



PDHonline Course R110 (2 PDH)

The Proper Use of Iowa Professional Seals

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The Proper Use of Iowa Professional Seals

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Introduction and Overview

In order to properly use professional seals in Iowa, licensed professionals are required to be familiar with specific practice regulations. These regulations are contained in the collection of Iowa statutes known as the *Iowa Code*. The Iowa Code is subdivided into Titles, Subtitles, and Chapters. The primary laws in which we have interest, *i.e.*, that deal with sealing and certification, are contained in Title XIII, *Commerce*, Subtitle 4, *Professional Regulation, Commerce Related*, and the following specific Chapters:



Iowa Capitol Building

1. Chapter 542B, *Professional Engineers and Land Surveyors*
2. Chapter 544A, *Registered Architects*
3. Chapter 544B, *Landscape Architects*

A collection of laws known as the *Iowa Administrative Codes* (IAC), add detail, and are intended to implement the Iowa Code Chapters. Each of the above Chapters are supplemented by each of the following Administrative Codes:

1. 193C, *Engineering and Surveying Examining Board*
2. 193B, *Architectural Examiners*
3. 193D, *Landscape Architectural Examining Board*

A specific Administrative Code is often referred to as a *Rule*. To reduce clutter in the body of the course content, no further literal enumeration will be made to these, or any of the numerous other ancillary Chapters and Rules; only reference numbers will be used.

The technical professions of Architecture, Professional Engineering, Surveying, and Landscape Architecture, are licensed under the Professional Licensing and Regulation Bureau of the Iowa Department of Commerce. The Bureau consists of six licensing Boards. By law¹, this Bureau uses a quarterly publication, *Iowa Professional Licensing Bureau Newsletter*, to officially disseminate information related to the regulated professions. This official information may include statutory requirements, statutory changes, Rules, Rule changes, proposed or pending Rule changes, licensing requirements, license renewal procedures, Board action, Board interpretative rulings or guidelines, disciplinary action, and ethical or professional standards. This course is an integration of the specific sections of the numerous Iowa laws and several past Bureau newsletters, that pertain to the use of professional seals. The course is not intended as a replacement or substitution for official information sources. The applicable regulations are listed in the Reference Section; they supersede any information contained in this course.

There exists major commonalities of acceptable seal use among all of the Iowa licensed professions. There are very few distinctions between them. The focus of the course content pertains primarily to the practice of Architecture and Engineering, and secondarily to the practice of Professional Land Surveying. The Landscape Architecture discipline is included because it can closely interface with the other professions.

While every effort has been made to insure the accuracy and completeness of the information presented in this course, the reader is reminded that the Code and Rules are subject to periodic revision. Consequently, while the course's base content is relatively constant, specifics are subject to variation. The reader of this course is strongly encouraged to periodically review the various regulations in order to stay informed. This is easily accomplished because the required information and the regulating Boards are readily accessible on the World Wide Web; a listing, with URLs, is provided in the **Additional Resources** section. Nothing herein has the force of law or the intention to force any licensed professional to comply with the content.

History²

The word "seal" stems from the act of closing. Originally, this was the closing, or securing if you will, of a document for the purpose of security and privacy. While the original sealing methods of old could not prevent unauthorized access, an unbroken seal did at least give the intended recipient of the document an indication of its security. Over time, the seal evolved into a representation of indisputable authenticity, just as a signature is



accepted in the world today. The emperor of China used his thumbprint when sealing documents in 3000 B.C. The use of seals is mentioned in the Old Testament, where Jezebel used Ahab's seal to counterfeit important documents. Royalty and governments used their own seal to affix to proclamations to give them their authoritative stamp of approval. The first Great Seal of England was that of Edward the Confessor, impressions of which can still be found. During this time, almost everyone had their own seal. While most people had just one, royalty would own several, including their "Great" seal, as well as seals for all their courts and officials. It was common practice to destroy the seal when the owner died, which is the reason so few original seals are still in existence today. Official seals of the Crown were often handed over with great ceremony, and in Medieval Times the size and motif of the seal conveyed an image of the status of its owner. Early motifs were equestrian or heraldic in nature, or showed

the owner in various pursuits like hunting or doing battle. William the Conqueror used an equestrian seal showing him armed and ready for battle. In Medieval Times, betrothals were prearranged; therefore true words of love were secretly written and the envelope's contents secured by a wax seal, so that the recipient could be assured that their passion would be unknown to others.

Background of the Seal in the U.S.

The first Seal of the United States was created by Benjamin Franklin, John Adams and Thomas Jefferson on July 4th 1776, immediately after the Declaration of Independence was signed. Congress realized the necessity of such a seal for the newly established nation. Seals were used less frequently as literacy increased. With the introduction of the gummed envelope in the 19th Century, the need for privacy was reduced. Seals became a more personal expression as well as a decorative embellishment. Today, seals serve functionally as well as symbolically. Seals represent the President, Federal agencies, States, State agencies, corporations, and notaries, to name barely a few.



The necessity for professional seals springs directly from laws regulating the practice of the various professions. The State of Wyoming was the first to enact an engineering registration law in 1907 and was ironically, the last State, in 1951, to enact a law regulating the practice of Architecture. By 1952 all the States and territories had adopted licensing laws of some description regarding the primary technical design professions. Iowa's engineering law was enacted in 1924, and the architectural registration law dates back to 1927. The Landscape Architecture Code Chapter is relatively new, coming into existence in 1974. Prior to 1997, the use of a Professional Engineer seal was optional.

Professional Practice Overlap

Iowa building code officials and other regulatory agency personnel, as well as the licensees themselves, are often confused as to the differences between how and when, and in what manner, the professions are allowed to use their seals. A frequent professional conduct violation concerns sealing improprieties. Sealing improprieties sometimes stem from the fact that there exists areas of overlap or common practice among the professions of Architecture, Engineering, Surveying, and Landscape Architecture. Setting aside any nefarious activity, one of the leading forms of impropriety occurs when the licensee incorrectly affixes a seal to work for which the licensee is not privileged to undertake. In order to appreciate the problems that sometimes arise from the use of the various professional seals, it is useful to study these areas of technical overlap or common practice.

Let's utilize set theory to diagrammatically examine the scope and prevue of the professions. Look at Figure 1 on page 4. Each circle is intended to graphically represent the total practice scope of each profession. The overlapping areas of the four professional practices (sets) represent the legally allowed, and generally accepted, common practice areas. You may recall that in set theory these common areas are known as *intersections*. We will address each one of these intersections individually as we progress through the course. For now, let's begin by an examination of the intersection of Architecture and Engineering.

