

North Carolina Department of Transportation
Division of Highways
Traffic Engineering and Safety Systems Branch

STANDARD PRACTICE
for
Sealing Work Prepared by a Licensed Professional Engineer

It will be the standard practice to seal Traffic Engineering and Safety Systems Branch Plans, Studies, Reports and other documents that are produced under the responsible charge of a licensed Professional Engineer according to the requirements of North Carolina General Statutes Chapter 89C and the standards outlined in the North Carolina Administrative Code Title 21, Chapter 56 as identified on the attached sheets.

Traffic Safety Systems Management Unit

The following items will be sealed:

- **Final reports from Road Safety Audits**
- **Investigation Guidelines**
- **Collision Diagrams completed for court cases**
- **Crash Analysis completed for court cases**
- **Other documents completed for court cases**
- **Special investigations completed that require engineering analysis**
- **Safety Evaluations of countermeasures not including a single site**
- **Safety Planning reports for Municipalities, Counties, and
Rural Planning Organizations**
- **Safety Planning analysis for TIP projects**
- **Final Reports for Grant Projects**
- **Research Projects completed in the Unit**

Traffic Management and Signal Systems Unit

The following items will be sealed:

- **Cable Routing Plans (for Signal Systems and ITS)**
- **Electrical and Programming Details**
- **Materials Specifications (used to procure materials)**
- **Project Special Provisions**
- **Standard Construction Drawings**
- **Standard Metal Strain Pole and Mast Arm Pole Design**
- **Traffic Signal Head Upgrade Plans**
- **Traffic Signal Plans**
- **Traffic Signal Plan Revisions**

Traffic Congestion and Engineering Operations Unit

The following items will be sealed:

- **Traffic Control Plans**
- **Pavement Marking Plans**
- **Signing Plans**
- **Traffic Control, Pavement Marking, and Signing Specifications**
- **Traffic Control, Pavement Marking, and Signing Typical Drawings**
- **Traffic Control, Pavement Marking, and Signing Plan Revisions**
- **Traffic Control Resurfacing Packages**
- **Traffic Control User Cost Reports**
- **Evaluations, Reports, and Documents that are Technical in Nature**
- **School Traffic Operations Studies**
- **Municipal Traffic Operations Studies**
- **Traffic Impact Studies**
- **TIP Plan Review Studies**
- **Externally Generated Plans, Engineering Studies, Reports, and Evaluations**

Traffic Engineering Safety Programs Unit

The following items will be sealed:

- **Developed W-Projects**
- **Traffic Signal Recommendations**
- **Safety Audits – Reports**
- **Development Access Reviews and related Reports**
- **Corridor Study Reports**
- **Special Studies (similar to Median Barrier, Speed Limit, Truck Lane Restrictions, etc.)**
- **STAA Routes Investigation Reports and Memorandum**
- **Depositions/Legal Correspondence and Documents**

North Carolina General Statutes

§ 89C-19. Public works; requirements where public safety involved.

This State and its political subdivisions such as counties, cities, towns, or other political entities or legally constituted boards, commissions, public utility companies, or authorities, or officials, or employees of these entities shall not engage in the practice of engineering or land surveying involving either public or private property where the safety of the public is directly involved without the project being under the supervision of a professional engineer for the preparations of plans and specifications for engineering projects, or a professional land surveyor for land surveying projects, as provided for the practice of the respective professions by this Chapter. An official or employee of the State or any political subdivision specified in this section, holding the positions set out in this section as of June 19, 1975, shall be exempt from the provisions of this section so long as such official or employee is engaged in substantially the same type of work as is involved in the present position. Nothing in this section shall be construed to prohibit inspection, maintenance and service work done by employees of the State of North Carolina, any political subdivision of the State, or any municipality including construction, installation, servicing, and maintenance by regular full-time employees of, secondary roads and drawings incidental to work on secondary roads, streets, street lighting, traffic-control signals, police and fire alarm systems, waterworks, steam, electric and sewage treatment and disposal plants, the services of superintendents, inspectors or foremen regularly employed by the State of North Carolina or any political subdivision of the State, or municipal corporation. The provisions in this section shall not be construed to alter or modify the requirements of Article 1 of Chapter 133 of the General Statutes. (1975, c. 681, s. 1; 1998-118, s. 17.)

§ 89C-19.1. Engineer who volunteers during an emergency or disaster; qualified immunity.

