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Pennsylvania Laws and Rules Governing Professional Engineer Seals

Course Number: SL-02-638

PDH: 2

Approved for: PA (Check with your state engineering board for acceptance in other states)

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New Jersey Professional Competency Approval #24GP00025600 North Carolina Approved Sponsor #S-0695 Maryland Approved Provider of Continuing Professional Competency Indiana Continuing Education Provider #CE21800088

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1. Introduction

In Pennsylvania, all licensed design professionals need to know the relevant regulations and practice law before they can legally use professional seals. These set of required laws can be found in a collection of Acts called the Pennsylvania Consolidated Statutes. These statutes can be further broken into Titles, Chapters, and then Sections. The statute that deals with certification and sealing is primarily found in Title 63. Professions and Occupations. The following chapters also deal with the Professional statutes on seals and certifications:

- 1. Chapter 2A. Architects Licensure Law
- 2. Chapter 5. Engineer, Land Surveyor, and Geologists Registration Law
- 3. Chapter 23. Landscape Architects' Registration Law

The Pennsylvania Code (P.C for short) is a group of regulations designed to implement the Pennsylvania statute chapters above. Its most relevant parts are Title 49. Part 1. Subpart A, as well as these chapters:

- 1. Chapter 9. State Architects Licensure Board
- 2. Chapter 15. State Board of Landscape Architects
- 3. Chapter 37. State Registration Board for Professional Engineers, Land Surveyors, and Geologists.

The Pennsylvania Consolidated Statutes are also known as Acts, while the regulations contained in the P.C are often called Rules. To make it easier to read, this course will use just the reference numbers instead of stating each Statute or Code sections.

Every Technical design professional is regulated by their respective Pennsylvania Board of Examiners and Registration. Before the internet, each board sent out periodical mails to officially convey news related to their professions. Today, this same information is published in Newsletters on the internet. Some of the news contained in newsletters could be statutory requirements, Rules, statutory changes, Rules changes, licensing requirements, proposed or awaiting Rule changes, License renewal procedures, Board interpretative rulings and guidelines, Board actions, professional or ethical standards or disciplinary actions.

This course will merge the most relevant past Board newsletters and parts of Pennsylvania laws that deal with using professional seals. Note that the course is not intended to substitute or replace the official sources of information regarding the rules and regulations governing Professional seal usage. This course is intended to supplement already available information, and the hope is that it conveys the same issues and concerns raised by the regulatory bodies. The reference section comprehensively catalogs all official documents used.

Though technical design professionals are regulated by different boards, the prescribed method of seal usage remains consistent across all Pennsylvania professional boards. However, slight differences are



not unusual, and wherever minor differences abound, they will be noted. Despite the amount of care this course has taken to ensure completeness and accuracy of seal usage laws and regulations, readers should note that Acts and Rules get revised periodically. Hence, while the foundation of this course will remain relatively unchanged, some specifics will change due to the revision of Rules and Acts. To stay informed, readers are encouraged to follow the relevant laws from time to time. This can be done by following the relevant websites listed in the Reference section. This content does not have any enforcement power, so no licensed professional is obliged to follow it.



2.0 The History of Seals

The term "seal" comes from the process of closing up something. Sealing was first used when referring to the process of closing a document to privacy and security purposes. Even though the old methods of sealing could not stop unauthorized viewing of a document, unbroken seals indicated that it had not been viewed and so was secured. With time, seals have evolved to represent the indisputable authenticity of a document, the same way a signature is accepted worldwide today.



In 3000 B.C, China's emperor used his thumbprint to seal documents. The Old Testament documents one of the oldest cases of fraud - where Queen Jezebel stole King Ahab's seal and used it to counterfeit documents. Governments and Royalty use seals on proclamations to give them their stamp of approval. Edward the Confessor owned the first Great seal of England, and the impressions of this seal can still be found today. During this period, virtually everyone had seals. Even though most people had only one seal, royalty typically had several, including a "Great" seal and other seals for courts and officials. The common practice then was to destroy a seal after the death of its owner; this is why so few original seals remain in existence today. Royalty seals were often handed over during big ceremonies, and during the Medieval Times,

the seal's size and motif conveyed the status of the owner. The earliest motifs were heralds or equestrian in nature - showing the owner in many pursuits, either battling or hunting. William the Conqueror favored an equestrian seal that showed him armed and prepared for battle. During this same period, betrothals were arranged; hence love notes were written secretly, with the content secured in an envelope with a wax seal. This way, the recipient is certain their passion is secret.