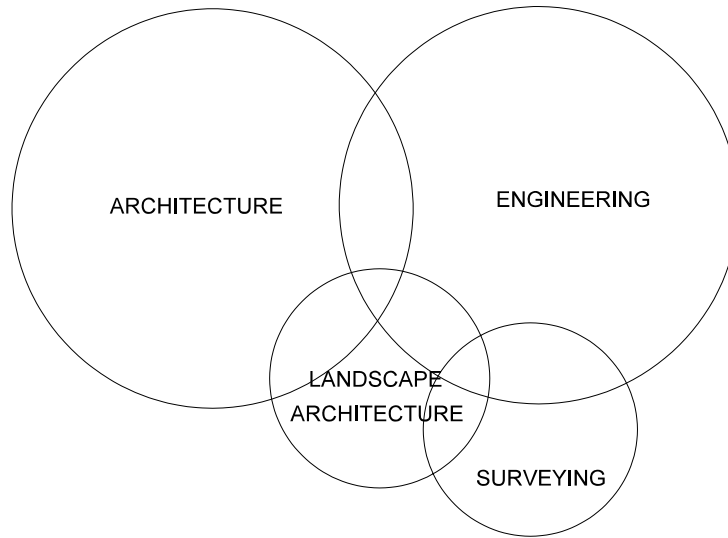


Figure 1

Comparing Apples to Oranges or Comparing Apples to Pears?

Everyone knows the difference between the practice of Architecture and the practice of Engineering, right? Well obviously not. A broad range of viewpoints exists among the various States and territorial jurisdictions with regard to this matter. Any analysis that examines the actions of the various courts and code enforcement officials quickly



reveals a difference in what is interpreted as allowable legal practice between the two. Individual State statutory definitions and court rulings range, on one end, with little or no distinction between the two professions, to the extreme of an apparent monopoly of professional authority being granted to one or the other. Iowa law falls in the former category, setting out very limited legal specifics in defining the practice bounds of the two professions.

That a difference exists between Architecture and Engineering is not an issue; the precise difference is, however, conjecture. It is generally held that Architecture is the profession of designing buildings for human habitation and occupancy; Engineering, among other things, is the profession of designing structures, to include buildings, and the various elements of utility that comprise the structure and make it functional. Although overly simplistic, Architecture is often discriminated from Engineering through the emphasis of interior and exterior aesthetics, and

form and function with regards to occupancy and use. Key phrases often used in the practice description of Architecture are: *use, order, and beauty through the resource of design and the call for artistic and technical ability.*³ To bolster the defense for the similarity of the two professions, the concept and term *Architectural*

Engineering as a separate discipline has been offered. This term is firmly established as evidenced by the existence of Architectural Engineering curriculums at several prominent technical schools and the creation of an optional Architectural Engineering format on the nationally administered National Council of Examiners for Engineering and Surveying (NCEES) exam. Although not universally accepted across the technical community, the National Council of Architectural Registration Boards (NCARB) holds that Architects, by their education and internship, are the only design professionals properly prepared to coordinate all the design disciplines and manage the typical building project.⁴ Ironically, even though the NCARB is incorporated in Iowa, an Iowa joint Board committee published an opinion that each building project is unique, and therefore, limiting the assignment of a managing/coordinating design professional to a specific occupation, was not relevant.⁵

Incidental Activities

Architecture Incidental to the practice of Engineering

Incidental practice is defined as the act of conducting non-customary professional activities, which are minor or subordinate in nature, which support the primary, legally licensed practice activity. Incidental practice, while limited, is a practical reality. There is no specific reference in the Code Chapters or Rules regarding the extent of its acceptability; however, let's look at the following passage paraphrased from a 1996 Bureau newsletter:

A joint committee comprised of the Architectural and Engineering examining Boards has concluded that there is no need to establish a legal demarcation of the practice scope of each profession. It is the opinion of the committee that each situation regarding overlapping and incidental practice is unique, and as such, problems arising from practice complaints will be handled by each respective Board. The committee has agreed that the two examining Boards should continue to assist each other, on a case by case basis, in the determination of the proper practice bounds of Architecture and Professional Engineering.⁵

The Chapters and Rules for the technical professions sometimes contain language which, albeit brief, expressly sets out what is not considered within the realm of each respective profession. Each of these short declarations will be presented in this course because they are so explicit and therefore useful. Also, it is sometimes pointed out which potentially intersecting professions are not mutually excluded by the existence of a Chapter or Rule. Accordingly, let's look at the Architecture practice Chapter to discover what the practice of Architecture does not preclude:

The provisions of this Chapter shall not apply to [licensed] Professional Engineers, superintendents, inspectors, supervisors and building trades craftpersons while performing their customary duties.⁶

Engineering Incidental to the practice of Architecture

There is no exclusionary phraseology in the Engineering and Surveying practice Chapter that prevents Architects from performing incidental engineering. Moreover, in a departure from what is conventionally held, the Architecture Rule states,

. . . that in the case of the portions of professional work prepared by the Architect's consultants, registered under this or another professional registration law of this jurisdiction, the Architect may sign and seal that portion of the professional work if the Architect has reviewed that portion, has coordinated its preparation and intends to be responsible for its adequacy.⁷

Now, in contrast, take a look at the following passages taken from a recent Iowa State University construction contract. While contracts certainly do not dictate general law, their content can give an indication of prevailing practice philosophy and acceptability.