(a) A professional engineer who voluntarily, without compensation, provides structural, electrical, mechanical, or other engineering services at the scene of a declared disaster or emergency, declared under federal law or in accordance with the provisions of Article 1 of Chapter 166A of the General Statutes or Article 36A of Chapter 14 of the General Statutes, at the request of a public official, law enforcement official, public safety official, or building inspection official, acting in an official capacity, shall not be liable for any personal injury, wrongful death, property damage, or other loss caused by the professional engineer's acts or omissions in the performance of the engineering services.

(b) The immunity provided in subsection (a) of this section applies only to an engineering service:

(1) For any structure, building, piping, or other engineered system, either publicly or privately owned.

(2) That occurs within 45 days after the declaration of the emergency or disaster, unless the 45-day immunity period is extended by an executive order issued by the Governor under the Governor's emergency executive powers.

(c) The immunity provided in subsection (a) of this section does not apply if it is determined that the personal injury, wrongful death, property damage, or other loss was caused by the gross negligence, wanton conduct, or intentional wrongdoing of the professional engineer, or arose out of the operation of a motor vehicle.

(d) As used in this section:

(1) "Building inspection official" means any appointed or elected federal, State, or local official with overall executive responsibility to coordinate building inspection in the jurisdiction in which the emergency or disaster is declared.

- (2) "Law enforcement official" means any appointed or elected federal, State, or local official with overall executive responsibility to coordinate law enforcement in the jurisdiction in which the emergency or disaster is declared.
- (3) "Public official" means any federal, State, or locally elected official with overall executive responsibility in the jurisdiction in which the emergency or disaster is declared.
- (4) "Public safety official" means any appointed or elected federal, State, or local official with overall executive responsibility to coordinate public safety in the jurisdiction in which the emergency or disaster is declared. (1995, c. 416, s. 1.)

§ 89C-20. Rules of professional conduct.

In the interest of protecting the safety, health, and welfare of the public, the Board shall adopt rules of professional conduct applicable to the practice of engineering and land surveying. These rules, when adopted, shall be construed to be a reasonable exercise of the police power vested in the Board of Examiners for Engineers and Land Surveyors. Every person licensed by the Board shall subscribe to and observe the adopted rules as the standard of professional conduct for the practice of engineering and land surveying and shall cooperate fully with the Board in the course of any investigation. In the case of violation of the rules of professional conduct, the Board shall proceed in accordance with G.S. 89C-22. (1975, c. 681, s. 1; 1987, c. 827, s. 73; 1998-118, s. 18.)

§ 89C-23. Unlawful to practice engineering or land surveying without licensure; unlawful use of title or terms; penalties; Attorney General to be legal adviser.

Any person who shall practice, or offer to practice, engineering or land surveying in this State without first being licensed in accordance with the provisions of this Chapter, or any person, firm, partnership, organization, association, corporation, or other entity using or employing the words "engineer" or "engineering" or "professional engineer" or "professional engineering" or "land surveyor" or "land surveying," or any modification or derivative of those words in its name or form of business or activity except as licensed under this Chapter or in pursuit of activities exempted by this Chapter, or any person presenting or attempting to use the certificate of licensure or the seal of another, or any person who shall give any false or forged evidence of any kind to the Board or to any member of the Board in obtaining or attempting to obtain a certificate of licensure, or any person who shall falsely impersonate any other licensee of like or different name, or any person who shall attempt to use an expired or revoked or nonexistent certificate of licensure, or who shall practice or offer to practice when not qualified, or any person who falsely claims that the person is registered under this Chapter, or any person who shall violate any of the provisions of this Chapter, in addition to injunctive procedures set out hereinbefore, shall be guilty of a Class 2 misdemeanor. In no event shall there be representation of or holding out to the public of any engineering expertise by unlicensed persons. It shall be the duty of all duly constituted officers of the State and all political subdivisions of the State to enforce the provisions of this Chapter and to prosecute any persons violating them. The Attorney General of the State or an assistant shall act as legal adviser to the Board and render any legal assistance necessary to carry out the provisions of this Chapter. The Board may employ counsel and necessary assistance to aid in the enforcement of this Chapter, and the compensation and expenses for the assistance shall be paid from funds of the Board. (1921, c. 1, s. 12; C.S., s. 6055(n); 1951, c. 1084, s. 1; 1975, c. 681, s. 1; 1993, c. 539, s. 612; 1994, Ex. Sess., c. 24, s. 14(c); 1998-118, s. 21.)