3.0 Background of Seals in the U.S

The first official seals in the US were created in July 1776, right after the Declaration of Independence by John Adams, Benjamin Franklin, and Thomas Jefferson. Soon after the declaration of independence, the U.S congress had realized the need for seals. But as literacy grew, the need for seals diminished. When gummed envelopes were introduced during the 19th Century, the relevance of seals for securing privacy decreased. With time, seals became a personal statement or decorative embellishment than a statement of privacy. Today, seals have both official and symbolic functions. The offices of the president, States, Federal agencies, State agencies, notaries and corporations all use seals in official capacities.



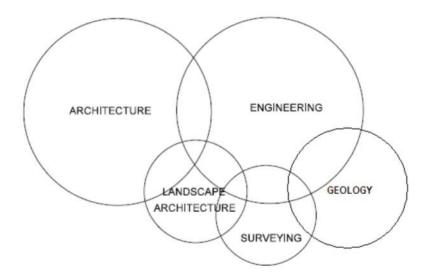
The need for professional seals stem from the laws governing different professions. Wyoming, despite being the first state to enact a registration law for engineers in 1907, was the last state to enact laws governing architecture, which happened in 1951. As of 1952, every U.S State and its territories had adopted some type of licensing law regulating technical design professions. Pennsylvania's architectural registration law goes back to 1919, while its engineering counterpart was enacted in 1921. Landscape Architectural practice law came into being in 1966, and by 1992, the engineering and Land surveying Act was revised to also regulate the profession of geology.



4.0 Professional Practice Overlap

There is no consensus amongst Pennsylvania building code officials, other regulatory agency personnel or even licensees about how, when, and in what manner professionals are allowed to use their seals. One of the most frequent professional misconduct is improper use of seals. Improper seal usage sometimes exists because of the overlap between the practice in Architecture, Geology, Surveying, Landscape Architecture, and Engineering professions. An example of such misconduct is when a licensee affixes their seal to a work they are not privileged to undertake. To appreciate the gravity of the problems wrong seal usage cause, it is important to study some of the areas of practice overlap.

The Venn diagram below provides a powerful visual of the overlap between professions. Each circle graphically shows the practice scope of each profession, whereas the overlapping areas of all five professions (sets) show the generally accepted and legally implied practice areas. In set theory, these common areas are called intersections, and they are responsible for the confusion in seal usage. Each of these intersections will be discussed as the course progresses.



Even though there is no significant meaning in the sizes of the diagram above, it should be noted that the actual population of Pennsylvania licensed Engineers and Architects exceed those of other licensed design professionals by far. In fact, this gap is so prominent it is estimated that there are ten times more professional engineers than there are land surveyors.

To begin understanding the technical overlapping amongst professions, this course will begin with the overlapping intersection of Engineering and Architecture.

4.1 Comparing Apples to Oranges or Comparing Apples to Pears

While the difference between the practice of engineering and the practice of architecture may seem glaringly obvious, many states and territorial jurisdictions offer different interpretations of what each profession should legally do. A quick examination of the legal actions of the various courts and the code



enforcement of their officials will reveal what each state considers allowable practice between the two professions. Differences exist in State-to-State interpretations ranging, on one hand, from those who make little or no clear distinction between the two professions, to the other extreme end where one profession has monopoly over the other. Pennsylvania case law has created very limited legal specifics in defining the boundaries of these two professions.

The issue here is not to contest the obvious difference between the Engineering and Architecture, but rather to state that the difference is often nebulous. The general consensus is that Architecture is a profession that focuses on designing buildings for human occupancy and habitation. Engineering, however, in addition to many other activities, is the profession that designs structures - including buildings as well as the building elements that make the structure functional. Despite being a simplistic approach, architecture is usually discriminated from Engineering by emphasizing interior and exterior aesthetics, form, and function with regards to occupancy and use. Key phrases typically used to describe architecture include: order, use, and beauty through the resource of the design and the call for artistic and technical ability.

While the main aim of this course is not to study Pennsylvania case law in great detail, it would be disingenuous to ignore a fairly recent case that provides legal precedent for the subject of this course. The engineering and architecture statutes may be limited with regards to the specific laws binding the two professions, but a 2000 appeals Commonwealth Court case sheds more light on this. Rosen v. State Architects Licensure Board brings to the front several clarifications and legal revelations regarding the intersection or overlap of architecture and engineering.

To summarize the Rosen case: a client, who had initially solicited a project proposal from a registered architect to provide professional services associated with the renovation of a Philadelphia building. After finding the proposal unacceptable, due to the high cost, the client chose to engage the services of a licensed engineer to provide the required design services needed to secure a building permit. The architect then filed a complaint arguing that the retained professional engineer worked illegally when they agreed to participate in the project, since it was the jurisdiction of architects.