Throughout this [contract] wherever the term architect is used in referring to a professional engaged by the university for a particular project, the term shall be equally applicable to an engineer. The agreement between [the university] and architect usually requires the architect to provide structural, electrical and mechanical engineering services for the project. An engineer's seal shall appear on the contract documents for [the engineer's] part of the work whether this work is done by [engineers on] the architect's staff or by [a] consultant [to the architect].⁸

Surveying Incidental to the practice of Engineering

The fact that certain non-cadastral surveying functions are critical components to engineering and construction endeavors is without question. Some of these functions are horizontal and vertical control, construction layout, and earthwork quantity determination. The framers of the initial Iowa Engineering and Surveying Act were obviously aware of this, as evidenced by the reference to incidental surveying activities within the definition of the practice of Engineering. None of the current civil engineering projects which are present today would be possible without the benefit of *engineering surveys*, this specific term being included in the statutory definition of Engineering. In order to qualify this important engineering function and to clearly differentiate it from cadastral, or land surveying, the Surveying practice Chapter specifically states that,



Engineering surveys [do not include] 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. A [licensed] Land Surveyor is not prohibited from performing engineering surveys as defined in the practice of engineering.⁹



Engineering Incidental to the practice of Landscape Architecture

As it turns out, Professional Landscape Architects in Iowa are allowed reasonable latitude with regards to what could normally be considered engineering activities. From the Landscape Architecture Chapter, Professional Landscape Architects are permitted to:

. . . . plan and design the alignment of roadways and the grading of the land, including surface and subsoil drainage, and erosion control, incidental to Landscape Architecture projects.¹⁰

The practice Chapter goes on to say, however, that “the practice of landscape architecture shall not include the design of structures or facilities with separate and self-contained purposes for habitation or industry, or the design of public streets and highways, utilities, storm and sanitary sewers, and sewage treatment facilities, such as are ordinarily included in the practice of engineering or architecture; and shall not include the making of land surveys or final land plats for official approval or recording.”¹⁰ In this same Chapter however, the corollary is not true: Registered Architects and licensed Professional Engineers are not prevented from performing landscape planning and designing.¹⁰

Sealing and Certification

The purpose of certification of technical documents is to attest to the preparation of the documents by the licensee or under the licensee’s direct supervision and responsible charge. A licensee cannot legally certify a document for which the licensee did not exercise, direct, guide, and restrain power over the design contained in the documents, as well as exercising professional judgment in all technical matters embodied in the documents. Merely reviewing the work prepared by another person does not constitute *direct supervision and responsible charge*. Although often used interchangeably, the terms sealing and certification are not synonymous. A seal is only one component of a legitimate certification. Three additional components, a certification/information block, an original signature, and a date, are also required.

In order to fully understand Iowa’s regulations and the proper methods for sealing and certification, we need to digress momentarily to establish the definition of two statutory terms: (1) Technical Submissions, and (2) Official Documents.

Technical Submissions

Technical Submissions is a term in the Architecture practice law which serves the purpose of collectively defining any or all of the designs, drawings, sketches, specifications, details, studies, and other technical reports, including construction documents, prepared during the course of the practice of a technical profession. These are commonly known as “deliverables” or “work products”. The preferred, nationally accepted term in professional service agreements (contracts) is, *instruments of service*. Technical submissions are synonymous with the term *Engineering Documents* in the engineering law.

Official Documents

Through Iowa Code interpretation¹¹ a document is labeled *official* strictly based upon its intended end use. *Official Copies* are defined as that set of documents submitted to a client, or to a public agency for the purpose of permit review, which will become the record set or will become part of the recipient’s official file. For a document or set of documents to qualify as *official* they must be properly certified. The licensing Boards only require that *official copies* be certified; however, the Boards do not prohibit the certification of copies that are not *official copies*. Confusing? Put simply, uncertified documents cannot be considered *official*, but unofficial documents can be certified.

OFFICIAL COPY

The example shown in Figure 2 below is a proper professional certification by an Iowa Registered Architect:^{12,13} It contains the four required components of:

- T A certification/information block;
- T The individual’s professional seal;
- T An original signature in contrasting ink color, and;
- T The date of the certification.

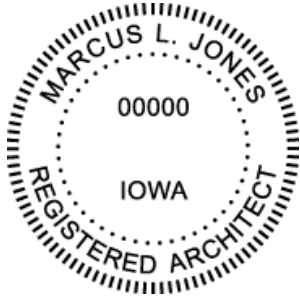
	I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly registered Architect under the laws of the state of Iowa.	
	<u>Marcus L. Jones</u> Printed or typed name	
	<u>Marcus L. Jones</u> Signature	<u>11/29/2004</u> Date
	<u>12/31/2004</u> Registration Expires	<u>1/1/2002</u> Date Issued
	Pages or sheets covered by this seal:	
<u>All</u>		

Figure 2 - Registered Architect’s Certification/Information Block

The figure below is an example of a typical, properly sealed, signed, and dated, professional certification by an Iowa licensed Professional Engineer.^{12, 13}

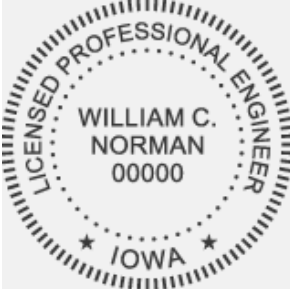
	<p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.</p> <p><u>William C. Norman</u> <u>11/29/2004</u> Signature Date</p> <p>Printed or typed name: William C. Norman My license renewal date is December 31, 2005. Page or sheets covered by this seal: <u>All</u></p>
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Figure 3 - Licensed Professional Engineer’s Certification/Information Block

Licensed Land Surveyor Certifications

The licensed Land Surveyor must comply with the technical stipulations of Chapter 11 of the Engineering and Land Surveying Rule¹⁴ and Chapter 355 Code of Iowa. These laws require the certification shown below:

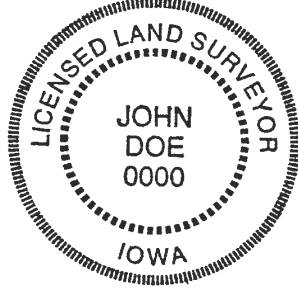
	<p>I hereby certify that this land surveying document was prepared and the related survey work was performed by me or under my direct personal supervision and that I am a duly licensed Land Surveyor under the laws of Iowa.</p> <p><u>John Doe</u> <u>11/29/2004</u> Signature Date</p> <p>Printed or typed name: John Doe My license renewal date is December 31, 2005. Page or sheets covered by this seal: <u>All</u></p>
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Figure 4 - Licensed Land Surveyor’s Certification/Information Block

The figure below is an example of a typical, properly sealed, signed, and dated, professional certification by an Iowa licensed Professional Landscape Architect:²⁴

	I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly licensed professional landscape architect under the laws of the state of Iowa.
	<p>Marcus L. Jones Printed or typed name</p> <p><u>Marcus L. Jones</u> <u>11/29/2004</u> Signature Date</p> <p><u>12/31/2004</u> <u>1/1/2002</u> License Expires Date Issued</p> <p>Pages or sheets covered by this seal: <u>All</u></p>

Figure 5 - Licensed Professional Landscape Architect’s Certification/Information Block

