

Minnesota Attorney General: Administrative Rules Proceedings

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Board of Architecture, Engineering, Land Surveying, and Landscape Architecture

Adopted Permanent Rules Relating to Examination of Architect and Engineer Applicants

Rules as Adopted

1800.1000 EDUCATION AND EXPERIENCE.

Subpart 1. **Written examination requirement.** An applicant for licensure as an architect shall pass a written examination as provided in part 1800.1200. Written examinations are required of all applicants except those licensed under part 1800.0800, items D and G, that apply to those architects licensed in one or more states other than Minnesota. An applicant for licensure under part 1800.0800, items D and G, must satisfy the Minnesota licensing requirements that were in effect at the time of the applicant's original licensure in the other state.

Subp. 1a. **Admission to written examination.** To qualify for admission to the written examination, an applicant shall present evidence that the applicant has obtained at least 13 qualifying credits as provided in this part. At least ten of the qualifying credits must be for education and at least three of the qualifying credits must be for experience. The qualifying credits shall be granted as provided in subparts 5 and 6.

Subp. 2. to 4. [See Repealer.]

Subp. 5. **Credits for education.** Qualifying credits for education shall be granted as follows:

A. An applicant who has graduated from an architectural curriculum accredited by the National Architectural Accrediting Board (NAAB), shall, at the time of graduation or within two years after graduation, receive ten qualifying credits for education.

B. An applicant holding a four-year baccalaureate

preprofessional degree in environmental design or architectural studies shall be granted credit depending on the number of years of architectural design courses successfully completed. An applicant with three years of design courses shall be granted eight qualifying credits. An applicant with two years of design courses will be granted six qualifying credits. In no case shall the applicant holding a preprofessional degree be granted less than six qualifying credits for education.

C. An applicant holding a four-year baccalaureate degree from the following curricula shall be given six qualifying credits for education:

(1) curricula in architectural, chemical, civil, electrical, mechanical, or structural engineering accredited by the Accreditation Board for Engineering and Technology (ABET);

(2) curricula in landscape architecture accredited by the American Society of Landscape Architects Committee on Education; or

(3) curricula in interior design accredited by the Foundation on Interior Design Education Research.

D. An applicant holding a two-year associate degree in architectural technology or architectural drafting from a community college or technical institute shall receive two qualifying credits for education.

E. For the purposes of this subpart, 32 semester credit hours or 48 quarter credit hours is considered to be one year of education. Fractions of a year of education shall be given credit in the amount earned.

F. An applicant holding a degree or having completed coursework from a foreign college or university shall be granted credit toward the requirements of this subpart on the same basis as a graduate of a United States college or university if the board determines that the educational requirements for the degree are equivalent to the requirements of this subpart. The applicant shall furnish a copy of the applicant's grade transcript, including course descriptions of courses successfully completed, in English, with the initial application

for evaluation by the board.

Subp. 6. **Credits for experience.** Qualifying credits for experience shall be granted as follows:

A. The applicant's total experience must meet the requirements for qualifying experience in subpart 7.

B. Experience must be acquired after graduation, except that continuous experience in periods of ten or more weeks gained before graduation shall be counted if gained as specified in subpart 7 after graduation from high school.

C. Each year of experience gained under the direct supervision and control of a licensed architect shall count for one qualifying credit.

D. Each year of architecturally related experience gained under the direct supervision and control of a licensed professional engineer, licensed landscape architect, or an interior designer certified by the American Society of Interior Designers shall count for one-half qualifying credit.

Subp. 7. **Qualifying experience defined.** As used in this part, qualifying experience consists of experience gained in each of the following areas of the practice of architecture in accordance with the minimum number of hours shown.

A. Design and construction:

(1) programming and client contact, 80 hours;

(2) site and environmental analysis, 80 hours;

(3) schematic design, 120 hours;

(4) building code analysis, 80 hours;

(5) code research, 120 hours;

(6) design development, 320 hours;

(7) construction documents, 1,240 hours;

(8) specifications and materials, 120 hours; and

(9) document checking, 120 hours.