The next paragraph details the most relevant sections of the Rosen case to the discussion of the practice bounds of these two Pennsylvania design professions.

To begin with, it was concluded that each of the two practice statutes explicitly recognizes that there is a professional overlap in both professions, and neither professional statute establishes a clear, mutually exclusive delineation between the two professions. It was noted that



Pennsylvania Judicial Center at Harrisburg

complications arise because both statutes allow reciprocal limited, incidental, practice. More on incidental practices in

a bit. Ultimately, it was concluded that because there exists overwhelming identical purpose in the two laws, they must be construed together and practically be considered as one.



With regards to the practice bounds, in Rosen, it was understood that both Engineers and Architects are legally allowed to design public and private buildings and structures. By virtue of a limiting reference to the design and construction of structures whose principal purpose is for "human habitation or use" in the definition of the practice of architecture, it was successfully argued that the statutory definition of the practice of engineering was broader than what was stated in the practice of architecture because no such limiting language existed in engineering law.

Though not universally accepted across the technical community, the National Council of Architectural Registration Board (NCARB) believes that Architects, by their educational training and internship, are the only design professionals properly prepared to coordinate all design disciplines and manage typical building projects.

4.2 Land Surveying Is Defined as a Special Branch of Engineering

The commonwealth of Pennsylvania is a bit unique in that the overlap of professional practice between Professional Land Surveyors and Professional Engineers is well delineated in the law. Not many states provide such legally specific boundaries of practice. The foundation for demarcation stems from the fact that, in Pennsylvania, surveying is considered a very specialized branch of engineering. The delineation is accomplished through the concept of the legally established term "Engineering Land Survey" that is defined as a series of surveying activities that do not involve the establishment of property boundaries. The legal excerpts below summarize the practice bounds:

A professional land surveyor may perform engineering land surveys but may not practice any other branch of engineering. A professional engineer may not practice land surveying unless licensed and registered as a Professional land surveyor; however, a professional engineer may perform engineering land surveys.

This course will provide more information concerning engineering land survey and who may legally practice it.

4.3 The Geologist and the Engineer



Before the 1992 amendment of the Engineering and Land Surveying Act, practicing geologists who wanted licensure could only do so as Professional Engineers. But by definition, geologists are considered scientists, not engineers. Compared to the broader legal definition of the Practice of Engineering, the statutory definition of the practice of professional geology limits its activities to the scientific evaluation and investigation of earth and geological factors. The present definition goes on to specifically prohibit geologists from practicing professional engineering, landscape

architecture or land surveying.

Adding to the complication is the specialized brand of civil engineering, also known as geotechnical engineering. It is routinely concerned with the evaluation of the physical, mechanical and chemical properties of subsurface materials through explorations and investigations. As a result, substantial



practice overlap does exist with the professional Geologist and the Professional Engineer practicing geotechnical engineering.

Legally speaking, the practice of professional geology is defined including the prediction and location of man-made and natural hazardous phenomena. Thanks to the public's heightened environmental concern and the resulting increase in environmental regulation, the practice realm of the professional geologist has mixed with certain areas previously seen as the domain of Professional Engineers practicing in the environmental engineering field.

In summary, with the expansion of the practice of Professional Geology into the environmental field, Professional Engineers already working in the geotechnical and environmental disciplines routinely provide the same services that have recently become associated with Professional Geologist. That said, the law does not allow Engineers to practice science that includes geology, soil science, chemistry or physics.



5.0 Incidental Practice Activities

5.1 Engineering Incidental to the Practice of Architecture (and vice versa)

Incidental practice refers to the act of conducting no-customary professional activities, which are subordinate or minor in nature, which support the primary, legally licensed practice activity. Incidental practice, which has very limited occurrence, is a practical reality. As in many states, incidental practice is legally addressed in Pennsylvania law. From the licensure law:

The [practice of engineering] shall not be deemed to include the practice of architecture as such, excepting only architectural work incidental to the practice of engineering. The [practice of architecture] shall not be deemed to include the practice of engineering as such, excepting only engineering work incidental to the practice of architecture.