Additional Certifications Required from the Licensed Land Surveyor

Iowa counties and municipalities may also, and often do, impose special certification requirements in addition to the standard certification shown above in Figure 4. These certifications can require statements regarding the adherence to a specific subdivision ordinance, or to the existence of encroachments or easements, and statements regarding the accuracy of the survey, the resulting plat, or both. Licensed Land Surveyors should periodically review these local laws carefully for possible changing certification requirements for recordation plats. No variation in the wording of any of the previously presented primary certification/information blocks is allowed.¹¹ The Land Surveyor, as well as Architects and Engineers, must provide the primary certification/information block separately from any other certification that may be required.¹¹

Special Certifications Required from the Professional Engineer

State agencies can require specialized certifications in conjunction with projects which potentially impact the public’s safety, health, welfare, and property. One of many such specialized certifications is shown in Figure 6 on page 11. This particular certification is one required by the Wastewater Section of the Iowa Department of Natural Resources in conjunction with construction permitting of wastewater treatment and disposal facilities. Pertinent certification information is highlighted in red text. It is interesting to note that there is no provision or space allowed for the application of a seal.

Iowa Department of Natural Resources
 Wastewater Section
 Construction Permit Application
SCHEDULE A, General Information
 Rule 567 IAC 60.3(1)a

APPLICANT	ENGINEER												
OWNER	FIRM												
ADDRESS	ADDRESS												
REPRESENTATIVE	PROJECT OFFICER												
[original document content removed in this area for clarification]													
<table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>5. Does each set of plans and specifications or engineering report accompanying this application contain a "professional engineer seal" executed in conformance with 542B.16 Code of Iowa?</td> <td style="text-align: center;">9</td> <td style="text-align: center;">9</td> </tr> <tr> <td>10. Will construction inspection be conducted by a licensed engineer employed by the applicant?</td> <td style="text-align: center;">9</td> <td style="text-align: center;">9</td> </tr> <tr> <td>If No =></td> <td colspan="2" style="text-align: center;"> <div style="border: 1px solid red; padding: 5px; display: inline-block;">NAME OF ENGINEERING FIRM CONDUCTING INSPECTION</div> </td> </tr> </tbody> </table>			YES	NO	5. Does each set of plans and specifications or engineering report accompanying this application contain a "professional engineer seal" executed in conformance with 542B.16 Code of Iowa?	9	9	10. Will construction inspection be conducted by a licensed engineer employed by the applicant?	9	9	If No =>	<div style="border: 1px solid red; padding: 5px; display: inline-block;">NAME OF ENGINEERING FIRM CONDUCTING INSPECTION</div>	
	YES	NO											
5. Does each set of plans and specifications or engineering report accompanying this application contain a "professional engineer seal" executed in conformance with 542B.16 Code of Iowa?	9	9											
10. Will construction inspection be conducted by a licensed engineer employed by the applicant?	9	9											
If No =>	<div style="border: 1px solid red; padding: 5px; display: inline-block;">NAME OF ENGINEERING FIRM CONDUCTING INSPECTION</div>												
[original document content removed in this area for clarification]													
CERTIFICATION													
APPLICANT	ENGINEER												
I certify that I am the authorized representative of the owner and state that the project identified above is approved by the owner.	I certify that all aspects of design included in this application conform to applicable standards contained in Chapter 567 IAC 64, or that an explanation and justification of any proposed variations from such standards is attached. I am familiar with the information contained in this application, and to the best of my knowledge, such information is complete and accurate.												
SIGNATURE	SIGNATURE												
DATE	DATE												

Figure 6 - Highlighted examples of special engineering considerations from portions of DNR Form No. 542-3129

Concurrent Use of the Architect’s and Engineer’s Seals

We have lightly touched on the subject of the proper and allowed use of Architectural and Engineering seals in our discussion of practice overlap and incidental activities. While there is very little specific legal verbiage defining the practice scope of the two professions, the intent that they be separate and distinct is easily discerned from language contained in the several Chapters and Rules. This fact can be inferred from the many references to the need of the licensed professional to consign practice activities which are beyond his area of self-evaluated professional competency. Let’s take a look a few of these legal sections:

Licensees shall not affix their signatures or seals to any plans, plats, or documents dealing with subject matter in which those licensees lack competence¹⁴

[A Professional Consultant is a licensed individual] who is employed by the [prime professional] to perform professional services as a consultant to the [prime professional] in connection with the design, preparation of construction documents or other technical submissions. [A prime professional] shall cause those portions of technical submissions prepared by a professional consultant to be stamped with the impression of the seal of the professional consultant, with clear identification of the consultant's areas of responsibility.⁶

Each document shall contain an information block for application of a seal by each professional consultant contributing to the submission.¹⁴

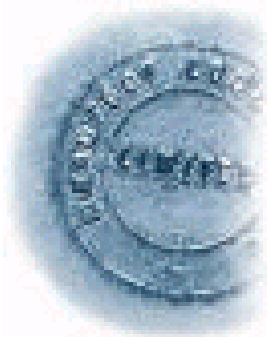
The above citations support the previous observation that, while both Architects and Engineers are allowed to produce building designs in Iowa, each would be expected to seal only those portions that were normally considered within their area of customary practice. Put quite simply, Architects should not generally seal mechanical, electrical, plumbing, and structural designs, and Engineers should not generally seal floor plans, wall sections, elevations views, door and window schedules, and the like.

Certificate of Authorization Seal/Corporate Seals

The corporate practice of Architecture, Landscape Architecture, Land Surveying, and Professional Engineering is allowed as long as the compositional make-up of the business entity meets the requirements specified in the respective Rules. Corporations are formed under the Iowa Business Corporation Act.¹⁵

Business entities are not eligible for registration under the respective professional practice laws; they are intended for individual practitioners.⁶ Like many States, a *certificate of authorization* is required to undertake corporate professional practice. Unlike many States, the application of a certificate of authorization seal or a professional corporate seal on technical submissions or engineering documents is not required in Iowa. For this reason, the actual details of the registration of a business entity will not be covered here. Please note however, regardless of practice profession type, business size, or legal form of business, all business entities must obtain a certificate of authorization. The Architecture Chapter specifically states that a formal application for the acquisition from the Board of an *Authorization to Practice Architecture as a Business Entity* is required of all licensees.

The only exception to this requirement is sole proprietorships which conduct their business under the exact name of the licensee.