B. Construction and administration:

(1) bidding procedures, 80 hours;

(2) construction office, 120 hours; and

(3) construction observation, 120 hours.

C. Office management:

(1) office procedures, 120 hours; and

(2) professional activities, 80 hours.

The number of hours shown are minimum time requirements for the areas of practice listed and do not represent three years of experience. More experience may be gained in any of these areas of practice to total 5,600 hours or three years of experience. Persons requiring more than three years of experience shall document qualifying experience in the amount of 1,867 hours for each year required.

Subp. 8. **Future admission requirements.** Effective January 1, 1991, admission to the registration examination is limited to holders of a degree from a curriculum accredited by the National Architectural Accrediting Board (NAAB), or architectural education equivalent to that curriculum as determined by the board. Persons with board approved applications as of January 1, 1991, are permitted to continue the examination process until licensed to practice architecture in Minnesota.

1800.1100 PROCEDURES.

Subpart 1. **Completion date.** An applicant may request to be admitted to an examination if the applicant has completed, or will have completed the educational and experience requirements in part 1800.1000 by the time of the examination.

Subp. 2. **Preliminary admission request.** Applicants shall submit to the board a preliminary request for admission to the licensing examination. The request shall be submitted on a form provided by the board and must include a detailed listing of all architecturally related experience gained in accordance with part 1800.1000. The experience listing shall include the name and mailing address of the applicant's supervising licensed architect or other supervisor for each period of employment. A transcript of grades showing the date of award of any degree earned shall accompany the submittal. Upon approval of the preliminary request by the board, the applicant shall be provided formal application materials. The preliminary request shall be submitted to the board by February 1 for the June

examination and by August 1 for the December examination.

Subp. 3. **Formal admission application.** Applicants shall by April 1 for the June examination and by October 1 for the December examination submit a formal application for admission to the licensing examination on a form provided by the board. The formal application shall include one signed copy of board rules of professional conduct and a fee as specified in part 1800.0500, subpart 5, item A.

Subp. 4. **Obtaining application.** Application materials may be obtained by calling or writing the board office.

1800.1200 WRITTEN EXAMINATION.

Subpart 1. **Architect Registration Examination.** The Architect Registration Examination (ARE) shall be administered twice annually at a time and place determined by the board to those applicants determined by the board to meet the requirements of part 1800.1000 for admission to the examination. Any person failing one or more parts of the ARE shall retake the failed parts.

Subp 2. to 4. [See Repealer.]

Subp. 5. **Equipment during examinations.** Silent, hand-held, battery-operated electronic calculators may be used as required during the ARE.

1800.2500 EDUCATION AND EXPERIENCE.

Subpart 1. **Written examination requirement.** An applicant for licensure as a professional engineer shall pass a written examination as provided in this subpart. Written examinations are required of all applicants except those licensed under part 1800.0800, items E and G, that apply to those professional engineers licensed in one or more states other than Minnesota. An applicant for licensure under part 1800.0800, items E and G, must satisfy the Minnesota licensing requirements that were in effect at the time of the applicant's original licensure in the other state. The written fundamentals of engineering (EIT) examination shall be waived by the board if the applicant meets the requirements in part 1800.2800.

Subp. 2. **Admission to written examination.** To qualify for admission to the written examination, the applicant shall present evidence of:

A. Graduation from an engineering curriculum accredited by the Engineering Accrediting Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) at the time of graduation; and

B. Completion of a minimum of four years of qualifying engineering experience, if the applicant has graduated from a baccalaureate curriculum in engineering accredited by the ABET-EAC. Three years of qualifying engineering experience is required, if the applicant has graduated from a masters or doctoral curriculum in engineering from an institution with an ABET-EAC accredited baccalaureate curriculum in that discipline of engineering. Not more than two years credit shall be allowed for qualifying engineering experience, gained before graduation from an accredited engineering curriculum. The two years experience before graduation must have been gained after completion of the second year of approved engineering education. The experience shall be credited at the rate of 50 percent up to the maximum allowable credit of two years.