5.2 Engineering Incidental to the Practice of Surveying

The idea of the engineering land survey was not fully developed earlier while discussing the practice of overlap. Pennsylvania Professional Land Surveyors are permitted to perform engineering land surveys. These surveys encompass the development of any tract of land including the incidental design of related improvements like line and grade extension of roads, sewers and grading, construction stake-out, and as-built plans. The legal definition of engineering land surveying also includes



underground and hydrographic surveys; storm water management surveys; erosion and sedimentation control surveys; determination of the quantities of materials; surveys for water percolation in soils; as well as the preparation of plans and specifications and estimates of proposed work and attendant costs for the survey. Hence, it is apparent that Pennsylvania Professional Land Surveyors have a lot of latitude with regards to what would normally be considered strictly limited to the practice of civil engineering in other states. Perhaps the only limiting legal statement regarding land surveyors performing these activities occurs with the exclusion that the engineering land surveyors must not require independent engineering judgment. Of course, independent engineering judgment is vague and not explicitly defined by the law.

5.3 The Practice and the Incidental Practice of Landscape Architecture



Though the practice of landscape architecture in the Commonwealth is regulated as a Practice Act instead of a tittle Act, legal language permits expansive incidental landscaping activities to both unlicensed and licensed entities. In fact, the only design professional not allowed to conduct landscape architecture endeavors is the Professional Geologist. The most relevant paraphrased excerpts are presented here:

The Landscape Architecture practice act shall not be construed to require licensure in the case of incidental landscape architectural service as is incidental to architectural, engineering or land surveying services or the practice of planning by community and regional planners, or the practice of any



nurseryman, landscape nurseryman, gardener or landscape gardener, general or landscape contractor as that practice pertains to planting design and its incidental items. This includes practice by agriculture, foresters, horticulturists, garden or land caretakers, home builders and graders or cultivators of land.

On the face of it, almost anyone can legally involve themselves in landscaping. However, representing oneself as a Registered Landscape Architect or offering professional landscape architecture service is prohibited.

Like Professional Land Surveyors, Registered Landscape Architects are legally permitted to design the settings and approaches to structures as well as other circulation improvements - the shapes and contours of water and land forms, the setting of grades and determination of environmental impacts and problems of land including erosion and sedimentation and other hazards. The Act goes further and states however that landscape architecture does not include the design of structures or facilities that are ordinarily included in the practice of architecture or engineering, and does not include the making of land survey.



6.0 Sealing and Certification

The main purpose of certifying technical documents is to attest that its preparation was done by a licensed person or under the licensee's control and supervision. Merely reviewing the work done by an unregistered or unlicensed non-employee does not count as supervision and control.

Although often used interchangeably, the concepts "sealing and certification" do not mean the same thing. A seal is only one part of a legitimate certification. At a minimum, two extra components, a date and signature, are also required. Examples of each design profession's seal can be seen below.

6.1 Architects

The prescribed seal design is indicated below. Though there is no apparent legal reference to size, the commercially available seals are found to range from 15/8 to 2 inches in diameter. The signature and date has to be applied near or across the seal, but not in a location that obscures the license number. See below.



The architecture practice law allows, with some special considerations, licensed architectural firms to use a professional seal that combines a firm's licensed individuals. Though no specific legal seal design is offered, the example below resembles what a hypothetical architectural firm group seal might look like:





The graphical representation of the seal above includes the statutory requirement that all of the licensees' registration numbers and names be shown, and that the legend "ARCHITECTS" be present. Note that using a group seal for a company's members is legal only if all the members are licensed individually. A legal warning for Commonwealth architects is that using a group seal or another such combination will not relieve individual licensees of their personal obligations as required by the Practice Act and Rule.

Is an Architect Registered, Licensed or Certified? Answer: Yes

Right off the bat, the seal legend states "Registered Architect" even though the practice Act and the Regulations emphasize "license or licensure" in referring to practitioners who have been granted licenses by the state Board of Architectural Examiners to practice architecture. That said, all through the current regulation, the words "registration" and "licensure" are often used interchangeably. The term "registration" refers primarily to architectural firms, who have been legally registered as the law requires or applied to be registered to conduct business within the Commonwealth. "Certification" is more accurately used with the procedure administered by the National Council of Architectural Registration Board (NCARB).

6.2 Professional Engineers, Geologist and Land Surveyors

Engineers, surveyors, and Geologists all use the same type of seal design, with the text portion alone differing. The outer diameter of the seal measures 13/4 inches. The date and signature must also be applied across or near the seal, but not where it will obscure the licensee's number. Examples of these seals can be seen below:



If a pocket seal (more on this later) is used, its outer diameter can be as small as 11/2 inches.