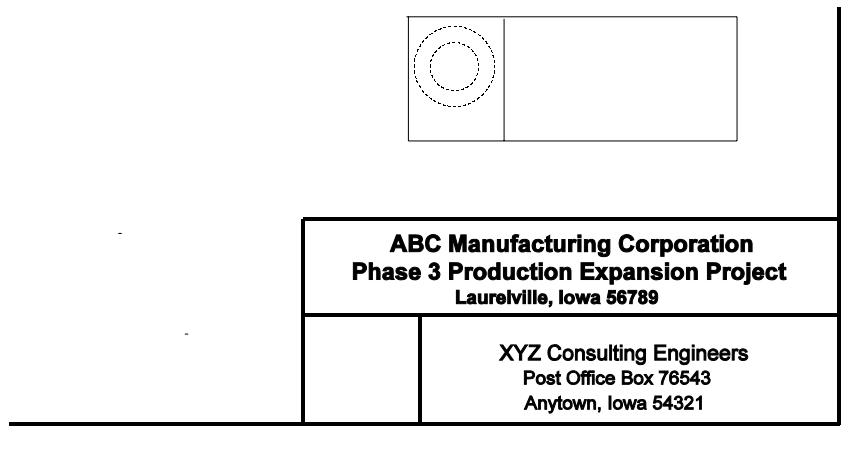


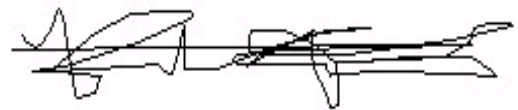
Figure 7 - Professional Firm Identification

Professional’s Firm Name

A frequent offense associated with the creation of technical submissions and engineering documents is the failure of the licensee to indicate the licensee’s firm name and full address on each sheet of architectural/engineering drawings. All construction documents issued by a professional firm, corporation, partnership, or sole proprietorship are required by law to bear the corporate or assumed business name, in addition to the seal and signature of the responsible licensed professional.¹⁶ One example of an arrangement to accomplish this is shown in Figure 7.

Facsimile Signatures

Facsimile signatures are unanimously prohibited by all of the licensing Boards.¹⁷ The term *facsimile signature* should not be confused with the signature produced by the transmission of a scanned document containing an original signature, *i.e.*, “faxed”. A facsimile signature is one graphically produced by computer, or by a stamp, or otherwise not directly by hand. It is perfectly acceptable to duplicate a hand signature, via electronic transmission scanning. Understand also that this prohibited use of a facsimile signature does not preclude the reproduction of certified documents; however, they could not be considered *official* documents because a proper certification requires an *original* signature in a contrasting ink color.¹⁴ Such reproductions are simply copies of certified documents containing a seal, a signature, and the date the original signature was executed. More discussion on the restriction, or lack thereof, of technical submissions and engineering documents reproduction will be taken up later.



Drawing Classifications

Construction documents are usually composed of working drawings, specifications, and occasionally other contract documents such as Shop Drawings and Standard Design Plans. A working drawing, or design drawing, is characterized by the exhibition of a total result achieved by the integration of various elements and systems; they are prepared under the supervisory control of the licensed design professional. A Shop Drawing is more limited in scope and is characterized by the indication of fabrication and/or installation details of a larger system's components. Shop drawings derive their name from the fact that they were originally prepared by shop personnel in the employ of a contractor. Today, shop drawings



are prepared by original equipment manufacturers, contractors or their subcontractors, or other specialists, such as fabricators, that are not under licensee supervisory control. The certification of shop drawings is exempt from the practice laws; they are considered support documents only.¹⁶ This is an unusual stance on the part of the Boards in light of the fact that shop drawings can contain critical design data such as load bearing component connection details. The shop drawing certification exemption, of course, does not relieve the design professional from reviewing and approving shop drawings.

Sealing Standard Design Plans

Standard Design Plans are defined as those documents that graphically depict items of a typical nature that do not require or represent special features unique to the design to which they will be incorporated or appended. These documents are often referred to as *prototypical* plans. Standard Design Plans are referred to as *standardized construction documents for pre-engineered or prototype buildings* in the Chapters and Rules. Standard design plans are considered exempt from the design professions' sealing requirements and do not require special certifying stipulations.

. . . . the certification by the licensee of standardized construction documents for pre-engineered or prototypical buildings is prohibited because the licensee is not the author of such technical submissions or engineering documents nor did the licensee prepare such under his direct supervision or responsible charge.⁶

Certification Letters

A certification letter contains a seal, signature, and date; it is a testament, devoid of the mandated certification/information block, that a design professional has properly reviewed either architectural or engineering plans and specifications prepared by non-licensed individuals. The use of certification letters in Iowa, as a substitute for properly certified plans, is not allowed.¹⁶

Temporary Practice Seals Prohibited

Many States grant temporary practice permits to persons who hold a license in another State. This usually entails the use of the temporary permit holders' foreign professional seal in conjunction with a temporary permit number. The Engineering and Land Surveying Chapter maintains a provision for the possible issuance of temporary licenses but the Engineering and Land Surveying Rule states that "the Board does not issue temporary permits." There are no provisions for temporary practice in either the Architecture or Landscape Architecture Chapters or Rules.

In Conclusion

The professional's seal on technical documents is in effect a representation that the documents have been prepared exercising reasonable care. In the case of the design professional, the seal is an implied representation that the design is adequate. Because this opens the door to professional liability, it only makes sense that certifying professionals should be specific with regards to the areas in which they are contributors and to which they are to be held responsible. It also speaks to the fact that the control of document publication is important for the prevention of unauthorized or inappropriate use. A discussion of each of these considerations will now be undertaken separately.

Assignment of Professional Responsibility

The Concept of Single Location Certification per Professional

It is common for technical submissions and engineering documents to contain drawings prepared by several professionals. The drawings must be certified by all of the professionals responsible for the preparation of the documents. Therefore, one technical submissions package may contain drawings that bear the seal and certification of more than one licensed professional. Iowa uses a single sheet (single location) certification per licensed professional format to appropriately identify the professional in direct supervisory control and responsible charge. Specifically, the Rules require that all of the certification/information blocks be located on the first page of a submission, or on an attached cover sheet. Therefore, each individual sheet of a submission package should not be signed/sealed. Contributing professionals should place their respective certification/information block on the cover sheet or the first page. This single location format, coupled with the revision feature presented below, assists those reviewing technical submissions and engineering documents to conveniently check for portions of the submissions which have not been certified.