Subp. 3. **Exception for nonaccredited education.** An applicant who does not meet the requirements of subpart 2 may qualify for admission to the examinations if evidence is submitted to the board that education and qualifying engineering experience completed meet the following requirements:

A. The education requirements of an applicant whose education was not obtained in an engineering curriculum accredited by the Accreditation Board for Engineering and Technology shall be accepted only if the education is determined by the board to be equivalent to the content of the accredited curriculum required for a bachelor of science degree in engineering. The applicant shall be required to submit a transcript of grades, along with descriptions of courses taken from the educational institution from which the applicant

graduated, for evaluation by the board to determine the credit to be allowed for that education.

B. If the applicant holds a degree from a nonaccredited four-year engineering curriculum, that person will be required to document six years of qualifying and verifiable engineering experience following graduation. If the applicant also holds a master's or doctoral degree in engineering, the applicant shall document five years of qualifying and verifiable engineering experience following graduation. Up to two years credit shall be allowed for qualifying and verifiable engineering experience gained before graduation, as provided in subpart 2, item B.

1800.2600 ORAL EXAMINATION.

An applicant shall appear before the board for oral examination and submit two exhibits of engineering work the applicant has performed if:

A. the experience record does not clearly indicate the required qualifying engineering experience;

B. the applicant does not hold a degree from an approved engineering curriculum; or

C. the applicant qualifies for waiver of the fundamentals of engineering examination as provided in part 1800.2800.

An applicant residing in an overseas area shall submit one exhibit of the applicant's engineering work with a written critique of that exhibit in lieu of the oral examination.

1800.2700 WRITTEN EXAMINATION.

Subpart 1. **Two-part examination.** The written examination consists of the two parts described in subparts 1a and 2.

Subp. 1a. **Fundamentals examination.** Part I is the fundamentals of engineering examination that may be taken upon graduation from an engineering curriculum meeting the requirements of part 1800.2500. The passing of this examination gives the applicant the status of engineer-in-training as defined in Minnesota Statutes, section 326.10, subdivision 7.

The applicant shall not again be required to take this examination. The applicant shall take and pass the fundamentals of engineering examination (EIT) before being permitted to take the professional examination.

Subp. 2. **Professional examination.** Part II is the professional examination covering the principles and practice of engineering examination, is an examination in a field of major practice and is required as outlined in this subpart. Examinations are presently offered in the following fields of major practice in engineering: aeronautical/aerospace, agricultural, ceramic, chemical, civil, electrical, fire protection, geological, industrial, manufacturing, mechanical, metallurgical, mining/minerals, nuclear, petroleum, sanitary, and structural.

Subp. 3. **Scope of examinations.** The scope of the fundamentals of engineering examination, EIT and the principles and practice of engineering examination is as follows:

A. Fundamentals of engineering examination, EIT: multiple-choice questions in mathematics and the basic and engineering sciences as presented in accredited college or university engineering curriculum. Allotted time: eight hours.

B. Principles and practice of engineering examination: problems embracing knowledge of professional practice and applied economics as acquired in connection with the planning, design, and construction of engineering work during the required period of qualifying engineering experience. This part of the examination, together with the oral examination or exhibit with written critique, shall not be permitted until the full required period of qualifying engineering experience has been completed. Allotted time: eight hours.

Subp. 4. **Purpose of the principles and practice of engineering examination.** The principles and practice of engineering examination is given to determine the proficiency of the applicant in professional practice. This examination shall include questions designed to test whether the applicant has

learned to apply the knowledge and understanding of the basic and engineering sciences gained through training and experience to the solution of engineering problems.

Subp. 5. [Unchanged.]

1800.2800 ENGINEERS QUALIFIED BY GRADUATION, LONG EXPERIENCE, AND EXAMINATION.

The fundamentals of engineering examination must be waived in those cases where the applicant furnishes evidence of:

A. graduation from an accredited engineering curriculum, or receipt of a graduate degree based upon at least one academic year of resident study in a department whose undergraduate curriculum is accredited by the Accreditation Board for Engineering and Technology (ABET); being at least 40 years of age; and having a verified professional engineering record of 20 years or more of qualifying engineering experience;

B. holding membership in a British Institute of Engineering as a chartered engineer by examination or other national certification by examination as approved by the board; or

C. having a doctorate degree in engineering from an educational institution whose baccalaureate curriculum is accredited by ABET-EAC or whose education is equivalent thereto.