6.3 Landscape Architects

Professional Landscape architects have very unique seals. The design approved by the board is shown below:





6.4 Proper Use of Professional Seals

A bit about the proper use of seals has been discussed already in Practice overlap and activities. Though there is sparse legal language detailing the practice scope of the four design professions, the need for registered professionals to only use their seals in cases of self-evaluated professional competency can be gotten from legal references. One example of such legal reference is:

[A registered professional] shall not attempt to practice in any field of engineering, land surveying or geology in which the registrant is not proficient and shall not permit the use of his professional seal on work over which he was not in responsible charge.

One particular Commonwealth publication proposed a prescribed drawing sheet nomenclature consisting of the prefixes "A" for architectural drawings, and "P" for plumbing drawings, "E" for electrical drawings and so on goes to say:

The Architect's seal must appear on the architectural drawings and the Engineer's seal must appear on the engineering drawings, etc.

6.5 Facsimile Signatures

Original documents are prohibited from having facsimile signatures. Facsimile signatures should not be mistaken with the signature produced during the transmission of a scanned document with the signee's original signature (i.e. a faxed copy). A facsimile signature would be one graphically created by a computer, stamp, or any device not done with actual hands.

6.6 Certificate of Authorization Seal/Corporate Seal

A company's practice of engineering, architecture, land surveying, landscape architecture or geology is permitted as far as the fulfilled all the legal requirements of each respective Act. Besides architectural professionals, other business entities are not allowed to register under their respective professional practice because the law intended licenses for only individuals.

Unlike most states, Pennsylvania does not require any application for a certificate of authorization seal or corporate seal on technical documents for public records. As a result, this course will not be covering business conduct or the details of registering a business entity.



6.7 Drawing Classifications



Documents for construction companies are usually made of specifications, working drawings and sometimes contract documents like Standard Design Plan and Shop Drawings. A working drawing is characterized by the exhibition of a total result achieved by the integration of various systems and elements; they are prepared under the supervisory control of licensed design professionals.

6.8 Shop Drawings

These are limited in nature and are typically characterized by the indication of fabrications and/or the installation details of a bigger system's components. Shop drawings got their name because they were originally prepared by shop personnel who were in the employ of the contractor. Today, these drawings are prepared by original equipment contractors, manufacturers



or their subcontractors or even other specialists like fabricators who are not under professional licensee supervisory control. These shop drawings should be reviewed by the licensed professional responsible for the project. Though Shop drawings are considered exempt from licensing laws, if the practice of a design profession, as indicated in the various Acts, is performed during the course of preparation, the licensed design professional responsible for the design must certify them.

6.9 Standard Design Plans

These are the documents associated with structures, buildings, electrical and mechanical installations that graphically show items of a typical nature that do not represent or require special features unique to the design to which they will be incorporated or appended. The various Acts do not necessarily address the certification of standard design plans. It follows logically that if the practice of a design profession as defined in the various Acts is performed during the course of preparation of standard design plans, then the licensed design professional responsible for their preparation must also certify them.

6.10 Where Should Seals Be Placed?

Sealing rules apply to every sheet of final engineering drawings and survey plans. Landscape Architects and Architects are directed to seal, sign and date the first sheet of any bound set of drawings (along with the index of drawings affixed); the title page of specifications; as well as unbound every single sheet drawings and other pertinent contract documents.



7.0 Assignment of Professional Responsibility

Sometimes, several professionals are responsible for drawings contained in technical submissions and engineering documents. These documents must be certified by all the licensed professionals responsible for the document's preparation. Hence, one technical submission package may contain drawings that carry the certifications and seals of more than one licensed professional. All contributing professionals should put their respective certifications on the first page of the document, or on the first page of the identifiable portion or section of the document that was prepared or controlled by them. If necessary, there should be notations describing the work done under each license holder's supervision.



8.0 Qualified and Unique Qualifications

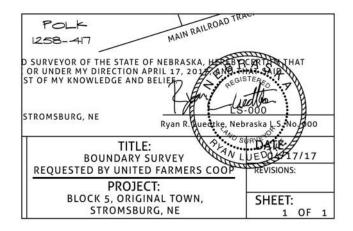
In today's complex world, simple, straightforward certification and sealing is not always possible. Qualified certifications abound to make allowances for such complex situations.

8.1 Professional Land Surveyor Certifications

Pennsylvania law, unlike many other state laws, does not legally define the bare minimum acceptable standards for practicing land surveying. To make up for this, Pennsylvania's Society of Surveyors publishes

"The manual of Practice for Professional Land Surveyors in the Commonwealth of Pennsylvania" provides nonbinding guidelines. The manual is not intended to guide professional seal use. It does, however, through an annotated commentary, suggest the bare minimum additional certification that may accompany the seal's impression.