The Adaptability of the Certification/information block

Refer to any one of the certification/information blocks on page 8 or page 9. Each individual's certification/information block must display the seal of the individual responsible for that portion of the technical submission. The block provides an area for the professional to designate the specific pages or sheets for which he is responsible. This permits the certification/information block to appear only once per professional, as stated above. In order for this concept to work effectively, each official copy (or copies) of a submission must be stapled, bound, or otherwise attached together so as to clearly establish the complete extent of the submission. The block is adaptable because page or sheet additions or deletions can, and should, be specifically indicated and linked to issued revisions.

Sealing Specifications

Sometimes the individual sections that comprise a project specification are authored by several licensees. Published guidelines state that the title page of all specifications must be sealed and signed by the responsible design professional.¹⁶ In the case of a specification compilation, each section's title sheet should be certified separately by the author of that section. In lieu of each contributing professional providing a certification/information block on every respective section's title sheet, a single, special sheet, see Figure 8 on page 16, could be used. This table allows for the identification of the contributing professionals and where their respective, single location, certification/information block can be found within the document.¹⁴ It removes the difficulty of attempting to fit all of the blocks on a single specification cover page.

CERTIFICATION LOCATION TABLE	
Contributing Professional's Name	Certification Block Page Location
F.L. Wright, R.A.	3
Eero Saarinen, A.I.A.	7
L. daVinci, P.E.	8
J.A. Roebling, P.E.	11
B.H. Gardens, L.A.	14
H.D. Thoreau, L.S.	2

Figure 8

Document Distribution and Control

Simple, straight forward, single event sealing and certification is not always possible in a complex world. Special consideration must be given to these situations.

Interim or Preliminary Documents

Documents or copies of documents that are beyond the confines of a design professional's office, or, otherwise out of his possession and control, are defined as *released*. Released documents can only fall into two categories: (1) Preliminary (or incomplete), and (2) Final. Work that is preliminary or incomplete must be designated as such. This makes sense when one contemplates the following logic:

The technical professions are licensed to protect the public. The sole purpose of the sealing exercise is to certify that plans and technical documents have been prepared by, or with the oversight of, a licensed professional. However, the general public cannot, and should not, be expected to apprise itself of the legal nuances associated with sealing requirements. Consequently, it logically follows that preliminary or incomplete documents should be clearly and conspicuously so noted to remove any chance of misunderstanding.

Preliminary, incomplete, or interim documents should not be certified.¹¹ By law, interim, preliminary, or otherwise incomplete documents which are released must be clearly labeled “preliminary” or “draft.”¹⁴ The seal and original signature shall be applied only to a final technical submission.^{7, 16} A licensed design professional should certify submissions to public review agencies if it is felt that the technical submissions or engineering documents are acceptable for permitting purposes, even understanding that minor review comments may generate later revisions.¹¹

Avoiding the Certification of Originals or Reproduces

While no specific legal prohibition is apparent to indicate that the act of reproducing properly certified documents is illegal, the intent of the Rules regarding the certification of originals or reproducible is quite clear. Look at the explanatory note provided to support an amendment to the Engineering Code Chapter which ultimately became law:

[This Chapter] is amended . . . by striking language that provides that . . . reproductions are also deemed [acceptable] if the date, signature, certificate, and [license] number are legibly reproduced.¹⁸

And the following hypothetical question posed to the Engineering Board in a Bureau newsletter after the enactment of a mandatory seal requirement for Professional Engineers became effective December 11, 1996:

Question: Can I sign and seal the originals and then make copies? **Answer:** No. In order to protect the licensee from the unauthorized reproduction of their documents and misuse of their certification, it is the intent of the Rule not to have the reproducible documents signed and dated. It is suggested that when the drawings are finalized and official copies are sent out, a certified set also be included in your records. Like all other official copies, your official set would be signed copies, not originals.¹¹

Iowa’s prohibition of the certification of original documents runs counter to nationally published practice guidelines.¹⁹

The Concept of the Record Copy

It was just mentioned that it is a good idea to maintain a certified set, or an official copy, in office files as records. Here are some additional thoughts on internal office copy management. Most current plotters and photocopiers produce copies that are virtually indistinguishable from the original, so it is important that official copies of technical submissions or engineering documents be stamped after copies are made. Even in the best copy management program, it will occasionally be necessary to make copies of drawings for circulation to concerned staff. It is very important to establish them as *review* or *comment* copies via stamp. It is recommended that a certification/ information block stamp be procured so that a contrasting ink color, say red or blue, can be used to clearly distinguish a certified record copy from a “review” or “working copy”. An alternative to the stamp could be the selection of a contrasting plotter pen color for the certification/information block. The ultimate record copy, of course, is the original. It is the principal copy of the technical submissions or engineering documents and is the only one, in addition to one current official, certified, record copy, that should have a place in the office main files. This prevents heavily revised copies of a submission supplanting the record copy. An accurate, dated revision or modification log should be included on each page or sheet of the original or reproducible.

Change Orders, Field Changes, and Addenda

Design and scope changes are inevitable during the normal course of a project's development. Change orders, field change requests, responses to requests for information (RFIs), and other addenda may be considered as technical documents. As such, they warrant certification. It is the responsibility of the licensee to forward copies of all revisions to the technical submissions or engineering documents, which shall become a part of the official copy of the submissions. These revisions must be identified as applicable on a certification/information block or blocks with professional seals applied so as to clearly establish professional responsibility for the revisions.

Seal Forms



Professional seals have undergone quite an evolutionary development. The first professional seals were devices which deformed the paper of the document through impression of the seal by embossing. Close inspection and feel of embossments provided the necessary tactile response to verify certification authenticity. Unfortunately they were not highly visible and were difficult to reproduce photostatically. The very nature of the embosser limited the placement of the seal near the edges of a given document. Embossed seals are still used and available today although their use was significantly diminished by the rise in popularity of the rubber stamp and ink pad in the 1960s. The stamp afforded ease of use, portability, and placement of the seal anywhere on the document. For a period nationally at least, the use of appliqué ("stick-on" or "sticky-back") seals became popular. Regulations require seals to become a *permanent* and *archival* addition to the technical document; therefore, application of superficial media is obviously unacceptable. Today of course,

seals graphically generated via computer software are the norm. Computer generated seals may be used on final and certified copies provided that a handwritten signature is placed adjacent to the seal and the date is written next to the signature.¹⁷

ELECTRONIC
SIGNATURES

Secure Electronic Signatures

It is beyond the scope of this course to provide an exhaustive treatment of electronic signatures. Suffice it to say that this is a complex subject, and there has yet to be an emergence of an accepted commercial standard

protocol. There are a few important points that should be known by those who are not currently using this new technology. Firstly, a electronic signature should not be confused with the mere handwritten signature electronically recorded by a touch-sensitive LCD pad or that facsimile signature which is appended to a document or e-mail. Secondly, secure electronic signatures must comply with the requirements of the Iowa Uniform Electronic Transactions Act.²⁰



Touch-sensitive signature pad

Secure signatures are created by special software which uses a combination of a pair of keys called the public key and the private key. In essence, the sender encrypts the original document intended for electronic transmission using special software and electronically signs the document using the private key. The receiver of the electronically transmitted document must use the public key to first decrypt the electronic signature in order to gain access to the encrypted document. He then uses the same special software owned by the sender, to decrypt the document itself. The special software insures that unauthorized recipients do not have the capability to decrypt the encrypted secure signature, the encrypted document, nor can they back-convert the encrypted document to its original form.

