

ADVISORY OPINIONS - ENGINEERING & SURVEYING

PE/PS Advisory: Review of Plans, Plats, or Engineering or Surveying Documents by Public Officials

The New Mexico Engineering and Surveying Practice Act, Sections 61-23-1 through 61-23-32 NMSA (1978), hereafter referred to as "the Act," defines the practice of engineering and surveying and who may engage in these practices. Persons performing acts or services described in the respective sections for engineering and surveying are required to be licensed as professional engineers or professional surveyors.

The review and approval of plans, maps, plats, reports and descriptions by public officials serves a multi-purpose function. In essence, reviewers enforce building code requirements that have been promulgated to protect the public's health and safety, which may or may not include professional engineering or surveying functions. A determination of whether a public employee's review and approval of plans, maps, plats, etc. constitutes the practice of engineering or surveying depends on the type of activity which is rendered by the public official. If while performing a review/approval function for code compliance, a public official engages in one of the activities described in the "Act" and that official is not a licensed professional nor is supervised by a licensed professional that public official would be in violation of the Act.

This advisory opinion is to clarify that non-licensed individuals cannot override or modify engineering or surveying documents prepared by licensed individuals unless such actions are concurred in by the licensee of record, and that said licensee takes full responsibility for such a decision.

[Approved 11/2/01]

PE/PS Advisory: Signatures/Electronic Signatures

Subject to the requirements of the Board's rules [16.39.3.12 NMAC & 16.39.5.11 NMAC], a licensee may affix an electronically generated signature and date of signature to documents; provided, however, that the licensee utilizes a secure method of affixation and provided that the registrant does not authorize any other person to so affix his signature and date in accordance with state statutes (Uniform Electronic transactions Act which applies only to transactions between parties each of which has agreed to conduct transactions by electronic means).

Signatures - the term "signature," as used in the Board's Administrative Code, shall mean handwritten or digital as follows:

1. A handwritten identification that represents the act of putting one's name on a document to attest to its validity. The handwritten identification must be:
 - a. Original and written by hand;
 - b. permanently affixed to the document(s) being certified;
 - c. Applied to the document by the identified licensee; or

2. A digital identification that is an electronic authentication process attached to or logically associated with an electronic document. The digital identification must be:
 - a. Unique to the person using it
 - b. Under the sole control of the licensee using it
 - c. Linked to a document in such a manner that the digital identification is invalidated if any data in the document is changed

Drawings, reports, or documents that are signed using a digital signature, as defined above, shall contain the following:

- a. Authentication procedure
- b. A list of the hardware, software, and parameters used to prepare the documents(s)

[Approved 11/2/01]

PE Advisory: Electronic Files Not Electronically Authenticated

Suggested language for inclusion in electronic files (approved by Board on 9/14/00):

"Absence of a seal, signature and date indicates this document is not the original. This media should not be considered a certified document. This document was originally issued and sealed by (name of sealer), (license number), on (date of sealing)."

[Approved 9/14/00]

ADVISORY OPINIONS - SURVEYING

PS Advisory: Acceptable Qualifying Surveying Experience

The New Mexico Engineering and Surveying Practice Act (hereafter referred to as "Act") requires a graduate of a board-approved related science curriculum of at least four years, to be considered for certification as a surveyor intern, to have a specific record of four years of combined office and field board-approved surveying experience obtained under the direction of a licensed professional surveyor [for licensure as a professional surveyor].

The Act requires a graduate of a four-year board-approved surveying curriculum to have at least four years of approved surveying experience [for licensure as a professional surveyor].

The Act requires a graduate of a board-approved four-year related science curriculum to have a total of eight years (includes the 4 years for as Surveyor Intern) of approved surveying experience [for licensure as a professional surveyor].

The applicant's experience must, at a minimum, include three years of increasingly responsible

experience in boundary surveying with a total of four years of increasingly responsible experience under the direct supervision of a licensed professional surveyor.

Increasingly responsible experience is to be found in the following five major elements of professional surveying.

Examples of Qualifying Experience

1. Research (13%)
 - a. Research record survey files and indices.
 - b. Research governmental records, rules, regulations, and statutes.
 - c. Research deeds
2. Legal Principles/Reconciliation (20%)
 - a. Identify boundary line discrepancies.
 - b. Reconcile records and field evidence.
 - c. Determine boundary line locations.
3. Computations/Analyses (25%)
 - a. Analyze existing control.
 - b. Verify field notes for completeness and accuracy.
 - c. Compute coordinate values.
 - d. Compute areas.
 - e. Prepare work sheets of surveys for final drafting/boundary determinations.
 - f. Compare research records with field data.
4. Documentation/Land Information Systems/Monumentation (14%)
 - a. Prepare boundary survey maps.
 - b. Prepare land descriptions.
5. Measurements/Locations (28%)
 - a. Locate existing monumentation
 - b. Perform angular and linear measurements
 - c. Perform boundary surveys of vacant and/or improved parcels
 - d. Retrace boundary lines.

Increasingly responsible experience is that experience which is also progressive experience. The board is to require progressive experience, not one year of experience repeated several times.

