business concerns of the licensee's practice, or which do not comply with the board's administrative rules. Examples of activities that do not qualify as continuing education include the following:

- Regular employment;
- Toastmasters club meetings;
- Service club meetings or activities;
- Personal estate planning;
- Banquet speeches unrelated to engineering;
- Professional society business meeting portions of technical seminars;

- Financial planning/investment seminars;
- Foreign travel not related to engineering study abroad;
- Personal self-improvement courses;
- Real estate licensing courses;
- Stress management;
- Trade shows;
- Peer review;
- Accreditation review;
- Independent study or self-study that does not meet the requirements of subrule 7.4(3);
- Basic CAD and fundamental computer application courses;
- Undergraduate engineering seminars.

193C—7.5(542B,272C) Biennial requirement.

The biennial requirement must be satisfied during the biennium prior to licensure renewal except for the carryover permitted.

7.5(1) The continuing education requirement for biennial licensure renewal is 30 professional development hours for an active licensee in engineering or land surveying. At least 2 of the 30 professional development hours must be in the area of professional ethics. For individuals actively licensed in both engineering and land surveying, at least 4 of the 40 total professional development hours must be in the area of professional ethics. The number of professional development hours that may be carried forward into the next biennium shall not exceed 15.

7.5(2) Inactive licensees are exempt from the continuing education requirements.

7.5(3) Continuing education requirements for licensure in more than one engineering branch are the same as for licensure in a single branch of engineering.

7.5(4) The continuing education requirement for biennial licensure renewal for an individual who is active in both engineering and land surveying is 20 professional development hours in engineering and 20 professional development hours in land

surveying. The number of professional development hours that may be carried forward into the next biennium shall not exceed 10 hours for each profession.

7.5(5) A licensee who is active in one profession and inactive in another shall meet the continuing education requirements for licensure in the profession in which active licensure is maintained.

7.5(6) A new licensee shall satisfy one-half the biennial continuing education requirement at the first renewal following initial licensure.

193C—7.6(542B,272C) Exemptions.

The continuing education requirements may be reduced in proportion to the following:

1. Periods of time that the licensee serves honorably on active duty in the military services;
2. Periods of time that the licensee is licensed in and a resident of another state or district having continuing education requirements for professional engineering or land surveying and meets all requirements of that state or district for practice therein;
3. Periods of time that the licensee is a government employee working as a professional engineer or professional land surveyor and assigned to duty outside the United States; or
4. Documented periods of the licensee's active practice and absence from the United States that are approved by the board.

No exemption will be granted without a written request from the licensee with documentation of the period of absence.

193C—7.7(542B,272C) Hardships or extenuating circumstances.

The board may, in individual cases involving hardship or extenuating circumstances, grant waivers of the continuing education requirements for a period of time not to exceed one year. No waiver or extension of time shall be granted unless the licensee makes a written request to the board for such action.

193C—7.8(542B,272C) Reports, records, and compliance review.

At the time of application for license renewal, each licensee shall report, on a form provided by the board, the number of professional development hours achieved during the preceding biennium.

7.8(1) Record keeping. Maintaining records to be used to support professional development hours claimed is the responsibility of the licensee. It is recommended that each licensee keep a log showing the type of activity claimed, sponsoring organization, location, duration, instructor's or speaker's name, and PDH credits earned. Documentation of reported PDHs shall be maintained by the licensee for two years after the period for which the form was submitted.

7.8(2) Compliance review. The board may select licensees for review of compliance with continuing education requirements on a random basis or upon receiving information regarding noncompliance and shall review compliance with continuing education requirements for reinstatement of lapsed or inactive licenses. Each licensed board member shall be audited for PDH compliance for a biennium that is within each member's respective three-year appointment term. For each PDH claimed, licensees chosen for compliance review shall furnish:

- a. Proof of attendance. Attendance verification records in the form of completion certificates, or other documents supporting evidence of attendance;
- b. Verification of the hours claimed; and
- c. Information about the course content.

7.8(3) Compliance review sanctions. Any discrepancy between the number of PDHs reported and the number of PDHs actually supported by documentation may result in a disciplinary review. If, after the disciplinary review, the board disallows any PDH, or the licensee has failed to complete the required PDHs, the licensee shall have 60 days from board notice to either provide further evidence of having completed the PDHs disallowed or remedy the discrepancy by completing the required number of PDHs (provided that such PDHs shall not again be used for the next renewal). Extension of time may be granted on an individual basis and must be requested by the licensee within 30 days of notification by the board. If the licensee fails to comply with the requirements of this subrule, the licensee may be subject to disciplinary action. If the board finds, after proper notice and hearing, that the licensee willfully disregarded these requirements or falsified documentation of required PDHs, the licensee may be subject to disciplinary action as further identified in 193C—paragraphs 9.3(1)"c" and 9.3(3)"e."

7.8(4) Out-of-state residents. A person licensed to practice engineering or land surveying or both in Iowa shall be deemed to have complied with the continuing education requirement of this state during the periods that the person is a resident of another state or district which has a continuing education requirement for engineers or

land surveyors and the individual meets all requirements of that state or district for practice therein. However, if selected for compliance review, such individuals must provide documentation as specified in 7.8(2).

CHAPTER 8 PROFESSIONAL CONDUCT OF LICENSEES

193C—8.1(542B) General statement.

In order to establish and maintain a high standard of integrity, skills and practice in the professions of engineering and land surveying, and to safeguard the life, health, property and welfare of the public, the following code of professional conduct shall be binding upon every person holding a certificate of licensure as a professional engineer or professional land surveyor in this state. The code of professional conduct is an exercise of the police power vested in the board by the Acts of the legislature.

193C—8.2(542B) Code of professional conduct.

All persons licensed under Iowa Code chapter 542B are charged with having knowledge of the existence of this code of professional conduct and shall be expected to be familiar with its provisions, to understand them, and to abide by them. Such knowledge includes the understanding that the practices of engineering and land surveying are a privilege, as opposed to a right, and the licensee shall be forthright and candid in statements or written response to the board or its representatives on matters pertaining to professional conduct.

8.2(1) Responsibility to the public. Licensees shall conduct their professional practices in a manner that will protect life, health and property and enhance the public welfare. If their professional judgment is overruled under circumstances where safety, health and welfare of the public are endangered, they shall inform their employer or client of the possible consequences, notify such other proper authority as may be appropriate, and withdraw from further services on the project.

Licensees shall neither approve nor certify engineering or land surveying documents that may be harmful to the public health and welfare and that are not in conformity with accepted engineering or land surveying standards.

8.2(2) Competency for assignments. Licensees shall undertake to perform engineering or land surveying assignments only when qualified by education or experience in the specific technical field of professional engineering or professional land surveying

involved. Licensees shall engage experts or advise that experts and specialists be engaged whenever the client's or employer's interests are best served by such service.

Licensees may accept an assignment on a project requiring education or experience outside their field of competence, but only to the extent that their services are restricted to those phases of the project in which they are qualified. All other phases of such projects shall be performed by qualified associates, consultants or employees.

8.2(3) Truth in reports and testimony. Licensees, when serving as expert or technical witnesses before any court, commission, or other tribunal, shall express an opinion only when it is founded upon adequate knowledge of the facts in issue, upon a background of technical competence in the subject matter, and upon honest conviction of the accuracy and propriety of their testimony. Under these circumstances, the licensee must disclose inadequate knowledge.

Licensees shall be objective and truthful in all professional reports, statements or testimony. All relevant and pertinent information shall be included in such reports, statements or testimony. Licensees shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact.

8.2(4) Conflict of interest. The following guidelines regarding conflict of interest shall apply:

- a. Licensees shall not issue statements, criticisms or arguments on engineering or land surveying matters connected with public policy which are influenced or paid for by an interested party, or parties, unless they have prefaced their comments by explicitly identifying themselves, by disclosing the identities of the party or parties on whose behalf they are speaking, and by revealing the existence of any pecuniary interest.
- b. Licensees shall avoid all known conflicts of interest with their employers or clients and, when unforeseen conflicts arise, shall promptly inform their employers or clients of any business association, interest, or circumstances that could influence judgment or the quality of services.
- c. Licensees shall not accept compensation, financial or otherwise, from more than one party for services on the same project, unless the circumstances are fully disclosed and agreed to by all interested parties.
- d. Licensees shall act in professional matters for each employer or client as faithful agents or trustees and maintain full confidentiality on all matters in which the welfare of the public is not endangered.

8.2(5) Ethics. Licensees shall conduct their business and professional practices of engineering and land surveying in an ethical manner. In addition to the provisions of this chapter, the board will consider, although not necessarily be bound by, the ethical standards that address public protection issues adopted by a recognized state or national engineering or land surveying organization such as the National Society of Professional Engineers and the National Society of Professional Surveyors.

8.2(6) Unethical or illegal conduct.

a. Business practices. The following guidelines regarding unethical or illegal business practices shall apply:

(1) Licensees shall not pay or offer to pay, either directly or indirectly, any commission, percentage, brokerage fee, political contribution, gift, or other consideration to secure work, except to a bona fide employee or bona fide, established commercial or marketing agency retained by them or to secure positions through employment agencies.

(2) Licensees, as employers, shall not engage in any discriminatory practice prohibited by law and shall, in the conduct of their business, employ personnel upon the basis of merit.

(3) Licensees shall not solicit or accept gratuities, directly or indirectly, from contractors, their agents, or other parties dealing with their clients or employers in connection with work for which they are responsible.

(4) Licensees shall not solicit or accept an engineering or land surveying contract from a governmental body when a principal or officer of the licensee's organization serves as an elected, appointed, voting or nonvoting member of the same governmental body which is letting the contract. For purposes of this subparagraph, "governmental body" means a board, council, commission, or similar multimembered body. A licensee would not violate this provision, however, if the principal or officer of the licensee's organization who serves as a member of the governmental body plays no role in the solicitation or acceptance of the contract, and the contract would be legally permissible under applicable Iowa law, including but not limited to Iowa Code sections 68B.3, 279.7A, 331.342, and 362.5.

(5) Licensees shall not associate with, or permit the use of their names or firms in a business venture by, any person or firm that they know, or have

reason to believe, is engaging in business or professional practice of a fraudulent or dishonest nature.

(6) Brochures or other presentations incident to the solicitation of employment shall not misrepresent pertinent facts concerning employers, employees, associates, firms, joint ventures, or past accomplishments.

b. Individual professional conduct. The following guidelines regarding illegal or unethical individual professional conduct shall apply:

(1) Licensees shall not use association with nonengineers, corporations or partnerships as “cloaks” for unethical acts.