North Carolina Administrative Code

CHAPTER 56 – BOARD OF PROFESSIONAL ENGINEERS AND PROFESSIONAL LAND SURVEYORS

21 NCAC 56 .0701 RULES OF PROFESSIONAL CONDUCT

(a) In order to safeguard the life, health, property and welfare of the public and to establish and maintain a high standard of integrity, skills, and practice in the professions of engineering and land surveying, the following rules of professional conduct are promulgated in accordance with G.S. 89C-20 and shall be binding upon every person holding a certificate of licensure as a Professional Engineer or Professional Land Surveyor (licensee), and on all business entities authorized to offer or perform engineering or land surveying services in this state. All persons licensed under the provisions of G.S. 89C are charged with having knowledge of the existence of the rules of professional conduct, and shall be deemed to be familiar with their several provisions and to understand them.

(b) The licensee shall conduct the practice in order to protect the public health, safety and welfare. The licensee shall at all times recognize the primary obligation to protect the public in the performance of the professional duties. If the licensee's engineering or land surveying judgment is overruled under circumstances where the safety, health and welfare of the public are endangered, the licensee shall inform the employer, the contractor and the appropriate regulatory agency of the possible consequences of the situation.

(c) The licensee shall perform services only in areas of the licensee's competence and:

- (1) Shall undertake to perform engineering and land surveying assignments only when qualified by education or experience in the specific technical field of professional engineering or land surveying involved.
- (2) May accept an assignment or project requiring education or experience outside of the licensee's own field of competence, but only to the extent that the services are restricted to those portions or disciplines of the project in which the licensee is qualified. All other portions or disciplines of such project shall be performed by associates, consultants, or employees who are licensed and competent in those portions or disciplines.
- (3) Shall not affix the signature or seal to any engineering or land surveying plan or document dealing with subject matter for which the licensee lacks competence by virtue of education or experience, nor to any such plan or document not prepared under the licensee's direct supervisory control. Direct supervisory control (responsible charge) requires a licensee or employee to carry out all client contacts, provide internal and external financial control, oversee employee training, and exercise control and supervision over all job requirements to include research, planning, design, field supervision and work product review. A licensee shall not contract with a non-licensed individual to provide these professional services. Research, such as title searches and soil testing, may be contracted to a non-licensed individual, provided that individual is qualified or licensed to provide such service and provided the licensee reviews the work. The licensee may affix the seal and signature to drawings and documents depicting the work of two or more professionals provided it is designated by a note under the seal the specific subject matter for which each is responsible.

(d) The licensee shall issue public statements only in an objective and truthful manner and:

- (1) Shall be objective and truthful in all professional reports, statements or testimony. The licensee shall include all relevant and pertinent information in such reports, statements or testimony.
- (2) When serving as an expert or technical witness before any court, commission, or other tribunal, shall express an opinion only when it is founded upon adequate knowledge of the facts in issue, upon a background of technical competence in the subject matter, and upon honest conviction of the accuracy and propriety of the licensee's testimony.
- (3) Shall issue no statements, criticisms, or arguments on engineering or land surveying matters connected with public policy which are inspired or paid for by an interested party, or parties, unless the licensee has prefaced the comment by explicitly identifying the licensee's name, by disclosing the identities of the party or parties on whose behalf the licensee is speaking, and by revealing the existence of any pecuniary interest the licensee may have in the instant matters.
- (4) Shall not attempt to injure, maliciously or falsely, directly or indirectly, the professional reputation, prospects, practice or employment of another engineer or land surveyor, nor indiscriminately criticize another engineer or land surveyor's work in public. Indiscriminate criticism includes statements without valid basis or cause or that are not objective and truthful or

that fail to include all relevant and pertinent information. If the licensee believes that another engineer or land surveyor is guilty of misconduct or illegal practice, such information shall be presented to the North Carolina Board of Examiners.