Technical Submissions' Exemption from Certification

Exemptions are specific situations which are granted relief from established law. Two exemptions from the requirements for sealing and certification have already been mentioned: (1) Shop drawings, and (2) Standard Design Plans. These involve the licensed professional. The course segment immediately below deals with documents and activities that do not fall under the various licensing laws.

The Common Exemptions to the Practice of Architecture and Engineering

As it turns out, it is important to have a clear understanding of the legal limitations of the professions. In this section we will deal with the more or less straightforward, well defined, exemptions from sealing and certification.

The following construction activities and associated documents are usually (more on this later) exempt from both the Architecture and Engineering licensing laws in Iowa and therefore sealing of these technical documents is optional:¹⁶

1. Detached residential buildings containing twelve or fewer family dwelling units of not more than three stories and outbuildings in connection with the buildings.
2. Buildings used primarily for agricultural purposes including grain elevators and feed mills and not corporate or publicly owned.
3. Nonstructural alterations to existing building which do not change the use of the building:
 - (a) From any other use to a place of assembly of people or public gathering.
 - (b) From any other use to a place for government, educational, or hazardous use.
 - (c) From any other use to a place of residence not exempted by item 1 above.
 - (d) From an industrial or warehouse use to a commercial or office use not exempted by item 4.
4. Warehouses and commercial buildings not more than one story in height and not exceeding ten thousand square feet in gross floor area; commercial buildings not more than two stories in height and not exceeding six thousand square feet in gross floor area; and light industrial buildings.
5. Factory built buildings which are not more than two stories in height and not exceeding twenty thousand square feet in gross area. [Note: A pre-engineered building utilizing standard building components assembled on the building site is not considered a factory built building].¹⁶ [Note: In

accordance with the Iowa State Building Code Act (Chapter 103A IAC), mobile homes, manufactured homes, and modular homes are included under the definition of factory built buildings].

6. Churches and accessory buildings, whether attached or separate, not more than two stories in height and not exceeding two thousand square feet in gross area.

In all cases when applying the exemptions outlined above, the use of the building takes priority over the size of the building. For example, a place of assembly or governmental use is not a commercial use, and would not constitute an exemption even if the building is not more than one story in height and does not exceed more than 10,000 square feet in gross area.⁷

Sealing Documents relating to Private Industry versus Public Impact

Technical employees of private manufacturing concerns who conduct their own internal engineering activities have enjoyed an exemption from the Architectural, Engineering, and Surveying laws since the very inception of their enactments. This exemption was granted based on the proposition of limited exposure and risk to the general public



generated by these private activities. The stance of limited external impact by private operations changed with heightened emphasis and interest in environmental issues in the early 1970s. It is obvious now that emissions and discharges of pollutants to air, surface and ground water, can potentially impact the life, health, safety, and property of the public. Since these emissions are not limited to the boundaries of the industrial property, industrial facilities are no longer exempt solely on the basis of the entity's involvement in *a developed or manufactured product*. The internal activities of private industry which may potentially impact the public are regulated by the current practice laws. Currently, the Iowa Department of Natural Resources (DNR) requires that the design, permitting, and construction of private industry wastewater treatment facilities and air pollution control measures be carried out under the responsible charge of a Professional Engineer.^{21, 22} Federally mandated oil spill control and countermeasure plans for private industrial facilities must be sealed by a Professional Engineer.

There is no specific reference to an industrial exemption in the Architecture law.

Sealing Exemptions can be Superseded

It is an oversimplification to assume that the sealing exemptions previously mentioned are without occasional enforced variation. As it turns out, the applicability of local ordinances, regulations, or building codes may invoke more stringent certification requirements. A perfect example is one in which certain Iowa localities, who wish to participate in the Federally subsidized National Flood Insurance Program (NFIP), must incorporate into their building code ordinance, phraseology mandated by the Federal Emergency Management Agency. Because of this Federal regulation, the building plans for some residential structures situated in flood prone areas, which would otherwise be exempt, may fall under the Iowa Architectural and Engineering Acts.²³

Summary

1. The use of seals to indicate authenticity dates back to antiquity B.C. in the Old World and back to the colonial period in the United States. The use of technical professional seals in Iowa for document certification began in the first quarter of the twentieth century.
2. Document sealing and certification in Iowa is strictly controlled through Code Chapters and Rules which are dynamic. It is incumbent upon licensed professionals to be knowledgeable of these regulations.
3. Practice overlap exists among the licensed technical professions; this fact can contribute to sealing improprieties. Registered Architects generally should not seal electrical, mechanical, and structural drawing sheets; Engineers generally should not seal floor plan, wall section, and elevation view sheets.
4. Only final documents should receive certification consisting of sealing, signing, and dating. Certifications are contained within an information block. Documents preliminarily released must be clearly labeled as such.
5. Acceptable seal forms are embossments, stamps, computer generations, and electronic transmissions. Only copies, not originals or reproducibles, should be certified. Facsimile signatures are prohibited.
6. Exemptions and exceptions to the laws and Rules currently exist; they are dynamic. For this reason, licensed technical professionals must stay abreast of changes to the numerous governing regulations.

Design professionals play a critical role in the public building process. The quality of their service is certainly one of the most important factors in insuring the safety, health, and protection to the natural and built environment. As the first steps in the construction process, a design, and the authenticity of the resulting technical submissions and engineering documents, is intuitively obvious. It is believed that most Iowa licensed technical professionals intend to conduct their practice in compliance with the applicable laws of their respective professions and that they are respectful of the laws of professions who may have overlapping, common practice. Infractions or violations of seal use among the regulated professions often occur simply because the licensee is not aware of the Board's Rules and the Code of Iowa.