(2) Licensees shall not violate any local, state or federal criminal law in the conduct of professional practice.

(3) Licensees shall not violate licensure laws of any state or territory.

(4) Licensees shall not affix their signatures or seals to any plans, plats or documents dealing with subject matter in which those licensees lack competence, nor to any plan, plat or document not prepared under their direct personal direction and control.

(5) Licensees shall not falsify their qualifications or permit misrepresentation of their or their associates' qualifications. They shall not misrepresent or exaggerate their responsibility in or for the subject matter of prior assignments.

c. Real property inspection reports.

(1) Licensees shall not represent themselves as licensed professional land surveyors or professional engineers on real property inspection reports (i.e., mortgage surveys).

(2) Licensees shall not place their firm names, logos, or title blocks on real property inspection reports (i.e., mortgage surveys).

193C—8.3(542B) Reporting of acts or omissions.

Licensees shall report acts or omissions by a licensee that constitute negligence or carelessness. For the purposes of these rules, “negligence or carelessness” means demonstrating unreasonable lack of skill in the performance of engineering or land surveying services by failure of a licensee to maintain a reasonable standard of care in the licensee’s practice of engineering or land surveying. In the evaluation of reported acts or omissions, the board shall determine if the engineer or land surveyor has

applied learning, skill and ability in a manner consistent with the standards of the professions ordinarily possessed and practiced in the same profession at the same time. Standards referred to in the immediately preceding sentence shall include any minimum standards adopted by this board and any standards adopted by recognized national or state engineering or land surveying organizations.

193C—8.4(542B) Standards of integrity.

1. Licensees shall answer all questions of a duly constituted investigative body of the state of Iowa concerning alleged violations by another person or firm.
2. When proven wrong, licensees shall admit and accept their own errors and shall not distort or alter the facts to justify their own decisions.
3. If licensees know or have reason to believe that another person or firm may be in violation of any Iowa law or rule regarding ethics or conduct of professional engineering or professional land surveying practice, those licensees shall present such information to the engineering and land surveying examining board in writing and shall cooperate with the board in furnishing further information or assistance required by the board.
4. Licensees shall not assist in the application of an individual they know is unqualified for licensure by reason of education, experience or character.

193C—8.5(542B) Engineering and land surveying services offered by business entities.

8.5(1) Purpose of rule. The purpose of this rule is to protect the public from misleading or deceptive advertising by business entities that hold themselves out to the public as providing professional engineering or professional land surveying services and to guard against the unlicensed practice of professional engineering or professional land surveying by persons who are not properly licensed to perform such services in the state of Iowa. This rule shall not be construed as restricting truthful advertising by business entities that appropriately place professional engineers or professional land surveyors in responsible charge of the professional services offered to and performed for the public.

8.5(2) Definitions. For purposes of this rule, the following definitions shall apply:

“Business entity” shall include corporations, partnerships, limited liability companies, persons using fictitious or assumed names, or any other form of entity which may conduct business.

“In responsible charge” means having direct control of and personal supervision over any professional land surveying work or work involving the practice of professional engineering. One or more persons, jointly or severally, may be in responsible charge. Indications of being in responsible charge include:

1. Obtaining or setting the project or service parameters or criteria.
2. Dictating the manner and methods by which professional services are performed.
3. Establishing procedures for quality control and authority over professional services in a manner that ensures that the professional licensee is in control of the work and of all individuals performing the work under the licensee’s supervision.
4. Spending sufficient time directly performing the work or directly supervising the work to ensure that the licensee is familiar with all significant details of the work.
5. Maintaining familiarity with the capabilities and methods of the persons performing professional services, and providing adequate training for all persons working under the licensee’s direct supervision.
6. Sustaining readily accessible contact with all persons performing professional services by direct physical proximity, or as appropriate in the licensee’s professional judgment, by frequent communication, in clear and complete verbal and visual form, of information about the work being performed.
7. Specifically pertaining to land surveying, reviewing all field evidence and making all final decisions concerning the placement of survey monuments and surveyed lines.

“Professional services” shall include professional engineering and professional land surveying services, as defined in Iowa Code sections 542B.2(5) and (8) and 542B.27, as applicable to the fact situation at issue.

8.5(3) General rule. Business entities offering professional services to the public must be owned, managed, or appropriately staffed by one or more professional engineers or professional land surveyors, as applicable, who are in responsible charge of all professional services offered and performed.

8.5(4) Appropriate staffing. The nature and extent of appropriate staffing by licensed professionals is necessarily a fact-based determination dependent on such factors as the nature and volume of professional services offered and performed, the risk of unlicensed practice, the impact of the professional services on the life, health and safety of the public and the public’s property, and the representations made to the

public. While the legal nature of the business entity's relationship (e.g., owner, manager, employee) with a licensed professional engineer or professional land surveyor is not necessarily determinative, licensed professionals must be in responsible charge of all professional services offered and performed.

8.5(5) Professional engineering or professional land surveying firms. Business entities holding themselves out to the public as professional engineering or professional land surveying firms cannot satisfy the requirements of this rule solely by retaining, through employment or contract, a licensed professional on an as-needed, occasional or consulting basis. Such an arrangement fosters unlicensed practice by the unlicensed owners or managers who place themselves in charge of determining when a licensed professional is needed. When a business entity conveys to the public that it is organized as a firm of licensed professionals, the public has a right to expect that the firm retains the full-time services of one or more licensed professionals. "Full-time" in this context is not measured by hours, but by a licensee's sustained, meaningful, and effective, direct supervision of all professional services performed, whether the firm performs services, for example, 20 hours per month or 80 hours per week.

8.5(6) Restricted services. Business entities that do not generally hold themselves out to the public as professional engineering or professional land surveying firms, but that do offer some type of professional engineering or professional land surveying service, shall be appropriately staffed by licensed professionals in a manner that (a) corresponds with the representations made to the public,

(b) places licensed professionals in responsible charge of all professional services performed, and (c) guards against the unlicensed practice of professional engineering or professional land surveying.

8.5(7) Permitted practices.

a. Nothing in this rule is intended to prevent an individual or business entity from truthfully offering services as a project manager, administrator, or coordinator of a multidisciplinary project.

b. Nothing in this rule shall prevent a joint venture arrangement between an engineering or land surveying firm and a business entity that is not owned, managed, or staffed by professional engineers or professional land surveyors, in which the venturing entities jointly and truthfully offer professional engineering or professional land surveying services on a project-by-project basis. Licensed professional engineers and professional land surveyors who participate in such arrangements shall ensure that the public is accurately informed as to the nature of

all professional services to be performed and by whom the services will be performed.

8.5(8) Remedies against licensees. Licensed professional engineers or professional land surveyors who aid and abet the unlicensed offering or practice of professional engineering or professional land surveying, or who otherwise knowingly participate in a business entity that does not comply with this rule, are engaging in unethical practices that are harmful or detrimental to the public and are subject to disciplinary action by the board.

8.5(9) Remedies against business entities and unlicensed individuals. Pursuant to Iowa Code section 542B.27, the board may by order impose civil penalties against any business entity or unlicensed individual that offers or performs professional services in violation of Iowa Code chapter 542B. The board shall apply the guidelines set forth in this rule in determining whether a violation exists and in establishing an appropriate civil penalty. Civil penalties may not exceed \$1000 for each offense. Each day of a continued violation constitutes a separate offense. In addition to a civil penalty or as an alternative to such remedy, the board may seek an injunction in district court to prevent future violations by business entities or by licensed or unlicensed individuals.

CHAPTER 9 COMPLAINTS, INVESTIGATIONS AND DISCIPLINARY ACTION

193C—9.1(542B) Complaints and investigations.

9.1(1) Complaints. The board shall, upon receipt of a complaint, or may upon its own motion pursuant to other evidence received by the board, review and investigate alleged acts or omissions which reasonably constitute cause under applicable law or administrative rule for licensee discipline. Complaints may be submitted to the board office via the board's website by members of the public, including clients, business organizations, nonprofit organizations, governmental bodies, licensees, or other individuals or entities with knowledge of possible violations of laws or rules by licensees.

9.1(2) Form and content. A written complaint may be submitted on forms available from the board office and on the board's website. The written complaint shall include the following information:

- a. The full name, address, and telephone number of complainant (individual who is complaining).

- b. The full name, address, and telephone number of respondent (individual against whom the complaint is filed).
- c. A statement of the facts and circumstances giving rise to the complaint, including a description of the alleged acts or omissions which the complainant believes demonstrate that the respondent has violated or is violating laws or rules enforced by the board.
- d. Citation of the statutes and administrative rules allegedly violated by the respondent.
- e. Evidentiary supporting documentation.
- f. Steps, if any, that have been taken by the complainant to resolve the dispute with the respondent prior to the filing of the complaint.

9.1(3) Initial complaint screening. All written complaints received by the board shall be initially screened by the board's administrator to determine whether the allegations of the complaint fall within the board's investigatory jurisdiction and whether the facts presented, if true, would constitute a basis for disciplinary action against a licensee. Complaints which are clearly outside the board's jurisdiction, which clearly do not allege facts upon which disciplinary action would be based, or which are frivolous shall be referred by the board administrator to the board for closure at the next scheduled board meeting. All other complaints shall be referred by the board administrator to the board's disciplinary committee for committee review.

9.1(4) Investigation of allegations. In order to determine if probable cause exists for a hearing on the complaint, the board may cause an investigation to be made into the allegations of the complaint. It may refer the complaint to a peer review committee or investigator for investigation, review and report to the board.

9.1(5) Informal discussion. If the board considers it advisable, or if requested by the affected licensee, the board may grant the licensee an opportunity to appear before the board or a committee of the board for a voluntary informal discussion of the facts and circumstances of an alleged violation. The licensee may be represented by legal counsel at the informal discussion. The licensee is not required to attend the informal discussion. By electing to attend, the licensee waives the right to seek disqualification, based upon personal investigation of a board member or staff, from participating in making a contested case decision or acting as a presiding officer in a later contested case proceeding. Because an informal discussion constitutes a part of the board's investigation of a pending disciplinary case, the facts discussed at the informal

discussion may be considered by the board in the event the matter proceeds to a contested case hearing and those facts are independently introduced into evidence. The board may seek a consent order at the time of the informal discussion. If the parties agree to a consent order, a statement of charges shall be filed simultaneously with the consent order.