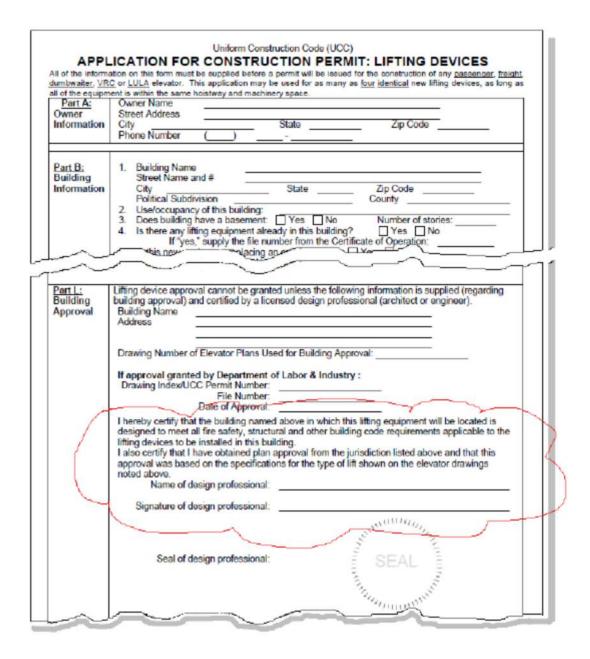
Counties and municipalities in Pennsylvania may, and they often do, impose very strict certification requirements. Professional Land surveyors should periodically catch up on these local laws to note any change in certification requirements for recordation plats. Such certifications may require statements about the adherence to specific subdivision ordinance, or even to the existence of encroachments or easements and additional statements regarding the accuracy of the survey, the resulting plat or even both. For example, a restricted portion of a plat for a hypothetical land tittle survey could look like this:



8.2 Special Certifications Required from Architects and Engineers

Projects that could potentially affect public health, safety, property, and welfare often require special certifications by state agencies or local jurisdictions. One such certification is shown below. The hypothetical certification below might be required by a county or municipal building inspection department:



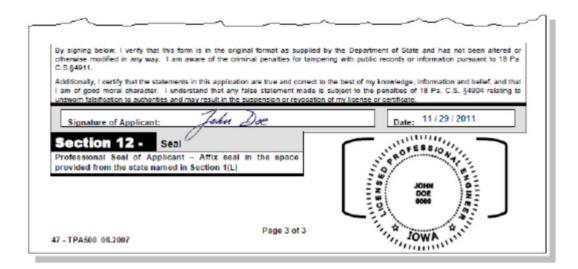


8.3 Using Non-Pennsylvania Seals

There is a very strict limitation on the use of seals besides Pennsylvania Commonwealth professional seals. Besides architecture, there are very restrictive regulations in each statute for temporary practice by unlicensed Commonwealth design professionals where the temporary licensee's oversigned foreign professional seal is allowed.

Temporary practice is limited for short periods not exceeding thirty days total in one calendar year. Special professional practice requirements need to be accompanied with a copy of the board issued temporary practice permit with a submission of the project documents.





9.0 Document Distribution and Control

In the real world, simple, straightforward, single-event sealing and certifications do not happen. Special considerations are given to some of these situations:

9.1 Interim or Preliminary Documents

Any document that is out of the confines of a design professional's office or out of his possession and control is considered "released". Released documents can only fall into two categories: 1. Preliminary (or incomplete), and 2. Final. Any work that is incomplete or preliminary must be indicated as such. It makes more sense when you consider this 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 the sealing requirements. Consequently, it logically follows that preliminary or incomplete documents should be clearly and conspicuously so noted to remove any chance of misunderstanding.

The different practice regulations do not specifically address the certification of preliminary documents. The professional engineering board has directed at least one registrant not sign or seal incomplete, interim or preliminary documents. Despite this, most Pennsylvania jurisdictions ask that plans submitted to local permitting agencies for preliminary reviews be certified by a licensed design professional, notwithstanding that subsequent plan modifications after review may be necessary.



It is prudent, therefore, that the interim, incomplete, or preliminary documents that are released be clearly labeled "PRELIMINARY ONLY", "NOT FOR CONSTRUCTION" or anything similar that clearly denotes the document is temporary.

9.2 Change Orders, Field Changes and Addenda

It is normal, inevitable even, for design and scope to change during a project's development. Any changes made in orders, fields or other addenda are considered technical documents. Hence they warrant certification. It is the licensee's responsibility to forward copies of all revisions made so that they can constitute part of the official submission copy. The revisions made must be identified as applicable with the professional seals applied to establish professional responsibility for all reviews.