- (e) The licensee shall avoid conflicts of interest and:
- (1) Shall promptly inform the employer or client and any reviewing agency of any business association, interests, or circumstances which could influence judgment or the quality of services.
 - (2) Shall not accept compensation, financial or otherwise, from more than one party for services on the same project, or for services pertaining to the same project, unless the circumstances are fully disclosed to, and agreed to, by all interested parties.
 - (3) Shall not solicit or accept financial or other valuable considerations from material or equipment suppliers for specifying their products.
 - (4) Shall not solicit or accept gratuities, directly or indirectly, from contractors, their agents, or other parties dealing with the client or employer in connection with work for which the licensee is responsible.
 - (5) When in public service as a member, advisor, or employee of a governmental body or department, shall not participate in considerations or actions with respect to services provided by the licensee or the licensee's organization in private engineering and land surveying practices.
 - (6) Shall not solicit or accept an engineering or land surveying contract from a governmental body on which a principal or officer of the licensee's organization serves as a member.
 - (7) Shall not attempt to supplant another engineer or land surveyor in a particular employment after becoming aware that the other has been selected for the employment.
- (f) The licensee shall solicit or accept work only on the basis of qualifications and:
- (1) Shall not offer to pay, either directly or indirectly, any commission, political contribution, gift, or other consideration in order to secure work, exclusive of securing salaried positions through employment agencies.
 - (2) Shall compete for employment on the basis of professional qualification and competence to perform the work. The licensee shall not solicit or submit proposals for professional services containing a false, fraudulent, misleading, deceptive or unfair statement or claim regarding the cost, quality or extent of services to be rendered.
 - (3) Shall, with regard to fee bidding on public projects, comply with the provisions of G.S. 143-64.31 et seq., (or for federal projects, the Brooks Act, 40 U.S. Code 541 et seq.) and shall not knowingly cooperate in a violation of any provision of G.S. 143-64.31 et seq. (or of 40 U.S. Code 541 et seq.).
 - (4) Shall not falsify or permit misrepresentation of academic or professional qualifications and shall only report educational qualifications when a degree or certificate was awarded, unless it is clearly stated that no degree or certificate was awarded. The licensee shall not misrepresent degree of responsibility in or for the subject matter of prior assignments. Brochures or other presentations incident to the solicitation of employment shall not misrepresent pertinent facts concerning employers, employees, associates, joint ventures, or past accomplishments with the intent and purpose of enhancing qualifications and work.
- (g) The Licensee shall perform services in an ethical and lawful manner and:
- (1) Shall not knowingly associate with or permit the use of the licensee's name or firm name in a business venture by any person or firm which the licensee knows, or has reason to believe, is engaging in business or professional practices of a fraudulent or dishonest nature or is not properly licensed.
 - (2) If the licensee has knowledge or reason to believe that another person or firm may be in violation of any of these provisions or of the North Carolina Engineering and Land Surveying Act, shall present such information to the Board in writing and shall cooperate with the Board in furnishing such further information or assistance as may be required by the Board. The licensee shall timely respond to all inquiries and correspondence from the Board and shall timely claim correspondence from the U. S. Postal Service, or other delivery service, sent to the licensee from the Board.
- (h) A Professional Engineer or Professional Land Surveyor who has received a reprimand or civil penalty or whose professional license is revoked, suspended, denied, or surrendered as a result of disciplinary action by another jurisdiction shall be subject to discipline by the Board if the licensee's action constitutes a violation of G.S. 89C or the rules adopted by the Board.

21 NCAC 56 .1101 GENERAL

It is misconduct for a Professional Engineer or Professional Land Surveyor to seal work done by another individual unless the work is performed under the "responsible charge" of the Professional Engineer or Professional Land Surveyor.

21 NCAC 56 .1102 DESIGN

The standard design of the seal shall be two concentric circles in which North Carolina and the name of the licensee are placed within the outermost circle and in which the license number of the licensee and either "Professional Engineer" or "Professional Land Surveyor," is placed within the innermost circle. The size shall be approximately 1 3/4 inches in diameter.

21 NCAC 56 .1103 STANDARD CERTIFICATION REQUIREMENTS

(a) Certification of Final Drawings. Drawings or maps not conforming to Paragraph (c) of this Rule shall conform to all of the following:

- (1) Certification is required on reproducibles or original drawings;
- (2) The seal may be a rubber stamp, embossed seal, computer-generated seal, or other facsimile that becomes a permanent addition to a plan sheet or map;
- (3) The licensee's written signature must be placed over, or near, the seal on the original document. A facsimile signature is not acceptable;
- (4) The date of signing must be annotated on the original document;
- (5) All sheets of engineering and surveying drawings must be sealed;
- (6) The name and address of the licensee's firm shall be included on each sheet of engineering drawings. For surveys, the licensee's name and address shall be included on the first sheet of the survey or title sheet; and
- (7) Any revision on a drawing after a licensee's certification is affixed shall be noted and dated and if not done under the responsible charge of the same licensee shall be separately certified.