9.1(6) Immunity. As provided by Iowa Code section 272C.8, a person shall not be civilly liable as a result of filing a report or complaint with the board unless such act is done with malice, nor shall an employee be dismissed from employment or discriminated against by an employer for filing such a report or complaint.

9.1(7) Role of complainant. The role of the complainant in the disciplinary process is limited to providing the board with factual information relative to the complaint. A complainant is not party to any disciplinary proceeding which the board may initiate based in whole or in part on information provided by the complainant.

9.1(8) Role of the board. The board does not act as an arbiter of disputes between private parties, nor does the board initiate disciplinary proceedings to advance the private interest of any person or party. The role of the board in the disciplinary process is to protect the public by investigating complaints and initiating disciplinary proceedings in appropriate cases. The board possesses sole decision-making authority throughout the disciplinary process, including the authority to determine whether a case will be investigated, the manner of the investigation, whether a disciplinary proceeding will be initiated, and the appropriate licensee discipline to be imposed, if any.

193C—9.2(542B) Ruling on the initial inquiry.

9.2(1) Dismissal. If a determination is made by the board that a complaint is without grounds or merit, the complaint shall be dismissed. A letter of explanation concerning the decision of the board shall be sent to the respondent and the complainant.

9.2(2) Requirement of further inquiry. If determination is made by the board to order further inquiry, the complaint and initial recommendations shall be provided to the investigator(s) along with a statement specifying the information deemed necessary.

9.2(3) Acceptance of the case. If a determination is made by the board to initiate disciplinary action the board may enter into an informal settlement or recommend formal disciplinary proceedings. The board's rules regarding informal settlement are found at 193—7.4(17A,272C).

This rule is intended to implement Iowa Code sections 542B.21, 542B.22 and 272C.6.

193C—9.3(17A,272C,542B,546) Grounds for discipline.

The board has authority pursuant to Iowa Code chapters 542B, 17A and 272C to impose discipline for violations of those chapters and the rules promulgated thereunder and may initiate disciplinary action against a licensee holding an active, inactive or lapsed license on any of the following grounds:

9.3(1) Fraud or deceit in procuring a license. Fraud or deceit in procuring or attempting to procure an initial, comity, renewal, or reinstated license includes any intentional perversion of or reckless disregard for the truth when an application, or information in support of another's application, is submitted to the board, including:

- a. False representation of a material fact, whether by word or by conduct, by false or misleading allegation, or by concealment of that which should have been disclosed.
- b. Attempting to file or filing with the board any false or forged record or document, such as a college transcript, diploma or degree, examination report, verification of licensure, or continuing education certificate.
- c. Reporting information, such as satisfaction of continuing education, in a false manner, through overt deceit, or with reckless disregard for the truth or accuracy of the information asserted.
- d. Otherwise participating in any form of fraud or misrepresentation by act or omission.

9.3(2) Professional incompetence. Professional incompetence includes, but is not limited to:

- a. A substantial lack of knowledge or ability to discharge professional obligations within the practice of engineering or land surveying.
- b. A substantial deviation from the standards of learning or skill ordinarily possessed and applied by other practitioners in the state of Iowa acting in the same or similar circumstances.
- c. A failure to exercise the degree of care which is ordinarily exercised by the average practitioner acting in the same or similar circumstances.
- d. Failure to conform to the minimum standards of acceptable and prevailing practice of engineering or land surveying in this state, including the land surveying

standards set forth in Iowa Code chapters 354 and 355 and 193C—Chapters 11 and 12.

e. Engaging in engineering or land surveying practices which are outside the technical competence of the licensee without taking reasonable steps to associate with a competent licensee or other steps to ensure competent practice.

f. Any other act or omission that demonstrates an inability to safely practice in a manner protective of the public's interest, including acts or omissions described in 193C—8.3(542B).

9.3(3) Deceptive practices. Deceptive practices are grounds for discipline, whether or not actual injury is established, and include, but are not limited to, the following:

a. Knowingly making misleading, deceptive, untrue or fraudulent representations in the practice of engineering or land surveying.

b. Use of untruthful or improbable statements in advertisements. Use of untruthful or improbable statements in advertisements includes, but is not limited to, an action by a licensee in making information or intention known to the public which is false, deceptive, misleading or promoted through fraud or misrepresentation.

c. Acceptance of any fee by fraud or misrepresentation.

d. Falsification of business or client records.

e. Submission of false or misleading reports or information to the board including information supplied in an audit of continuing education or as a condition of probation, or in a reference submitted for an examination or a license applicant or in any reports identified in this rule or 193C—8.3(542B).

f. Knowingly presenting as one's own the license, signature, or seal of another or of a fictitious licensee, or otherwise falsely impersonating a person holding an engineering or land surveying license.

g. Representing oneself as a professional engineer or professional land surveyor after the license has been suspended, revoked, surrendered, or placed on inactive status or has lapsed.

h. Fraud in representations as to skill or ability.

i. Any violation of Iowa Code section 542B.16 or associated rules in 193C—Chapter 6 involving a licensee's seal or certificate.

9.3(4) Unethical, harmful or detrimental conduct. Licensees engaging in unethical conduct or practices harmful or detrimental to the public may be disciplined whether or not injury is established. Behaviors and conduct which are unethical or harmful or detrimental to the public include, but are not limited to, the following actions:

- a. A violation of the code of professional conduct in 193C—Chapter 8.
- b. Verbal or physical abuse, or improper sexual contact, if such behavior occurs within the practice of engineering or land surveying or if such behavior otherwise provides a reasonable basis for the board to conclude that such behavior could occur within such practice and, if so, would place the public at risk.
- c. Aiding or abetting a violation of a provision of Iowa Code section 542B.27(1).

9.3(5) Lack of proper qualifications. Lack of proper qualifications includes, but is not limited to:

- a. Continuing to practice as an engineer or land surveyor without satisfying the continuing education required for license renewal.
- b. Habitual use of or addiction to alcohol or other drugs, or other impairment, which adversely affects the licensee's ability to practice in a safe and competent manner.
- c. As provided in Iowa Code section 272C.3(2)"b," any act, conduct, or condition, including lack of education or experience, or a pattern of careless or intentional acts or omissions that demonstrate a lack of qualifications which are necessary to ensure a high standard of professional care or that impair a practitioner's ability to safely and skillfully practice the profession.

9.3(6) Professional misconduct. Professional misconduct includes, but is not limited to, revocation, suspension, or other disciplinary action taken against a licensee by a licensing authority of this state or another state, territory, or country. "Disciplinary action" includes a voluntary surrender of a license to resolve a pending disciplinary investigation or proceeding. A stay by an appellate court shall not negate this requirement; however, if such disciplinary action is overturned or reversed by a court of last resort, discipline by the board based solely on such action shall be vacated. A licensee shall notify the board of such disciplinary action within 30 days of the disciplinary action.

9.3(7) Willful or repeated violations. Willful or repeated violations include the willful or repeated violation or disregard of any provision of Iowa Code chapter 272C or 542 or

any administrative rule adopted by the board in the administration or enforcement of such chapters.

9.3(8) Conviction of felony. Conviction of felony includes the conviction of a felony under the laws of the United States, of any state or possession of the United States, or of any other country. If such conviction is overturned or reversed by a court of last resort, discipline by the board based solely on the conviction shall be vacated.

193C—9.4(542B) Disciplinary findings and sanctions.

The board's decision may include one or more of the following findings or sanctions:

1. Exoneration of respondent.
2. Revocation of license.
3. Suspension of license until further order of the board or for a specified period.
4. Nonrenewal of license.
5. Prohibition, until further order of the board or for a specific period, of engaging in specified procedures, methods or acts.
6. Probation.
7. Requirement of additional education or training.
8. Requirement of reexamination.
9. Issuance of a reprimand.
10. Imposition of civil penalties.
11. Issuance of citation and warning.
12. Desk review.
13. Other sanctions allowed by law as may be appropriate.

193C—9.5(272C) Civil penalties.

In addition to other disciplinary options, the board may assess civil penalties of up to \$1000 per violation against licensees who violate any provision of rule 193C—9.3(17A,272C,542B,546). Factors the board may consider when determining whether and in what amount to assess civil penalties include:

1. Whether other forms of discipline are being imposed for the same violation.

2. Whether the amount imposed will be a substantial economic deterrent to the violation.
3. The circumstances leading to the violation.
4. The severity of the violation and the risk of harm to the public.
5. The economic benefits gained by the licensee as a result of the violation.
6. The interest of the public.
7. Evidence of reform or remedial action.
8. Time elapsed since the violation occurred.
9. Whether the violation is a repeat offense following a prior cautionary letter, disciplinary order, or other notice of the nature of the infraction.
10. The clarity of the issue involved.
11. Whether the violation was willful and intentional.
12. Whether the licensee acted in bad faith.
13. The extent to which the licensee cooperated with the board.
14. Whether the licensee practiced professional engineering or professional land surveying with a lapsed, inactive, suspended or revoked license.

This rule is intended to implement Iowa Code section 542B.22.

193C—9.6(542B) Publication of decisions.

In addition to publication requirements found at 193—subrule 7.30(3), the following notifications shall be issued:

1. Following suspension of a professional land surveyor's license, notification must be issued to the county recorders and county auditors of the county of residence and immediately adjacent counties in Iowa.
2. Following revocation of a professional land surveyor's license, notification must be mailed to all county auditors in Iowa and the county recorders in the county of residence and immediately adjacent counties in Iowa.
3. Following the suspension or revocation of the license of a professional engineer or professional land surveyor, notification must be issued to other boards of

examiners for engineers and land surveyors under the jurisdiction of the government of the United States. This notification may be made through the National Council of Examiners for Engineering and Surveying or other national organizations recognized by the board. In addition, if the licensee is known to be registered in another nation in North America, the appropriate board(s) shall be notified of the action.

193C—9.7(542B) Disputes between licensees and clients.

Reports from the insurance commissioner or other agencies on the results of judgments or settlements of disputes arising from malpractice claims or other actions between professional engineers or professional land surveyors and their clients may be referred to counsel or peer review committee. The counsel or peer review committee shall investigate the report for violation of the statutes or rules governing the practice or conduct of the licensee. The counsel or peer review committee shall advise the board of any probable violations, any further action required, or recommend dismissal from further consideration.

193C—9.8(272C,542) Confidentiality of complaint and investigative information.

9.8(1) General provisions. All complaint and investigative information received or created by the board is privileged and confidential pursuant to Iowa Code section 272C.6(4). Such information shall not be released to any person except as provided in that section.

9.8(2) Disclosure to the subject of the investigation.