10.0 Physical Seals Forms

10.1 History of Seal Forms

The means of creating physical seals have evolved. The first seal devices deformed the paper document through the impression of the seal by embossing. Due to their construction, they were often called metal seals. Physically smaller versions are called pocket seals because of their portability. The positive tactile response created by the raised embossment provides the indisputable verification of certification



authenticity. Unfortunately, these seal imprints were not highly visible and were difficult to reproduce photostatically. The actual construction of most embossing seals limits the placement of the seal near the edge of a given document.

Embossing seals are available today, though their use has decreased thanks to the popularity of rubber stamps and ink pads in the 1960s. The stamp allows ease of use, portability, and ease of placement anywhere on the document. For a brief period, nationally at least, the use of applique ("sticky-back" or "stick-on") seals became popular. Seals should be permanent and archival additions to the technical document; hence application of superficial media is not recommended. Today, seals are often graphically generated through computer software.

10.2 What is a Facsimile Seal?

When a seal is not impressed in the form of an embossment, it is legally called a facsimile seal. Different Pennsylvania practice laws regulate the allowed limits of facsimile seals, that is, one that results in the graphical representation of the embossed seal.

The architecture practice law explicitly requires the procurement of an embossing seal prerequisite to the allowed use of a facsimile seal and the impression of that seal on the first or cover sheet of final architectural documents. Any following sheets optionally may receive the embossing seal or a facsimile. Original signature and date certification must accompany the first or cover sheet embossing seal.

While not directly stated in the regulations of the other four design professions, the State Registration Board of Professional Engineers, Land Surveyors and Geologists has affirmed that the intent and regulatory meaning of the single term *seal* is in fact an embossing seal.²⁰ As such, an embossing seal must be prominently displayed on the first page, front cover, or flyleaf of each set of drawings, specifications, and designer's reports, irrespective of design profession. Facsimile seals may be affixed to accompanying drawing sheets.



10.3 Electronic Seals and Digital Signatures

With regards to technical documentation, anything "electronic" means; controlled or implemented by a computer or computer network. According to Commonwealth law, an electronic signature is an electronic symbol or process attached to or logically associated with a document, adopted by a person as means of signing documents. The terms "electronic seal" and "electronic signature" imply a digitally encrypted certification. It is beyond the scope of this course to cover the treatment of electronic certification in exhaustive detail. Suffice to say, secure certifications are created by special software that uses a combination of a pair of keys called the public key and private key. Hence, the sender encrypts the original document intended for electronic transmission using a special software and an electronically certifies the document using the private key. The receiver must use the public key to decrypt the digital signature before accessing the encrypted file. He will then use the special software owned by the sender to decrypt the actual document. Using special software guarantees unauthorized users do not have the ability to decrypt encrypted and secured signatures, the encrypted document, neither can they back-convert the encrypted document to its original form.

The Pennsylvania Electronic Transaction Act became effective in 1999. The law allows transactions to be legally binding even if conducted entirely through electronic means, and gives legal recognition of e-records and e-signatures. More importantly though is the fact that the law only applies to parties who have agreed to conduct transactions electronically. Furthermore, Commonwealth agencies are afforded discretion under the Act to determine if, and to what extent, they will accept electronic records. Government agencies are not expressly mandated to use or accept electronic records or signatures. Besides, the Act states that if other law needs a document to be sent, posted, transmitted or communicated through a specific method, or to need information formatted in a particular manner, then that document must be handled in the manner as implied by that law. Since the different professional practice Acts do not have provisions for electronic signatures or digital transmission of technical documents, it is only logical to conclude that electronic versions of these documents are not acceptable.

10.4 Seal Security and Control

Professionals need to take reasonable steps to guarantee the physical security of their seals. Consideration should be given to notify the relevant Board if a physical seal goes missing. Suspended architects or architects with revoked licenses are to render their seals in person, by mail or through facsimile stamps to their Board. Those with revoked licenses can expect their seals to be destroyed by the board.



11.0 Exemptions from Sealing

Certain situations are granted relief from the established law. Pennsylvania's practice regulation has a few specific exemptions from sealing and certifications to legally allow some unlicensed entities to operate. Though it is important for licensed design professionals to know the exact legal capabilities of unlicensed individuals, it is expected that professionals, who will have to affix their seals on all technical documents - including those produced by exempt individuals - will supervise and control the process before putting their seals.

11.1 Exempt Projects and Structures

The following are projects which non-licensed individuals and firms can legally create architectural designs or drawing documents.

- 1. Detached one-family or two-family home not more than three stories high, or accessory buildings;
- 2. Altered or remodeled buildings not involving structural changes or additions;
- 3. Any farm or utility structure, as long as it is used in connection with a farm residence.