Responsible Office Experience

"Responsible office experience" includes, but is not limited to, the land surveying activities listed below. Under the responsible charge, direction, and review of a person legally authorized to practice surveying, the applicant:

1. Assists in the planning, directing, and analyzing necessary for the preparation of surveys, plats, and related documents.
2. Reduces and evaluates field data.
3. Develops procedures and systems for the collection, reduction, adjustment, and use of land surveying data.
4. Prepares data to be used by field surveyors or field crews.
5. Coordinates the preparation and processing of maps, plats, reports, descriptions, or other documents.
6. Researches records to obtain survey and title data.
7. Performs boundary analysis and reconciles records and field evidence to identify boundary lines' discrepancies.

The enumeration of the above tasks does not preclude the board from awarding credit for unenumerated training of a similar character in current or future surveying activities. It is also understood that the listed tasks are only some of those which may be considered as responsible training, and that this list is not in any way intended to enumerate all of the tasks, which may be performed by licensed professional surveyors.

Responsible Field Experience

Responsible field experience includes, but is not limited to, the land surveying activities listed below. Under the responsible charge, direction, and review of a person legally authorized to practice surveying, the applicant:

1. Assists in determining field survey methods and procedures, including selection of accuracy standards.
2. Selects or verifies that the correct control monumentation is used to establish the survey datums (horizontal and vertical) and selects "on the ground" locations for control monuments.
3. Inspects monumentation in the field and/or examines field evidence for the determination and identification of physical evidence.
4. Reviews measurements observations with the responsibility for accuracy, completeness, and consistency.
5. Reviews, learns procedures for and prepares field notes and records for proper application of field survey procedures.
6. Plans field checks, reviews field checks, and, based on such checks, determines if completed field survey plats are accurate and sufficient.
7. Searches for boundary and control monuments; assists in analyzing field evidence for locating boundary points and lines; identified and describes such evidence; compares record data to found physical evidence; compares record data to measured data, documents discrepancies; assists in acquiring and documenting testimony regarding boundary locations; recommends boundary locations and/or establishment; selects or verified that

- the correct controlling monuments are used to locate or establish boundary points and lines.
8. Recommends when existing boundary monuments are to be replaced; selects the methods to be used for replacing and resetting monuments.
 9. Functions as a "party chief," "chief of parties," or lead person in charge of field surveyors or field crews.

[NCEES]

PS Advisory: Certification and Registration as a Professional Surveyor by Endorsement/Comity

Section 61-23-27.4 E. states:

"If otherwise qualified, an applicant may be registered if he is currently registered as a professional surveyor in:

- (1) the District of Columbia, another state, territory or possession of the United States, provided that: (a) registration does not conflict with the provisions of the Engineering and Surveying Practice Act and that the standards required by the registration or the applicant's qualifications equaled or exceeded the registration standards in New Mexico at the time the applicant was initially registered; and...."

Therefore, out-of-state applicants must demonstrate that they met or exceeded New Mexico's requirements when they were initially registered as professional surveyors in their home state.

New Mexico Surveyor Interns who were certified by June 30, 1995 may continue to complete the PS registration in New Mexico without having to obtain a four-year degree under the current Act. Therefore, out-of-state applicants must demonstrate that they met or exceeded New Mexico's requirements when they were initially certified as a Surveyor Intern in their home state.

If applicants did not meet New Mexico's requirements when they were initially licensed or certified in another state, they shall meet New Mexico's current requirements.

[Approved 10/29/98]

PS Advisory/Guidelines for Evaluating Academic Qualifications:

Section 61-23-27.4. Requires for certification as a surveyor intern and licensure as a professional surveyor the following education:

- Completion of a board-approved, four-year curriculum in surveying; or
- Completion of a board-approved, four-year related science curriculum

The Board may approve related science curriculums if they include, or are augmented by eighteen (18) additional semester hours of surveying related courses. These curriculums will be evaluated by the Board on an individual basis. The additional eighteen (18) semester hours may be obtained

by completing courses from the following recommended list:

Plane Surveying*
Photogrammetry and Mapping
Legal Principles of Surveying*
Advanced Surveying*
Cartography
Surveying Practicum (work program)
Introduction to Remote Sensing
Survey Measurements, Analysis and Adjustments
Introduction to Geodesy*
Global Positioning Systems
Principles and Practices of Construction Surveying
Land Development Design

Twelve (12) of the eighteen (18) semester hours shall be obtained by completing those courses marked with an asterisk (*). The remaining semester hours may be obtained by completing any of the remaining courses.

[Rev. 6/14/01; Rev. 11/2/2017]

ADVISORIES - ENGINEERING

PE Advisory: Use of Seal on Certain Federal Plans/Certifications

Several federal programs and regulations (e.g. 40 CFR 112, 40 CFR 60.5360, 40 CFR 60.5360a) require the seal of a registered professional engineer for certain plans and/or certifications. In some cases, these regulations specify that the engineer needs to be registered in the state where the subject facility is located, while other regulations are less clear, or even state that the federal government does not have a position. Regardless of the federal regulation, if the practice of engineering is completed on a facility located within the geographic jurisdictional limits of the New Mexico Board of Licensure for Professional Engineers and Professional Surveyors, this document shall be sealed by a professional engineer duly licensed in the State of New Mexico. In addition, if a seal is not required on such a document, but the choice is made by the preparer to either seal the document or represent themselves as an engineer, that preparer must be a professional engineer duly licensed in the State of New Mexico, notwithstanding the allowances provided by NMSA 61-23-22. B.