- a. Legal authority. Pursuant to Iowa Code Supplement section 546.10(9) [2007 Iowa Acts, Senate File 360, section 7], the board may supply to a licensee who is the subject of a disciplinary complaint or investigation, prior to the initiation of a disciplinary proceeding, all or such parts of a disciplinary complaint, disciplinary or investigatory file, report, or other information, as the board in its sole discretion believes would aid the investigation or resolution of the matter.
- b. General rule. As a matter of general policy, the board shall not disclose confidential complaint and investigative information to a licensee except as permitted by Iowa Code section 272C.6(4). Disclosure of a complainant's identity in advance of the filing of formal disciplinary charges, for instance, may adversely affect a complainant's willingness to file a complaint with the board.
- c. Exceptions to general rule. The board may exercise its discretion to release information to a licensee that would otherwise be confidential under Iowa Code

section 272C.6(4) under narrow circumstances, including but not limited to the following:

- (1) Following a board determination that probable cause exists to file disciplinary charges against a licensee and prior to the issuance of the notice of hearing, the board may provide the licensee with a peer review or investigative report or expert opinions, as reasonably needed for the licensee to assess the merits of a settlement proposal.
- (2) The board may release to a licensee who is the subject of a board-initiated investigation, including those initiated following the board's receipt of an anonymous complaint, such records or information as may aid the investigation or resolution of the matter.
- (3) The board may release information from a peer review or consultant's report when soliciting the licensee's position will aid in making the probable cause determination and such disclosure can be made to the licensee without revealing identifying information regarding the complainant, peer reviewer or consultant.

CHAPTER 10 PEER REVIEW

193C—10.1(542B,272C) Peer review.

The board may appoint a peer reviewer, or multiple peer reviewers, for the investigation of a complaint about the acts or omissions of one or more licensees.

10.1(1) Peer review. Peer reviewers shall generally be licensed engineers or licensed land surveyors or both, as determined by the board, who are selected for their knowledge and experience in the type of engineering or land surveying involved in the complaint.

An individual shall be ineligible as a peer reviewer in accordance with the standard for disqualification found at 193—subrule 7.14(1). If a peer reviewer is unable to serve after an investigation has begun, the peer reviewer must notify the board office.

10.1(2) Authority. The peer reviewer's investigation may include activities such as interviewing the complainant, the respondent, individuals with knowledge of the alleged violation, and individuals with knowledge of the respondent's practice in the community; gathering documents; conducting site visits; and performing independent

analyses as deemed necessary. Although the board does not become involved in a complaint investigation, the board may give specific instructions to the peer reviewer regarding the scope of the investigation. In the course of the investigation, the peer reviewer shall refrain from advising the complainant or respondent on actions that the board might take.

10.1(3) Term of service. The peer reviewer serves at the pleasure of the board. The board may dismiss any peer reviewer or add new peer reviewers at any time.

10.1(4) Compensation. The terms of payment as authorized by the peer review agreement may vary based on the nature and complexity of each assignment. The peer reviewer shall be additionally entitled to reimbursement of expenses directly related to the peer review process, deposition or hearing preparation, or deposition or hearing testimony, such as mileage, meals, or out-of-pocket charges for securing copies of documents. Expenses will be reimbursed as allowed under the manuals and guidelines published by the Iowa department of administrative services, state accounting enterprise. The peer reviewer shall not hire legal counsel, investigators, secretarial help or any other assistance without written authorization from the board.

193C—10.2(542B,272C) Reports.

Each peer reviewer shall submit a written report to the board within 90 days of the peer review assignment, unless an extension is granted by the board.

10.2(1) Components of the report. The report shall include:

- a. A statement of the charge to the peer reviewer;
- b. A description of the actions taken by the peer reviewer in the peer reviewer's investigation, including but not limited to document review, interviews and site visits;
- c. A summary of the peer reviewer's findings, including (1) the peer reviewer's opinion as to whether a violation has occurred, (2) citation of the Iowa Code section(s) and Iowa Administrative Code rule(s) violated, and (3) the peer reviewer's opinion of the seriousness of the violation; and
- d. A recommendation.

In the case of a land surveyor peer reviewer report, the report must be plat-specific as to the violations.

10.2(2) Recommended action. The peer reviewer report shall recommend one of the following:

- a. Dismissal of the complaint,
- b. Further investigation, or
- c. Disciplinary proceedings.

If the peer reviewer recommends further investigation or disciplinary proceedings, supporting information must be submitted to the board, including citation of the specific Iowa Code section(s) and Iowa Administrative Code rule(s) violated.

10.2(3) Disciplinary recommendations. When recommending disciplinary proceedings, a peer reviewer shall refrain from suggesting a particular form of discipline, but may provide guidance on the severity of the violations that prompted the recommendation and may identify professional areas in which the licensee needs additional education, experience or monitoring in order to safely practice.

193C—10.3(542B,272C) Confidentiality.

The peer reviewer shall not discuss the peer reviewer's findings and conclusions with any party to the complaint. Peer reviewer findings including the name of the complainant shall be kept confidential at all times. The peer reviewer shall not reveal the peer reviewer's findings to anyone other than the board (through the peer reviewer's report to the board) or board staff. Peer reviewer findings shall be used only for the purposes of the board's possible disciplinary action and not for any other court case, lawsuit, or investigation. Peer reviewer reports are not subject to discovery.

193C—10.4(542B,272C) Testimony.

Peer reviewers may be required to testify in the event of formal disciplinary proceedings.

CHAPTER 11 MINIMUM STANDARDS FOR PROPERTY SURVEYS

193C—11.1(542B) Scope.

Each professional land surveyor shall comply with the minimum standards for property surveys described by statute or administrative rule. The minimum standards in this chapter shall apply to all property surveys performed in this state except those done for acquisition plats as described in Iowa Code chapter 354.

193C—11.2(542B) Definitions.

For the purposes of these rules, the following definitions shall apply:

“Plat” means both a plat of survey and a subdivision plat as those terms are defined in Iowa Code section 355.1.

“Property survey” means any land survey performed for the purpose of describing, monumenting, retracing and establishing boundary lines, dividing, subdividing, or platting one or more parcels of land.

“Retrace” means following along a previously established line to logical termini.

193C—11.3(542B) Boundary location.

Every property survey shall be made in accordance with the legal description (record title) boundaries as nearly as is practicable. The surveyor shall acquire data necessary to retrace record title boundaries, centerlines, and other boundary line locations. The surveyor shall analyze the data and make a careful determination of the position of the boundaries of the parcel being surveyed. The surveyor shall make a field survey, locating and connecting monuments necessary for location of the parcel, and coordinate the facts of such survey with the analysis. The surveyor shall set monuments marking the corners of such parcel unless monuments already exist at such corners.

193C—11.4(542B) Descriptions.

Descriptions defining land boundaries written for conveyance or other purposes shall be complete, providing definite and unequivocal identification of lines or boundaries. The description must contain dimensions sufficient to enable the description to be platted and retraced and shall describe the land surveyed either by government lot or by quarter-quarter section or by quarter section and shall identify the section, township, range and county; and by metes and bounds commencing with a corner monumented and established in the U.S. Public Land Survey System; or if such land is located in a recorded subdivision or recorded addition thereto, then by the number or other description of the lot, block or subdivision thereof which has been previously tied to a corner monumented and established by the U.S. Public Land Survey System. If the parcel is described by metes and bounds, it may be referenced to known lot or block corners in recorded subdivision or additions.

193C—11.5(542B) Plats.

A plat shall be drawn for every property survey performed showing information developed by the survey and including the following elements:

11.5(1) The plat shall be drawn to a convenient scale which shall be clearly stated and graphically illustrated by a bar scale on every plat sheet.

11.5(2) The plat shall show the length and bearing of the boundaries of the parcels surveyed. Where the boundary lines show bearing, lengths or locations which vary from those recorded in deeds, abutting plats or other instruments, the following note shall be placed along such lines: "recorded as (show recorded bearing, length or location)."

11.5(3) The plat shall show and identify all monuments necessary for the location of the parcel and shall indicate whether such monuments were found or placed and shall include an accurate description of each monument consisting of size, shape, material type, capped with license number, and color as applicable.

11.5(4) The plat shall be captioned to identify the person for whom the survey was made and the date of the survey and shall describe the parcel as provided in rule 193C—11.4(542B) above.

11.5(5) The plat shall show that record title boundaries, centerlines, and other boundary lines were retraced to monuments found or placed by the surveyor.

11.5(6) The plat shall show that the survey is tied to a physically monumented land line which is identified by two U.S. Public Land Survey System corners or by two physically monumented corners of a recorded subdivision. The plat shall show a distance relationship measured by the surveyor between the two corners on the physically monumented land line. The physically monumented land line shall be germane to the survey of the lot, parcel, or tract.

11.5(7) The plat shall bear the signature of the professional land surveyor, a statement certifying that the work was performed by the surveyor or under the surveyor's direct personal supervision, the date of signature, and the surveyor's Iowa license number and legible seal as provided in rule 193C—6.1(542B). 11.5(8) The surveyor shall record every plat and description with the county recorder no later than

30 days after signature on the plat by the surveyor. The 30-day requirement shall not apply to subdivision plats.

193C—11.6(542B) Measurements.

11.6(1) Measurements shall be made with instruments and methods capable of attaining the required accuracy for the particular problem involved.

11.6(2) Measurements as placed on the plat shall be in conformance with the capabilities of the instruments used.

11.6(3) The unadjusted closure for all closed traverse surveys shall be not greater than 1 in 5,000 and, for subdivision boundaries, 1 in 10,000.

11.6(4) In a closed traverse, the sum of the measured angles shall agree with the theoretical sum by a difference not greater than 30 seconds times the square root of the number of angles.

11.6(5) The unadjusted error of field measurements shall not be greater than 1 in 5,000.

11.6(6) The relative positional tolerance at the 95 percent confidence level shall be as follows:

- a. For subdivision boundaries: $\pm(0.13 \text{ feet} + 1:10,000)$
- b. For all other land surveying: $\pm(0.26 \text{ feet} + 1:5,000)$

11.6(7) Bearings or angles on any property survey plat shall be shown to the nearest one minute; distance shall be shown to the nearest one-tenth foot.

193C—11.7(542B) Monuments.

Permanent monuments shall be constructed of reasonably permanent material solidly embedded in the ground and capable of being detected by commonly used magnetic or electronic equipment. The licensed professional land surveyor shall affix to the top of each monument set by the surveyor a cap of reasonably inert material bearing an embossed or stencil-cut marking of the Iowa license number of the licensed professional land surveyor. Monuments or marks placed in pavements need not be capped. See rule 193C—11.3(542B).