Additional Resources

The list that follows contains the names, addresses, telephone numbers, and e-mail addresses of organizations and agencies which play an important role in regulatory affairs of Iowa licensed technical professionals. They can be contacted directly regarding any additional information or for clarifications needed on acceptable sealing and certification practices.

1. Iowa Department of Commerce, Professional Licensing Bureau, 1920 S.E. Hulsizer Road, Ankeny, Iowa 50021, (515) 281-7393, Facsimile (515) 281-7411, website:
www.state.ia.us/government/com/prof/pro_licens/about_pl.html.
2. Iowa Architectural Examining Board, 1920 S.E. Hulsizer Road, Ankeny, Iowa 50021, (515) 281-7393, Facsimile (515) 281-7411, e-mail: sandy.malek@comm7.state.ia.us, website:
www.state.ia.us/government/com/prof/architect/home.html.
3. Iowa Engineering and Surveying Examining Board, 1920 S.E. Hulsizer Road, Ankeny, Iowa 50021, (515) 281-4126, Facsimile (515) 281-7411, e-mail: Gleena.Coates@iowa.gov, website:
www.state.ia.us/government/com/prof/engineer/contact.html.

4. Iowa Landscape Architecture Licensing Board, 1920 S.E. Hulsizer Road, Ankeny, Iowa 50021, (515) 281-7395, Facsimile (515) 281-7411, e-mail: Glenda.Loving@iowa.gov, website: www.state.ia.us/government/com/prof/landscape/home.html.
5. National Council of Architectural Registration Boards, 1801 K Street NW, Suite 1100-K, Washington, DC 20006, (202) 783-6500, Facsimile (202) 783-0290, e-mail: customerservice@ncarb.org.
6. United States Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, Washington, DC 20472, (202) 566-1600, www.fema.gov.
7. National Society of Professional Engineers, 1420 King Street, Alexandria, Virginia 22314-2794, (703) 684-2800, Facsimile (703) 836-4875, www.nspe.org.
8. American Institute of Architects, 1735 New York Avenue NW, Washington, D.C. 20006-5292, (800) 242-3837, Facsimile (202) 626-7547, e-mail: infocentral@aia.org.

References

1. Iowa Legislature General Assembly, Administrative Code, Rule 193, Professional Licensing and Regulation Bureau, Chapter 1, Organization and Operation.
2. Nostalgic Impressions Incorporated, Post Office Box 1309, Selden, New York 11784, ©2003, www.nostalgicimpressions.com.
3. North Carolina Office of Administrative Hearings, Rules Division, Administrative Code, Title 21, Chapter 2, Architecture.
4. *Architecture As It Differs From Engineering*, National Council of Architectural Registration Boards, Washington, D.C., April 1995.
5. Belzung P.E., J.L., *Who Should Be The Prime Professional?*, Iowa Examining Board News, page 3, Fall 1996.
6. Iowa Legislature General Assembly, Iowa Code, Title XIII, Commerce, Subtitle 4, Professional Regulation, Commerce Related, Chapter 544A, Registered Architects.
7. Iowa Legislature General Assembly, Administrative Code, Rule 193B, Architectural Examiners.
8. Iowa State University, Facilities Planning and Management, Architectural and Engineering Design Standards, Design Manual, §1.01 *Working Relationships*, Ames, Iowa, October 2003.
9. Iowa Legislature General Assembly, Iowa Code, Title XIII, Commerce, Subtitle 4, Professional Regulation, Commerce Related, Chapter 542B, Professional Engineers and Land Surveyors.
10. Iowa Legislature General Assembly, Iowa Code, Title XIII, Commerce, Subtitle 4, Professional Regulation, Commerce Related, Chapter 544B, Landscape Architects.
11. Belzung P.E., J.L., *Sealing and Certification*, Iowa Examining Board News, page 4, Fall 1997, reproduced from the Iowa Engineering Society's Exponent magazine, publication date unknown.
12. Private use of any Iowa State seal is restricted by law. Iowa State seals may not be used for commercial purposes by unauthorized individuals. It is held that the consequential commercial use of the seals displayed in this course is subordinate to the primary purpose of education. Therefore, their use herein is believed to be consistent with the intent of the law.

13. While it is known that the presentation of individually registered Iowa professional seals is strictly controlled (Reference: IC §542B, §544A, §544B), it is believed that the generic Iowa professional seal designs displayed in this course content are public domain. Facsimiles of hypothetical (example) Iowa professional seals displayed in this content are ©2000 A-Plus Rubber Stamp & Engraving, Duncanville, Texas, 75116. Custom individual stamp and seal embossers are available from them at www.aplusrubberstamps.com/.
14. Iowa Legislature General Assembly, Administrative Code, Rule 193C, Engineering and Surveying Examining Board.
15. Iowa Legislature General Assembly, Iowa Code, Title XII, Business Entities, Subtitle 2, Business and Professional Corporations, Chapter 490, Business Corporations.
16. *Handbook for Iowa Building Officials and Design Professionals*, Iowa Architectural Examining Board and Iowa Engineering and Land Surveying Examining Board, Ankeny, Iowa, February 1997.
17. *Board Adopts Sealing Rules*, Iowa Examining Board News, page 5, Fall 1996.
18. Iowa Legislature General Assembly, House Study Bill 549, Section 542B.16, Sealing Requirement, February 1996.
19. National Council of Examiners for Engineering and Surveying, Model Rules, Section 240.20.C, Seal on Documents, Clemson, South Carolina, August 2003.
20. Iowa Legislature General Assembly, Iowa Code, Title XIII, Commerce, Chapter 554D, Uniform Electronic Transactions Act.
21. Iowa Legislature General Assembly, Administrative Code, Rule 567, Environmental Protection Commission, Title IV, Wastewater Treatment and Disposal, Chapter 64, Wastewater Construction and Operation Permits.
22. Iowa Legislature General Assembly, Administrative Code, Rule 567, Environmental Protection Commission, Title II, Air Quality, Chapter 22, Air Quality Construction and Operation Permits.
23. Iowa Legislature General Assembly, Administrative Code, Rule 567, Environmental Protection Commission, Title V, Flood Plain Development, Chapter 70, Scope of Title-Definitions-Forms-Rules of Practice.
24. Iowa Legislature General Assembly, Administrative Code, Rule 193D, Landscape Architectural Examining Board.