The engineering practice Act does not permit such project and structural exemptions.

11.2 Federal Government Employees

Certain employees in technical services can be granted exemptions. They include Engineers, Architects, Land Surveyor and Geology employees working for the federal government, limited only to work associated with the U.S government. Though highly unlikely but still legally stated, regularly employed Architects of telephone, railroad or telegraph companies engaged in interstate commerce are also exempt. It seems logical that to qualify for these exemptions, these individuals must not furnish advisory services to the public and expect to be compensated in connection to the technical activities they are exempted for.

11.3 Attorneys, Construction Managers, and Geologists

Lawyers responsible for writing the property deed and description are exempt, while all persons involved in the formalized management of the construction projects do not require professional licensure. Other individuals providing geological services to businesses engaged in development or exploration of oil or gas are also exempt.

11.4 The Industrial Exemption

Since the inception of their enactment, technical employees of private manufacturing concerns conducting their own internal activities have always enjoyed exemption in engineering, architectural and surveying laws nationally. The exemption evolved due to the proposition of their limited risk and exposure to the general public, generated by their private activities. The justification for this exemption is further elaborated below:



Pennsylvania statutes allow employees of mining, manufacturing, communications common carrier, research and development and other industrial corporation exemptions from licensing Acts as long as the work they undertake is in line with or incidental to the services or products that business entity renders. Services are typically understood to not include technical design services normally associated with licensed design professionals.

In the early 1970s, due to heightened interest and emphasis in environmental issues, the stance of limited external impact by private operations changed. It is clear that emissions and discharges of air, ground, water, and surface pollutants could potentially affect public health, safety, and property. Because these emissions are not limited to the boundaries of an industrial property, industrial facilities no longer enjoy omnibus exemptions. Any internal activity by the private industry, which could affect the public, is now regulated by the current practice laws. For example, the Pennsylvania Department of Environmental Protection (DEP) requires the design of private industry waste water treatment facilities be done under the supervision of a licensed Professional Engineer. There are now federally mandated oil spill controls and countermeasure plans for private industries in Pennsylvania who operate aboveground storage capacities greater than 10,000 gallons to be certified by Professional Engineers.

11.5 Sealing Exemptions Can Be Superseded

It will be simplistic to assume sealing exemptions do not have occasional enforcement variations. As it happens, applying local ordinances, regulations or even building codes could invoke even more stringent certification requirements. One good example has to do with certain Pennsylvania localities who want to participate in the federally subsidized National Flood Insurance Program (NFIP). Interested localities must incorporate building code ordinance and phraseology mandated by the Federal Emergency Management System. Due to this Federal regulation, some residential structures situated in flood-prone areas, which would normally be exempted, will now have their building plans changed under the Pennsylvania statute.





12.0 Summary

1. The usage of seals to authenticate documents date back to antiquity B.C in the Old World, and back to the colonial period in the United States. The first quarter of the twentieth century saw the practice begin to use technical professional seals in Pen for document certification.

2. Pennsylvania Consolidated Statutes and Pennsylvania Codes are strictly responsible for controlling documentation and sealing within the state. It is the responsibility of the licensed and registered professional to stay updated on what these laws and regulations entail.

3. Practice overlap exists amongst the different licensed design professionals; this can lead to sealing improprieties. According to Architecture and Engineering practice Acts, mutually incidental professional activities are lawful; but each should limit their practice to their areas of expertise and competence.

4. All final documents should be certified. This means sealing, signing and dating all documents. All temporal or preliminary documents released must be clearly labeled as such.

5. The acceptable forms of seals are embossments, stamps, and computer generations. A seal impression done with an embossment must be used on the first page, front cover or flyleaf of each set of drawings, specifications and designer's reports.

6. There are currently some exemptions to the practice Acts and regulations, but these are dynamic, varied, and may or may not be superseded by local jurisdictions. Because of this, licensed technical design professionals must be updated on the numerous governing regulations.

Design professionals play a vital role in the public building process. The quality of their service is definitely one of the most important factors in ensuring public safety, health and protection of the natural and built environment. As the first step in the construction process, engineering documents, drawings, and the resulting technical submissions provide certification in a logical and sequential manner.

Most Pennsylvania licensed design professionals are believed to conduct their practice in strict compliance with the respective laws regulating their practice, and that they are respectful of the laws of other professions who may have overlapping, common practice. Infractions and violations of seal use amongst licensed professionals typically occur when licensees do not update their knowledge of the various Board's Regulations and Pennsylvania statutes.