CHAPTER 12 MINIMUM STANDARDS FOR U.S. PUBLIC LAND SURVEY CORNER CERTIFICATES

193C—12.1(542B) General statement.

Each professional land surveyor shall comply with the minimum standards for preparing a U.S. Public Land Survey Corner Certificate as described by statute or administrative rule. The minimum standards in this chapter shall apply to every corner certificate prepared in this state.

193C—12.2(355) U.S. Public Land Survey Corner Certificate.

12.2(1) A corner is considered a part of the U.S. Public Land Survey System if it has the status of a corner of a:

- a. Quarter-quarter section or larger aliquot part of a section.
- b. Fractional quarter-quarter section or larger fractional part of a section.
- c. Government lot.

12.2(2) A U.S. Public Land Survey Corner Certificate shall be prepared by the surveyor as part of any land surveying which includes the use of a U.S. Public Land Survey System corner if one or more of the following conditions exist:

- a. There is no certificate for the corner monument on file with the recorder of the county in which the corner is located.
- b. The surveyor in responsible charge of the land surveying accepts a corner position which differs from that shown in the public records of the county in which the corner is located.
- c. The corner monument is replaced or modified in any way.
- d. The reference ties in an existing public record are incorrect or missing.

12.2(3) A U.S. Public Land Survey Corner Certificate shall comply with the following requirements:

- a. The identity of the corner monument, with reference to the U.S. Public Land Survey System, shall be clearly indicated.
- b. The certificate shall contain a narrative explaining:
 - (1) The reason for preparing the certificate.
 - (2) The evidence and detailed procedure used in establishing or confirming the corner position whether found or placed.
 - (3) The monumentation found or placed perpetuating the corner position with an accurate description of each monument including but not limited to size, shape, material type, capped with license number, and color.
 - (4) The extent of the search for an existing monument when the corner is reset as obliterated or lost.

- c. The certificate shall contain a plan-view drawing depicting:
 - (1) Relevant monuments including the reference monumentation and an accurate description thereof.
 - (2) Physical surroundings including highway and street centerlines, fences, structures and other artificial or natural objects as applicable that would facilitate recovery of the corner.
 - (3) Reference ties in sufficient detail to enable recovery of the corner. There shall be at least three reference ties from the corner to durable physical objects near the corner which are located so that the intersection of any two of the ties will yield a strong corner position recovery. All ties shall be measured to one-hundredth of a foot.
- d. The certificate shall bear the signature of the professional land surveyor, a statement certifying that the work was performed by the surveyor or under the surveyor's direct personal supervision, the date of signature, and the surveyor's Iowa license number and legible seal as provided in rule 193C—6.1(542B).

12.2(4) The surveyor shall record the required U.S. Public Land Survey Corner Certificate and forward a copy to the county engineer of the county in which the corner is located within 30 days after completion of the surveying.

CHAPTER 13 CIVIL PENALTIES FOR UNLICENSED PRACTICE

193C—13.1(542B) General statement.

The board may impose civil penalties by order against a person who is not licensed as an engineer or land surveyor pursuant to Iowa Code chapter 542B based on the unlawful practices specified in Iowa Code section 542B.27. In addition to the procedures set forth in Iowa Code section 542B.27, this rule shall apply.

13.1(1) The notice of the board's intent to impose a civil penalty required by Iowa Code section 542B.27 shall be served upon the nonlicensee by restricted certified mail, return receipt requested, or personal service in accordance with Rule of Civil Procedure 56.1. Alternatively, the nonlicensee may accept service personally or through authorized counsel. The notice shall include the following:

- a. A statement of the legal authority and jurisdiction under which the proposed civil penalty would be imposed.

- b. A reference to the particular sections of the statutes and rules involved.
- c. A short and plain statement of the alleged unlawful practice.
- d. The dollar amount of the proposed civil penalty.
- e. Notice of the nonlicensee's right to a hearing and the time frame in which hearing must be requested.
- f. The address to which written request for hearing must be made.

13.1(2) Nonlicensees must request a hearing within 30 days of the date the notice is mailed if served through restricted certified mail to the last-known address or within 30 days of the date of service if service is accepted or made in accordance with Rule of Civil Procedure 56.1. A request for hearing must be in writing and is deemed made on the date of the United States Postal Service postmark or the date of personal service.

13.1(3) If a request for hearing is not timely made, the board chair or the chair's designee may issue an order imposing the civil penalty described in the notice. The order may be mailed by regular first-class mail or served in the same manner as the notice of intent to impose civil penalty.

13.1(4) If a request for hearing is timely made, the board shall issue a notice of hearing and conduct a hearing in the same manner as applicable to a disciplinary case against a licensed engineer or land surveyor.

13.1(5) In addition to the factors set forth in Iowa Code section 542B.27, the board may consider the following when determining the amount of civil penalty to impose, if any:

- a. The time elapsed since the unlawful practice occurred.
- b. Evidence of reform or remedial actions.
- c. Whether the violation is a repeat offense following a prior warning letter or other notice of the nature of the infraction.
- d. Whether the violation involved an element of deception.
- e. Whether the unlawful practice violated a prior order of the board, court order, cease and desist agreement, consent order, or similar document.
- f. The clarity of the issue involved.
- g. Whether the violation was willful and intentional.

- h. Whether the nonlicensee acted in bad faith.
- i. The extent to which the nonlicensee cooperated with the board.

13.1(6) A nonlicensee may waive the right to a hearing and all attendant rights and enter into a consent order imposing a civil penalty at any stage of the proceeding upon mutual consent of the board. 13.1(7) The notice of intent to impose civil penalty and order imposing civil penalty are public records available for inspection and copying in accordance with Iowa Code chapter 22. Copies may be provided to the media, the National Council of Examiners for Engineering and Surveying, and other entities. Hearings shall be open to the public.

CODE OF ETHICS

Preamble

Engineering is an important and learned profession. As members of this profession, engineers are expected to exhibit the highest standards of honesty and integrity. Engineering has a direct and vital impact on the quality of life for all people. Accordingly, the services provided by engineers require honesty, impartiality, fairness, and equity, and must be dedicated to the protection of the public health, safety, and welfare. Engineers must perform under a standard of professional behavior that requires adherence to the highest principles of ethical conduct.

I. Fundamental Canons

Engineers, in the fulfillment of their professional duties, shall:

- 1) Hold paramount the safety, health, and welfare of the public.
- 2) Perform services only in areas of their competence.
- 3) Issue public statements only in an objective and truthful manner.
- 4) Act for each employer or client as faithful agents or trustees.
- 5) Avoid deceptive acts.
- 6) Conduct themselves honorably, responsibly, ethically, and lawfully so as to enhance the honor, reputation, and usefulness of the profession.

II. Rules of Practice

1. Engineers shall hold paramount the safety, health, and welfare of the public.
 - 1) If engineers' judgment is overruled under circumstances that endanger life or property, they shall notify their employer or client and such other authority as may be appropriate.
 - 2) Engineers shall approve only those engineering documents that are in conformity with applicable standards.
 - 3) Engineers shall not reveal facts, data, or information without the prior consent of the client or employer except as authorized or required by law or this Code.

- 4) Engineers shall not permit the use of their name or associate in business ventures with any person or firm that they believe is engaged in fraudulent or dishonest enterprise.
 - 5) Engineers shall not aid or abet the unlawful practice of engineering by a person or firm.
 - 6) Engineers having knowledge of any alleged violation of this Code shall report thereon to appropriate professional bodies and, when relevant, also to public authorities, and cooperate with the proper authorities in furnishing such information or assistance as may be required.
2. Engineers shall perform services only in the areas of their competence.
 - 1) Engineers shall undertake assignments only when qualified by education or experience in the specific technical fields involved.
 - 2) Engineers shall not affix their signatures to any plans or documents dealing with subject matter in which they lack competence, nor to any plan or document not prepared under their direction and control.
 - 3) Engineers may accept assignments and assume responsibility for coordination of an entire project and sign and seal the engineering documents for the entire project, provided that each technical segment is signed and sealed only by the qualified engineers who prepared the segment.
 3. Engineers shall issue public statements only in an objective and truthful manner.
 - 1) Engineers shall be objective and truthful in professional reports, statements, or testimony. They shall include all relevant and pertinent information in such reports, statements, or testimony, which should bear the date indicating when it was current.
 - 2) Engineers may express publicly technical opinions that are founded upon knowledge of the facts and competence in the subject matter.
 - 3) Engineers shall issue no statements, criticisms, or arguments on technical matters that are inspired or paid for by interested parties, unless they have prefaced their comments by explicitly identifying the interested parties on whose behalf they are speaking, and by revealing the existence of any interest the engineers may have in the matters.
 4. Engineers shall act for each employer or client as faithful agents or trustees.

- 1) Engineers shall disclose all known or potential conflicts of interest that could influence or appear to influence their judgment or the quality of their services.
 - 2) Engineers shall not accept compensation, financial or otherwise, from more than one party for services on the same project, or for services pertaining to the same project, unless the circumstances are fully disclosed and agreed to by all interested parties.
 - 3) Engineers shall not solicit or accept financial or other valuable consideration, directly or indirectly, from outside agents in connection with the work for which they are responsible.
 - 4) Engineers in public service as members, advisors, or employees of a governmental or quasi-governmental body or department shall not participate in decisions with respect to services solicited or provided by them or their organizations in private or public engineering practice.
 - 5) Engineers shall not solicit or accept a contract from a governmental body on which a principal or officer of their organization serves as a member.
5. Engineers shall avoid deceptive acts.
- 1) Engineers shall not falsify their qualifications or permit misrepresentation of their or their associates' qualifications. They shall not misrepresent or exaggerate their responsibility in or for the subject matter of prior assignments. Brochures or other presentations incident to the solicitation of employment shall not misrepresent pertinent facts concerning employers, employees, associates, joint venturers, or past accomplishments.
 - 2) Engineers shall not offer, give, solicit, or receive, either directly or indirectly, any contribution to influence the award of a contract by public authority, or which may be reasonably construed by the public as having the effect or intent of influencing the awarding of a contract. They shall not offer any gift or other valuable consideration in order to secure work. They shall not pay a commission, percentage, or brokerage fee in order to secure work, except to a bona fide employee or bona fide established commercial or marketing agencies retained by them.

