

## CHAPTER 1 ADMINISTRATION

IAC Supp. 8/14/85

[Rules 1.5 to 1.13 were either rescinded or renumbered and new rules added, see IAB 8/14/85]

[Prior to 6/1/88, see Engineering and Land Surveying Examiners, Board of [390] Ch 1]

[Rules 1.10 to 1.29 were amended and transferred to 193C—Chapter 4, IAC Supplement 11/27/91]

**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.

[ARC 4206C, IAB 1/2/19, effective 2/6/19; ARC 5953C, IAB 10/6/21, effective 11/10/21]

**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.

[ARC 0362C, IAB 10/3/12, effective 11/7/12; ARC 0684C, IAB 4/17/13, effective 5/22/13]

**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.**

**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.  
[ARC 5953C, IAB 10/6/21, effective 11/10/21]

**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:

| <b>BUILDINGS<br/>NEW CONSTRUCTION</b>                         |   |                              |   |
|---|---|------------------------------|---|
| <b>Building Use Type</b>                                      | <b>Description</b>  | <b>Engineer<br/>Required</b> | <b>Engineer<br/>May<br/>Not Be<br/>Required</b> |
| 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:

| <b>ALTERATIONS<br/>TO EXISTING BUILDINGS</b>  |  |  |                                     |   |
|---|--|--|-------------------------------------|---|
| <b>Alteration Type</b>  | <b>Description</b>   | <b>Engineer Required</b>   | <b>Engineer May Not Be Required</b> |   |
| 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                                   |   |
|   | Industrial or warehouse use  | 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                                   |   |

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

**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.

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<sup>1</sup> Effective date of subrule 1.3(1) delayed 70 days by the Administrative Rules Review Committee at its meeting held March 11, 1996; delay lifted by this Committee at its meeting held May 14, 1996, effective May 15, 1996.