[Approved 8/11/16]

PE Advisory: Use of Standard Detail Drawings

Q: If a revision/modification is made to a standard detail does the entire detail need to be re-stamped, or just the portion that's been revised/modified?

A: Title 16, Chapter 39, Part 3, Section 12 states:

"A. Each licensed professional engineer shall obtain a seal/stamp, which must appear on all design drawings, and the certification page of all specifications and engineering reports prepared by the licensee in responsible charge."

"E. For the purposes of the Engineering and Surveying Practice Act, a licensee of this board has "responsible charge of the work" as defined in Section 61-23-3 (M), NMSA 1978 and may sign, date and seal/stamp plans, specifications, drawings or reports which the licensee did not personally prepare when plans, specifications, drawings or reports have been sealed only by another licensed engineer, and the licensee and/or persons directly under his personal supervision have reviewed the plans, specifications, drawings or reports and have made tests, calculations or changes in the work as necessary to determine that the work has been completed in a proper and professional manner."

Yes, if the details are revised/modified the engineer in charge of the revision/modification will need to take responsibility for the entire detail.

[Approved 4/19/15]

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[Approved 9/14/00]

PE Advisory: Certification as an Engineer Intern and Registration as a Professional Engineer by Endorsement/Comity

Section 61-23-14.1 D. states: "An applicant may be registered by endorsement or comity if:

He is currently registered as an engineer in the District of Columbia, another state, a territory or a possession of the United States, provided the registration does not conflict with the provisions of the Engineering and Surveying Practice Act and that the standards required by the registration or the applicant's qualifications equaled or exceeded the registration standards in New Mexico at the time the applicant was initially registered; or

He is currently registered as an engineer in a foreign country and can demonstrate, to the board's satisfaction, evidence that the registration was based on standards that equal or exceed those presently required for registration by the Engineering and Surveying Practice Act and can satisfactorily demonstrate to the board his competence in current engineering standards and procedures."

Title 16, Chapter 39, Part 3, Section 13 states:

"13.1 For the purpose of New Mexico registrants by endorsement from other states, or possessions, the Professional Engineering Committee will only recognize registration granted by those authorities when the Professional Engineering Committee has determined that the applicant possesses qualifications which "do not conflict with the provisions of the Engineering and Surveying Practice Act and one of standards not lower than that specified in Sections 61-23-14 and 61-23-14.1, NMSA 1978". Conditions establishing eligibility for registration by endorsement shall have been met at the time of initial registration.

Additionally, the applicant must have a current registration in another state. Conditions for endorsement for registration as a Professional Engineer shall be as follows:"

Therefore, out-of-state applicants must demonstrate that they met or exceeded New Mexico's requirements when they were initially registered as professional engineers in their home state.

If applicants did not meet New Mexico's requirements when they were initially licensed or certified in another state, they shall meet New Mexico's current requirements.

PE Advisory: Non-engineering Graduates Enrolled in a Master of Engineering Program - FE Examination

Section 61-23-14 establishes when an engineering student may sit for the FE examination:

"A. An applicant for certification as an engineer intern shall file the appropriate application that demonstrates that he:

...

(2) Has obtained at least a senior status in a board-approved, four-year curriculum in engineering or in a board-approved, four-year curriculum in engineering technology that is accredited by the technical accreditation commission of the accreditation board for engineering and technology; and..."

Rule 16 NMAC39.3.7.1.4 defines a master of engineering degree as a "board-approved" engineering curriculum:

"Graduate degree (master or doctoral) from an engineering program where the bachelor's degree is ABET-accredited and the candidate has completed all the BS deficiencies (confirmation letter from graduate committee), even though the applicant's bachelor's degree was earned in a non-engineering program."

Therefore, a graduate who is working toward a graduate degree in an engineering program where the bachelor's degree is ABET-accredited, may be approved to sit for the FE examination prior to completing the master/doctoral degree provided there is verification from the Advisor/Professor that the graduate has completed all B.S. deficiencies and the applicant has provided the Board with an official transcript. Completion of the following minimum number of engineering credits will ensure that all academic deficiencies have been met: 32 semester or 48 quarter credit hours in math/science including 12 semester credits of calculus terminating with differential equations; 32

semester or 48 quarter credit hours of engineering science; 16 semester or 24 quarter credits of engineering design; and 16 semester or 24 quarter credits of humanities/social science).

The candidate's application, Advisor/Professor verification, and the official transcript will be reviewed by the board to ensure the candidate has obtained the equivalency of at least senior status.

These applicants shall submit their application to sit for the FE examination on the short form.

[Approved: 03/16/00]