III. Professional Obligations

1. Engineers shall be guided in all their relations by the highest standards of honesty and integrity.
 - 1) Engineers shall acknowledge their errors and shall not distort or alter the facts.
 - 2) Engineers shall advise their clients or employers when they believe a project will not be successful.
 - 3) Engineers shall not accept outside employment to the detriment of their regular work or interest. Before accepting any outside engineering employment, they will notify their employers.
 - 4) Engineers shall not attempt to attract an engineer from another employer by false or misleading pretenses.
 - 5) Engineers shall not promote their own interest at the expense of the dignity and integrity of the profession.
2. Engineers shall at all times strive to serve the public interest.
 - 1) Engineers are encouraged to participate in civic affairs; career guidance for youths; and work for the advancement of the safety, health, and well-being of their community.
 - 2) Engineers shall not complete, sign, or seal plans and/or specifications that are not in conformity with applicable engineering standards. If the client or employer insists on such unprofessional conduct, they shall notify the proper authorities and withdraw from further service on the project.
 - 3) Engineers are encouraged to extend public knowledge and appreciation of engineering and its achievements.
 - 4) Engineers are encouraged to adhere to the principles of sustainable development¹ in order to protect the environment for future generations.
3. Engineers shall avoid all conduct or practice that deceives the public.
 - 1) Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact.
 - 2) Consistent with the foregoing, engineers may advertise for recruitment of personnel.
 - 3) Consistent with the foregoing, engineers may prepare articles for the lay or technical press, but such articles shall not imply credit to the author for work performed by others.

4. Engineers shall not disclose, without consent, confidential information concerning the business affairs or technical processes of any present or former client or employer, or public body on which they serve.

1) Engineers shall not, without the consent of all interested parties, promote or arrange for new employment or practice in connection with a specific project for which the engineer has gained particular and specialized knowledge.

2) Engineers shall not, without the consent of all interested parties, participate in or represent an adversary interest in connection with a specific project or proceeding in which the engineer has gained particular specialized knowledge on behalf of a former client or employer.

5. Engineers shall not be influenced in their professional duties by conflicting interests.

1) Engineers shall not accept financial or other considerations, including free engineering designs, from material or equipment suppliers for specifying their product.

2) Engineers shall not accept commissions or allowances, directly or indirectly, from contractors or other parties dealing with clients or employers of the engineer in connection with work for which the engineer is responsible.

6. Engineers shall not attempt to obtain employment or advancement or professional engagements by untruthfully criticizing other engineers, or by other improper or questionable methods.

1) Engineers shall not request, propose, or accept a commission on a contingent basis under circumstances in which their judgment may be compromised.

2) Engineers in salaried positions shall accept part-time engineering work only to the extent consistent with policies of the employer and in accordance with ethical considerations.

3) Engineers shall not, without consent, use equipment, supplies, laboratory, or office facilities of an employer to carry on outside private practice.

7. Engineers shall not attempt to injure, maliciously or falsely, directly or indirectly, the professional reputation, prospects, practice, or employment of other engineers. Engineers who believe others are guilty of unethical or illegal practice shall present such information to the proper authority for action.

- 1) Engineers in private practice shall not review the work of another engineer for the same client, except with the knowledge of such engineer, or unless the connection of such engineer with the work has been terminated.
 - 2) Engineers in governmental, industrial, or educational employ are entitled to review and evaluate the work of other engineers when so required by their employment duties.
 - 3) Engineers in sales or industrial employ are entitled to make engineering comparisons of represented products with products of other suppliers.
8. Engineers shall accept personal responsibility for their professional activities, provided, however, that engineers may seek indemnification for services arising out of their practice for other than gross negligence, where the engineer's interests cannot otherwise be protected.
- 1) Engineers shall conform with state registration laws in the practice of engineering.
 - 2) Engineers shall not use association with a nonengineer, a corporation, or partnership as a "cloak" for unethical acts.
9. Engineers shall give credit for engineering work to those to whom credit is due, and will recognize the proprietary interests of others.
- 1) Engineers shall, whenever possible, name the person or persons who may be individually responsible for designs, inventions, writings, or other accomplishments.
 - 2) Engineers using designs supplied by a client recognize that the designs remain the property of the client and may not be duplicated by the engineer for others without express permission.
 - 3) Engineers, before undertaking work for others in connection with which the engineer may make improvements, plans, designs, inventions, or other records that may justify copyrights or patents, should enter into a positive agreement regarding ownership.
 - 4) Engineers' designs, data, records, and notes referring exclusively to an employer's work are the employer's property. The employer should indemnify the engineer for use of the information for any purpose other than the original purpose.
 - 5) Engineers shall continue their professional development throughout their careers and should keep current in their specialty fields by engaging in professional practice, participating in continuing education courses,

reading in the technical literature, and attending professional meetings and seminars.

ENGINEERING ETHICS CASE REVIEWS

Case 1: Incomplete Plans and Specifications – Engineer, Government, and Contractor Responsibilities

Facts:

Engineer A responds to an RFP from a small local public agency to build a new dam to be financed in part by a federal grant. Engineer A's firm's impressive brochure and personal interview results in the award of a contract for the design, drawings, and specifications.

The signed and sealed drawings and specifications are ultimately approved by Engineer B of the engineering staff of the federal agency funding the project, and the project is thereafter duly advertised for bids and a contract is awarded to the low bidder, Hi-Lo Construction. The local public agency does not have the in-house technical resources to review the drawings and specifications.

At the pre-construction conference, it is pointed out by Engineer C, owner of Hi-Lo Construction, that much of the design detail is lacking in the drawings and specifications and that Hi-Lo Construction declares that certain parts of the project are "unbuildable" without major changes. Engineer A generally agrees with Hi-Lo's characterization, but in his defense responds that he felt pressured to deliver the drawings and specifications on a specified date, but did not inform anyone as to their incompleteness. While much of the information was missing from the drawings and specifications, Engineer A was confident that sufficient federal funds (and not local funding) would cover any potential increased costs.

References:

Section I.1. - Code of Ethics: Engineers, in the fulfillment of their professional duties, shall hold paramount the safety, health and welfare of the public.

Section II.3.a. - Code of Ethics: Engineers shall be objective and truthful in professional reports, statements or testimony. They shall include all relevant and pertinent information in such reports, statements or testimony, which should bear the date indicating when it was current.

Section II.5. - Code of Ethics: Engineers shall avoid deceptive acts.

Section III.1.b. - Code of Ethics: Engineers shall advise their clients or employers when they believe a project will not be successful.

Section III.2.b. - Code of Ethics: Engineers shall not complete, sign or seal plans and/or specifications that are not in conformity with applicable engineering standards. If the client or employer insists on such unprofessional conduct, they shall notify the proper authorities and withdraw from further service on the project.

Discussion:

The Board has considered cases involving similar situations in the past. In BER Case No. 82-5, where an engineer employed by a large defense industry firm documented and reported to his employer excessive costs and time delays by sub-contractors, the Board ruled that the engineer did not have an ethical obligation to continue his efforts to secure a change in the policy after his employer rejected his reports or to report his concerns to proper authority, but has an ethical right to do so as a matter of personal conscience. The Board noted that the case did not involve a danger to the public health or safety, but related to a claim of unsatisfactory plans and the unjustified expenditure of public funds. The Board indicated that it could dismiss the case on the narrow ground that the NSPE Code does not apply to a claim not involving public health and safety, but that was too narrow a reading of the ethical duties of engineers engaged in such activities. The Board also stated that if an engineer feels strongly that an employer's course of conduct is improper when related to public concerns, and if the engineer feels compelled to blow the whistle to expose facts as he sees them, he may well have to pay the price of loss of employment. In this type of situation, the Board felt that the ethical duty or right of the engineer becomes a matter of personal conscience, but the Board was unwilling to make a blanket statement that there is an ethical duty in these kinds of situations for the engineer to continue the campaign within the company and make the issue one for public discussion.

As in Case No. 82-5, the issue does not allege a danger to public health or safety, but is premised upon a claim of unsatisfactory plans and the unjustified expenditure of public funds. In Case No. 82-5, the Board found that, while the Code did not require disclosure, the engineer did have an ethical right to pursue the matter further, even to the point of public disclosure. Unlike Case No. 82-5, this case does not involve a conflict with the ethical requirement of confidentiality, but concerns the affirmative responsibility of engineers to complete plans in conformity with applicable engineering standards and avoid deceptive acts.

While the Board certainly hopes that the facts involved in this case are very unique and do not represent more than a small fraction of public design and construction projects in the United States, it appears that the facts as presented in this case are, unfortunately, not as unique as one might hope.

It is clear that Engineer A had an obligation to provide a complete set of design drawings and specifications on the project in which Engineer A was engaged. Unlike what is required on some projects (e.g., design/build or construction contracts with specific design delegation clauses or provisions) where the engineer is expected to only design a certain percentage of the project prior to the selection of the contractor, here, Engineer A was fully required to provide the complete design on the project. Engineer A's bold assertion that the work was incomplete, but that this was due to time pressures and his expectation that Federal funds would be awarded to complete the work is wholly unconvincing. Engineer A was selected for his expertise, which presumably included Engineer A's ability to fully perform the work based on project time parameters.

Engineer A's comment about Federal funds borders on fraud and misrepresentation and is a clear violation of the NSPE Code.

Engineer B's approval of Engineer A's incomplete plans is troubling, although we do not know all of the facts and circumstances relating to the decision to approve. Engineers have an obligation to perform services within their area of competence. If Engineer B was not able to perform the necessary reviews of Engineer A's work, Engineer B should have provided this information to a supervisor who would have assigned an appropriate engineer to perform the review. Not possessing adequate competency to perform a task is not in and of itself a violation of the NSPE Code, but the failure to recognize the lack of competency and take appropriate action to address the situation is a violation of the NSPE Code.

Finally, the Board believes that Engineer C's actions in bidding on an "unbuildable" contract is also very troubling. Presumably, Engineer C had an opportunity to review the bidding documents which included appropriate engineering drawings, plans, and specifications. From such a review, Engineer C should have had a sense of what would be necessary to complete the project. If the engineering documents were incomplete or inadequate, then Engineer C's bid should have reflected that fact and contained appropriate bid items for additional services required to complete the work for the benefit of the owner. In addition, Engineer C could have requested further clarification from the owner or Engineer A in order to better understand the engineering drawings.

As an engineer and a contractor presumably, Engineer C had the necessary background and experience to carefully evaluate the engineering drawings as well as other aspects of the work in order to make an informed decision as to whether to bid on the project. Engineer C had no one to fault but himself for the problems Engineer C encountered in attempting to build the project. Engineer C submitted the low bid on the project, presumably knowing inadequacies of the documents as well as the obvious risks involved.