(b) Certification of Specifications and Reports. All specifications, reports, or other documents, including letter reports and calculations, not conforming to Paragraph (c) of this Rule shall conform to all of the following:

- (1) Certification is required on original specifications, reports, or other documents, including letter reports and calculations;
- (2) The seal may be a rubber stamp, or other facsimile;
- (3) The licensee's written signature must be placed over, or near, the seal on the original document. A facsimile signature is not acceptable;
- (4) The date of signing must be annotated on the original document;
- (5) The title sheet of engineering specifications or other reports must be sealed and bear the name and address of the licensee's firm. The title sheet of any survey report or written description of property shall include the name and address of the Professional Land Surveyor; and
- (6) Any revision on a drawing after a licensee's certification is affixed shall be noted and dated and if not done under the responsible charge of the same licensee shall be separately certified.

(c) Exceptions to Required Certification. The seal of a licensee on a map, drawing, plan, specification, plat, document, or report shall signify that it is the final work of the licensee unless the work is stamped or clearly marked substantially as follows so as to put the public on notice not to use as a final product, in which case certification is optional:

- (1) "Preliminary - Do not use for construction";
- (2) "Progress Drawings - Do not use for construction";
- (3) "Preliminary Plat - Not for recordation, conveyances, or sales";
- (4) "Final Drawing - Not released for construction";
- (5) "Final Drawing - For Review Purposes Only";
- (6) "Not a Certified Document - This document originally issued and sealed by (name of licensee), (license number), on (date of sealing). This document shall not be considered a certified document";
- (7) "Not a Certified Document as to the Original Document but Only as to the Revisions - This document originally issued and sealed by (name of licensee), (license number), on (date of sealing). This document is only certified as to the revisions".

(d) Electronically transmitted documents. Documents, including drawings, specifications and reports, that are transmitted electronically to a client or a governmental agency shall have the computer-generated seal removed from

the original file, unless signed with a digital signature as defined in Paragraph (e) of this Rule. After removal of the seal the electronic media shall have the following inserted in lieu of the signature and date: This document originally issued and sealed by (name of sealer), (license number), on (Date of sealing). This medium shall not be considered a certified document. Hardcopy documents containing the original seal, signature and date of the licensee may be duplicated by photocopy or electronic scanning processes and distributed either in hardcopy or electronic medium. The scanned digital files of properly certified documents are not subject to the requirements of this Paragraph. The electronic transmission of CAD, vector or other similar files subject to easy editing are subject to the requirements of this Paragraph. Easy editing is based on the file consisting of separate elements that can be individually modified or deleted.

(e) Documents to be electronically transmitted that are signed using a digital signature, shall contain the authentication procedure in a secure mode and a list of the hardware, software and parameters used to prepare the document(s). Secure mode means that the authentication procedure has protective measures to prevent alteration or overriding of the authentication procedure. The term "digital signature" shall be an electronic authentication process that is attached to or logically associated with an electronic document. The digital signature shall be:

- (1) Unique to the licensee using it;
- (2) Capable of verification;
- (3) Under the sole control of the licensee; and
- (4) Linked to a document in such a manner that the digital signature is invalidated if any data in the document is changed.

21 NCAC 56 .1104 CERTIFICATION WITH TEMPORARY PERMIT

All plans, specifications, plats, and reports issued by a person holding temporary license in North Carolina, and for use in North Carolina, shall be stamped with the licensee's seal from the state of residence where licensed and in good standing. Directly beneath this seal, the licensee shall note the North Carolina Temporary Permit Number, written signature, and the date of signing. A facsimile signature is not acceptable.

21 NCAC 56 .1105 FIRM SEAL

The use of a seal by a firm is not required for certification. A firm seal is not authorized for use in lieu of the required seal of a Professional Engineer or Professional Land Surveyor. When a firm seal is used, it does not relieve the individual licensee of the requirements and responsibilities pertaining to the individual's seal.

21 NCAC 56 .1106 CERTIFICATION OF STANDARD DESIGN PLANS

Standard design plans that were initially prepared and sealed by an individual who is a licensed engineer in the state of origin of such plans may then be reviewed by a North Carolina Professional Engineer for code conformance, design adequacy, and site adaptation for the specific application within North Carolina. The Professional Engineer who is licensed in North Carolina assumes responsibility for such standard designs. Standard plans, which bear the seal of an individual who is a licensed engineer in another state, shall be sealed by the North Carolina Professional Engineer who is assuming responsibility. In addition to the seal, a statement shall be included as follows: "These plans have been properly examined by the undersigned. I have determined that they comply with existing local North Carolina codes, and have been properly site adapted for use in this area."