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.

"Land surveyor" means a person who engages in the practice of land surveying as defined in this rule.

"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 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.