Case 2: Incomplete Plans and Specifications

Use of P.E. Designation Not Licensed In State in Which Complaint Is Filed

Facts:

Engineer A is a safety engineer for a federal agency. He is responsible for independently overseeing the proper implementation of worker and nuclear safety programs in the agency's facilities, which are located in many different states, including the state in which Engineer A is licensed, State Y. Engineer A is not required to be licensed by the federal agency, but has become licensed because of his personal commitment to the engineering profession.

Engineer A has never used his seal in the course of his employment. When Engineer A moves to State Z, he does not obtain an engineering license in State Z. Engineer A reads a newspaper account about LMN Engineering, a subcontractor to the federal agency in which he works, having a conflict of interest with the agency. Engineer A, acting on his ethical obligation to report violations of the NSPE Code of Ethics to a public authority, files a complaint against LMN Engineering. In the text of the complaint, Engineer A indicates that he is licensed in State Y but not licensed in State Z and signs the letter "Engineer A, P.E."

Engineer A is thereafter notified by the State Z engineering licensure board that his use of the title "P.E." in the letter is inappropriate because he is not licensed in State Z.

References:

Section II.1. - Code of Ethics: Engineers shall hold paramount the safety, health, and welfare of the public.

Section II.1.e. - Code of Ethics: Engineers having knowledge of any alleged violation of this Code shall report thereon to appropriate professional bodies and, when relevant, also to public authorities, and

cooperate with the proper authorities in furnishing such information or assistance as may be required.

Section II.3. - Code of Ethics: Engineers shall issue public statements only in an objective and truthful manner.

Section II.3.b. - Code of Ethics: Engineers may express publicly technical opinions that are founded upon knowledge of the facts and competence in the subject matter.

Section III.3.a. -Code of Ethics: Engineers shall avoid the use of statements containing a material mis-representation of fact or omitting a material fact.

Discussion:

The use of appropriate engineering titles has long been an important issue within the engineering profession. Misuse of engineering titles has the effect of misleading and deceiving the general public, as well as diminishing the image and stature of qualified engineering professionals. In recent years, efforts have been undertaken to educate individuals and companies about the inappropriate use of engineering titles or references by many engineering organizations and state engineering licensure boards. State engineering licensure boards have also increasingly taken a stricter position on the use of the reference, "P.E.," by licensed engineers not licensed in the state in which the reference is being used. In fact, some states have developed guidelines on appropriate use of the "P.E." reference.

The NSPE Board of Ethical Review has had recent occasion to consider the use of appropriate engineering titles. For example, the Board has had three occasions to consider cases involving alleged misrepresentation of credentials or status. BER Case No. 90-4 involved the question of whether it was ethical for Engineer Z, a principal in an engineering firm, to continue to represent Engineer X as an employee of his Firm. Engineer X had been employed by Firm Y, a medium-sized engineering consulting firm controlled by Engineer Z. Engineer X was one of a few engineers in Firm Y with expertise in hydrology, but the firm's work in the field of hydrology did not constitute a significant percentage of its work. Engineer X, an associate with the firm, gave two weeks notice of her intent to move to another firm. Thereafter, Engineer Z continued to distribute a brochure identifying Engineer X as an employee of Firm Y and list Engineer X on the firm's resume.

In concluding that Engineer Z's actions were not unethical, the Board noted that under the facts of the case, there was no suggestion that any of the brochures or other

promotional material describe Engineer X as a “key employee” in the firm. Nor was there any effort or attempt on the part of Firm Y to highlight the activities or achievements of Engineer X in the field of hydrology. While the facts reveal that Engineer X was one of the few engineers in the firm with expertise in the field of hydrology, Engineer X was not the only engineer in the firm who possessed such expertise. In addition, it appeared that this area of practice did not constitute a significant portion of the services provided by Firm Y. Therefore, the Board concluded that the inclusion of Engineer X’s name in the firm’s brochure and resume did not constitute a misrepresentation of “pertinent facts.”

Importantly, however, in BER Case No. 90-4, the Board went on to note that “We must make clear that we are not condoning the failure of an engineering firm to correct material (brochures, resumes, etc.) which might have the unintentional effect of misleading clients, potential clients, and others. While we recognize the realities of firm practice and the logistical problems involved in marketing and promotion, we do believe it is important for firms to take actions to expeditiously correct any false impressions which might exist.” The Board continued by noting that “we believe engineering firms that use printed material as part of their marketing efforts should take reasonable steps

to assure that such written matter is as accurate and up-to-date as possible. In the case of marketing brochures and other similar materials, errata sheets, cover letters, strike-outs and, if necessary, reprints should be employed within a reasonable period of time to correct inaccuracies, particularly where a firm has reason to believe that a misunderstanding might occur. Firms that fail to take such measures run the risk of breaching ethical behavior.”

Later, in BER Case No. 91-9, the Board considered a case involving Engineer A, who misrepresented his educational credentials. In carefully considering earlier BER opinions, the Board again noted that the issue of falsification or misrepresentation of academic or professional qualifications is a core ethical issue because it goes to the heart of engineering ethics—the protection of the public health and safety through the establishment of rules of conduct that help to assure that the public receives the highest quality engineering services possible.

The Board has noted its deep concern over situations and circumstances in which an individual expressly or implicitly falsifies or misrepresents academic or professional qualifications to employers, clients, or members of the public.

More recently, in BER Case No. 97-8, Engineer A was licensed as a professional engineer in State B, the state in which Engineer A resided. Engineer A was about to retire from his full-time employment with ENG Co. As part of this transition and because

Engineer A would no longer be engaged in the practice of engineering under his state's law, Engineer A planned to discontinue his professional engineering license, which was paid for by his former employer. Engineer A planned to continue serving on several local governmental boards. Because of his association with and the pride he had for engineering, Engineer A wanted to continue to use the P.E. designation after his name on his board business card and on the board's letterhead. Engineer A took pride in his longstanding status as a professional engineer and believed he would be giving professional engineering added recognition by including the reference on the letterhead, which included other individuals such as attorneys and architects. State B did not have a provision in its law addressing the issue of "inactive status." In reviewing this issue, the Board noted that at first blush, the facts appeared to present a set of circumstances that would dictate an obvious result. It would appear on its face that an individual who has a close affinity with the engineering profession during his or her lifetime should be permitted to continue to use the P.E. designation after retirement. Once earned, it would seem unjust to deny one the right to call oneself a professional engineer (P.E.), particularly where the individual is seeking to enhance the recognition of professional engineers and professional engineering.

However, upon further examination, the Board deemed the issue to be more complex than first thought and raised the question of misrepresentation of credentials or status. The facts in BER Case No. 97-8 were quite different in degree than those involved in the earlier cases reviewed, and the Board noted that the facts did involve a degree, albeit slight, of misrepresentation. While it was true that Engineer A had demonstrated the necessary qualifications to be licensed as a professional engineer, Engineer A made a conscious and intentional decision to cease maintaining his status as a professional engineer in his state. While the Board recognized and appreciated Engineer A's desire to enhance the status and image of all professional engineers by indicating his professional status, they believed it was important that this status be represented in a manner that is above reproach, particularly because of the very public nature of Engineer A's position on several local governmental boards. The Board concluded that at a minimum, Engineer A should have indicated his inactive or retired status next to the P.E. designation. To do otherwise would create a misleading impression that Engineer A was currently licensed under state law in the jurisdiction in which he resided, and this could potentially cause embarrassment to all professional engineers. There was nothing demeaning or derogatory for an engineer to provide this straightforward and simple clarification in his status. To do so would clearly be consistent with the letter and the spirit of the law and avoid any possible questions or doubts about any actions, however unintentional, to mislead or deceive anyone concerning Engineer A's current status as an engineer. The Board concluded that it

would be ethical for Engineer A to continue to use the P.E. designation after his name, as long as Engineer A indicated his inactive or retired status next to the P.E. designation, and as long as this was done in compliance with the state engineering licensing laws and regulations.

Turning to the facts in the instant case, the Board believes that the conclusion reached in BER Case No. 97-8 is partly applicable to the discussion in the present case. As noted earlier, the Board recognizes that state engineering licensure boards are becoming increasingly strict on the use of engineering titles and references. However, in view of Engineer A's clarification in the body of his letter to the engineering licensure board concerning his licensure status in states Y and Z, and the fact that the complaint letter was sent to a limited group of individuals, the Board believes that Engineer A was not attempting to mislead or deceive the board or any other group or individual concerning his licensure status. Instead, the Board believes Engineer A's actions were probably an oversight, or at worst, a misunderstanding of the law or requirements of State Z.

Therefore, the Board cannot conclude that Engineer A's actions, although criticized by a state engineering licensure board, amount to a violation of the NSPE Code. At the same time, the Board must caution all engineering licensees on the need to be familiar with the technical requirements contained in applicable state engineering licensure statutes and regulations to avoid unintended violations of the law.

The NSPE Code of Ethics is a national code of ethics and this Board believes the NSPE Code obligates NSPE members to report ethical violations to the appropriate authorities in whatever jurisdiction the NSPE member observes the violation. This obligation is separate and apart from the obligation a professional engineer may have under state law.

As to the second question, Engineer A's actions are fully consistent with the professional and ethical obligation to hold paramount the health, safety and welfare of the public. While this obligation is codified in state laws, its application cannot be restricted within state boundaries. The NSPE Code of Ethics is a national code of ethics and this Board believes the NSPE Code obligates NSPE members to report ethical violations to the appropriate authorities in whatever jurisdiction the NSPE member observes the violation. This obligation is separate and apart from the obligation a Professional Engineer may have under state law.

Case 3: Responsible Charge Working Part-Time For Firm

FACTS:

Engineer A is a licensed professional engineer and land surveyor in state A. Engineer A is associated with a firm, XYZ Engineering and Surveying (which offers professional engineering and surveying), as the licensed professional engineer in charge under the state's certificate of authorization requirement. The firm has not performed any work outside of state A. Engineer A's understanding of the law of state A is that a licensed professional engineer is to be in "responsible charge" of engineering and a person licensed as a professional land surveyor is to be in "responsible charge" of land surveying. These persons in responsible charge can be a principal of the firm or an employee of the firm under the state's laws.

The agreement Engineer A has with XYZ Engineering and Surveying is that XYZ grants Engineer A 10% share of the stock in the firm and as compensation for his engineering services, Engineer A will receive 5% of the gross billings for engineering work for which the seal of a licensed engineer in responsible charge of engineering is required. This agreement is contingent on the understanding that if any one of the three principals of XYZ Engineering and Surveying becomes licensed as a professional engineer in state A, the agreement will become void and the 10% stock will be returned to XYZ Engineering and Surveying.

In addition to working with XYZ Engineering and Surveying, Engineer A has a full-time engineering position for a state governmental agency. This work requires no engineering license. Engineer A works thirty-five hours per week on a flex-time basis and provides about twenty hours per week supervising engineering services at the firm, plus an additional twelve hours of work on the weekends. Engineer A does not normally go into the field for XYZ Engineering and Surveying but is available for consultation, twenty-four hours a day.

Both the state governmental agency and the engineering firm are aware of Engineer A's activities as a dual employee and do not object to these activities.

REFERENCES:

II.2.b. - Code of Ethics: Engineers shall not affix their signatures to any plans or documents dealing with subject matter in which they lack competence, nor to any plan or document not prepared under their direction and control.

II.2.c. - Code of Ethics: Engineers may accept assignments and assume responsibility for coordination of an entire project and sign and seal the engineering documents for the entire project, provided that each technical segment is signed and sealed only by the qualified engineers who prepared the segment.

II.4.d. - Code of Ethics: Engineers in public service as members, advisors or employees of a governmental or quasi-governmental body or department shall not participate in decisions with respect to services solicited or provided by them or their organizations in private or public engineering practice.

II.4.e. - Code of Ethics: Engineers shall not solicit or accept a contract from a governmental body on which a principal or officer of their organization serves as a member.

II.5.a. - Code of Ethics: Engineers shall not falsify their qualifications or permit misrepresentation of their, or their associates' qualifications. They shall not misrepresent or exaggerate their responsibility in or for the subject matter of prior assignments. Brochures or other presentations incident to the solicitation of employment shall not misrepresent pertinent facts concerning employers, employees, associates, joint venturers or past accomplishments.

III.1.c. - Code of Ethics: Engineers shall not accept outside employment to the detriment of their regular work or interest. Before accepting any outside engineering employment, they will notify their employers.

III.6.a. - Code of Ethics: Engineers shall not request, propose, or accept a commission on a contingent basis under circumstances in which their judgment may be compromised.

III.6.b. - Code of Ethics: Engineers in salaried positions shall accept part-time engineering work only to the extent consistent with policies of the employer and in accordance with ethical considerations.

DISCUSSION:

The circumstances faced by Engineer A in this case are not unlike circumstances occasionally faced by other engineers who seek to explore career opportunities beyond

a full-time position. A key question involved in such activities is whether the engineer can devote sufficient attention to the responsibilities involved in an ethical manner.

Engineers are frequently required to provide oversight and review of the work of others under their supervision and sign and seal the drawings. As noted in NSPE Code Section II.2.b. it states that engineers are not permitted to affix their signatures to any plans and documents dealing with subject matter in which they lack competence, nor to any plan or document not prepared under their direction and control. This principle is one of the most basic and fundamental ethical principles to which professional engineers are required to adhere because it goes to the heart of the public trust upon which their professional status is based.

The BER has in the past had occasion to consider cases similar to this case. In BER Case No. 91-8, an Engineer's firm was retained by a major fuel company to perform site investigations in connection with certain requirements under state and federal environmental regulations. Under the procedures established by the Engineer's firm, the site visits would be conducted by engineering technicians under direct supervision of Engineer A who would perform all observations, sampling, and preliminary report preparation. Engineering technicians would also take photographs of the sites. No professional engineers were present during the site visits. Following site visits, all pertinent information and material was presented to Engineer A who was competent in this field. Following a careful review, Engineer A would certify that the evaluations were conducted in accordance with engineering principles.

In considering whether it was ethical for Engineer A to certify that the evaluations were conducted in accordance with engineering principles, the Board noted that the NSPE Code of Ethics is very clear concerning the requirements of engineers not to affix their signatures to any plans or documents dealing with subject matter in which the engineers lack competence, nor to any plan or document not prepared under their direction and control (See NSPE Code Section II.2.b.). The BER concluded that it was ethical for the engineer to certify that the evaluations were conducted in accordance with engineering principles so long as the engineer exercising direction and control performs a careful and detailed review of the material submitted by the engineer's staff and there has been full compliance with NSPE Code Section II.2.c.

Also, in BER Case No. 86-2, an engineer was the chief engineer within a large engineering firm, and affixed his seal to some of the plans prepared by licensed engineers working under his general direction who did not affix their seals to the plans. At times, the engineer also sealed plans prepared by unlicensed graduate engineers working under his general supervision. Because of the size of the organization and the

large number of projects being designed at any one time, the engineer found it impossible to give a detailed review or check of the design. He believed he was ethically and legally correct in not doing so because of his confidence in the ability of those he had hired and who were working under his general direction and supervision. By general direction and supervision, the engineer meant that he was involved in helping to establish the concept, the design requirements, and review elements of the design or project status as the design progressed. The engineer was consulted about technical questions and he provided answers and direction in these matters. In evaluation of the facts and circumstances in this case, the Board focused on the language in the NSPE Code Section II.2.b. relating to the obligation of engineers not to affix their signature to documents or plans ... not prepared under their "direction and control." Following a careful review of the plain meaning of the terms "direction" and "control," the Board concluded that the terms have meaning which, when combined, would suggest that an engineer would be required to perform all tasks related to the preparation of the drawings, plans, and specifications in order for the engineer ethically to affix his seal. The Board also noted at the time that the NCEES Model Law would require that an engineer must be in "responsible charge" -- meaning "direct control and personal supervision of engineering work" -- in order to affix his seal. After careful evaluation, the Board concluded that it would not be ethical for the engineer to seal plans that have not been prepared by him or which he has not checked and reviewed in detail.

In BER Case No. 90-6, the Board considered two separate fact situations involving the signing and sealing by an engineer of documents prepared using a CADD system. In considering the facts, the Board noted that the rendering of the Board's decision in BER Case No. 86-2 raised a considerable degree of discussion within the engineering community because to many it appeared to be inconsistent with customary and general prevailing practices within the engineering profession and would therefore place a significant number of practitioners in conflict with the provisions of the Code. The Board noted at the time that the Code of Ethics is not a static document and must reflect and be in consonance with general prevailing practices within the engineering profession. Said the Board, "the Code must not impose an impossible or idealistic standard upon engineers, but rather must establish a benchmark of reasonable and rational methods of practice for it to maintain its credibility and adherence." The Board determined that the conclusion in BER Case No. 86-2 should be modified to reflect actual practices which exist within engineering and not impose an impossible standard upon practice. Said the Board, "Were the Board to decide BER Case No. 86-2 today, the Board would conclude that it was not unethical for the engineer in that instance to seal plans that were not personally prepared by him as long as those plans were checked and reviewed by the engineer in some detail. The Board does not believe this represents a reversal of

the Board's decision in BER Case No. 86-2, but rather a clarification, particularly for those who were troubled by the Board's discussion and conclusion in that case."

Once again, we follow the reasoning in BER Case No. 90-6 and its clarification of BER Case No. 86-2. Under the facts in the instant case, we believe it was appropriate for Engineer A to sign and seal the drawings under the facts and circumstance involved in this case. Engineer A is providing approximately thirty-two hours each week of engineering services to the firm and is on call twenty-four hours a day to provide engineering field services for the benefit of the firm and its clients. His responsibilities appear to be consistent with the state's certificate of authorization requirements, are limited to professional engineering services and do not involve land surveying services. As noted under the facts, Engineer A has a flexible schedule with his other employer and presumably is able to adjust his schedule to meet the needs of his employers. While it appears that Engineer A may be stretching his role as an engineer in responsible charge for the firm, without more evidence to suggest improper activity, we are hesitant to conclude that Engineer A was violating the NSPE Code of Ethics.

The manner in which Engineer A is compensated does not appear to contain any specific provision which would necessarily run afoul of the NSPE Code of Ethics. Under NSPE Code Section III.6.a., engineers are not permitted to request, propose or accept a commission on a contingency basis under circumstances in which their judgment may be compromised. Although it could be argued that Engineer A's receiving 5% of the gross billings for engineering work for which the seal of a licensed engineer is required could potentially compromise Engineer A's judgment, we believe that would stretch this provision of the NSPE Code of Ethics beyond its actual intent. Otherwise, virtually any compensation scheme that was not based upon the number of hours worked could be held to be in violation of the NSPE Code of Ethics and that would be an impractical conclusion.

In addition, the Board views the transfer provision ("The agreement is contingent on the understanding that if any one of the three principals of XYZ Engineering and Surveying becomes licensed as a professional engineer in state A, the agreement will become void and the 10% stock will be returned to XYZ Engineering and Surveying") is not of a nature that would compromise Engineer A's judgment. Instead, the Board views this provision as a means of the firm's principals' maintaining control over the management of the firm.

With regard to Engineer A's dual role as an governmental employee and a private employee, as noted under the facts, both the state governmental agency and the engineering firm are aware of Engineer A's activities as a dual employee and do not

object to these activities. However, the Board must note that should a conflict-of-interest arise (e.g., where Engineer A or the firm's activities conflict with the governmental employer's activities or interests) Engineer A will need to carefully address those activities consistent with NSPE Code Sections III.6.b., II.4.d., II.4.e. and other applicable provisions of the NSPE Code.

As has been noted in cases similar to this one, while the actions of Engineer A may be consistent with the NSPE Code of Ethics, it is critical for an engineer under these circumstances to understand the need to perform a careful review of all pertinent material before signing and sealing appropriate plans and drawings. We are of the view that so long as the professional engineer exercising direction and control performs a careful and detailed review of the material submitted by the engineer's staff, there has been compliance with NSPE Code Section II.2.c. In addition, Engineer A must carefully review and understand all state requirements regarding "responsible charge" activities including possible local office and employment restrictions.

REFERENCES

Iowa Engineering and Land Surveying Examining Board Rules/Laws

<https://plb.iowa.gov/board/engineers-land-surveyors>

Iowa Code, Chapter 542B: Professional Engineers and Land Surveyors

<https://www.legis.iowa.gov/docs/code/542B.pdf>

Iowa Administrative Code: Engineering and Land Surveying[193C]

<https://www.legis.iowa.gov/law/administrativeRules/chapters?agency=193C>

National Society of Professional Engineers, Code of Ethics

<http://www.nspe.org/resources/ethics/code-ethics>

National Society of Professional Engineers, Board of Ethical Review Cases

<https://www.nspe.org/resources/ethics/ethics-resources/board-ethical-review-cases>