An applicant qualifying under item A, B, or C shall pass a written professional practice examination of at least eight hours duration. To qualify for waiver of the fundamentals of engineering examination under item A, the applicant's engineering experience shall show responsible charge of engineering projects for at least ten years and advancement in the character of the work performed. The experience gained before reaching the age of 20 years shall not be credited as a part of the required engineering experience, except that graduation from an accredited baccalaureate engineering curriculum shall be considered equivalent to four years of engineering experience. Credit shall not be given for more than a total of four years experience because of undergraduate

educational qualifications.

1800.2805 QUALIFYING EXPERIENCE DEFINED.

As used in this part and parts 1800.2600, 1800.2700, and 1800.2800, qualifying experience consists of varied, progressive, nonrepetitive, practical experience at engineering work, developing the ability to apply the theoretical knowledge gained during academic training in making sound judgments in solving engineering problems. The varied experience must include increments of design, planning, technical specification, codes and standards research and analysis, engineering economics, safety, observation, and inspection of construction of products. Experience shall be written in detail and submitted with the application for evaluation and approval by the board.

1800.2900 PROCEDURES.

Subpart 1. **Application deadline.** An applicant shall submit an application for admission to the fundamentals of engineering examination explained in part 1800.2700, subpart 1a, by February 1 for the April examination or by August 1 for the October examination. Application shall be made on a form provided by the board and shall include the fee specified in part 1800.0500, subpart 5, item B, subitem (1). A transcript of grades showing the date of award of the degree earned shall be submitted before the applicant may be certified as engineer-in-training.

Subp. 2. **Preliminary request for professional examination.** An applicant shall submit a preliminary request for admission to the principles and practice of engineering examination explained in part 1800.2700, subpart 2, by November 1 for the April examination or by June 1 for the October examination. The request shall be made on a form provided by the board and shall include a detailed listing of engineering experience gained. The experience listing shall include the name and mailing address of the applicant's supervisor for each period of employment. The board shall verify listed experience by sending

an employer reference form to each listed supervisor. A transcript of grades showing the date of award of the degree earned shall accompany the completed form, unless previously submitted. Upon approval of the preliminary request by the board, the applicant will be so notified and provided formal application materials.

Subp. 3. **Formal application for professional examination.** An applicant shall submit a formal application for admission to the principles and practice of engineering examination by January 2 for the April examination or by August 1 for the October examination. Application shall be made on a form provided by the board and shall include one signed copy of board rules of professional conduct and a fee as specified in part 1800.0500, subpart 5, item B, subitem (2).

Subp. 4. **Obtaining application material.** Application materials may be obtained by calling or writing the board office.

REPEALER. Minnesota Rules, parts 1800.1000, subparts 2, 3, and 4; 1800.1200, subparts 2, 3, and 4; and 1800.3000 are repealed.

B. Professional engineer:

(1) fundamentals of engineering. ~~$25~~ $30;

(2) principles and practice of engineering:. $60;

(a) ~~April 1988. $35~~ special structural I. 1990 $40. 1991 $60;

(b) ~~October 1988. $55~~ special structural II. 1990 $60. 1991 $110.

C. Land surveyor:

(1) fundamentals of land surveying ~~(effective as of September 1, 1988)~~. $32.50;

(2) principles and practice of land surveying:

(a) part III. ~~$15~~ $20;

(b) part IV A. ~~$30~~ $35;

(c) ~~parts III and IV. $15~~ part IV B. $15;

(d) parts III and IV A. $55;

(e) parts III and IV B. $35;

(f) parts IV A and IV B. $50.

D. Landscape architect:

(1) section 1. professional practice ~~1988 $20. 1989 $22~~. 1990 $28. 1991 $29;

(2) section 2. design. ~~1988 $25. 1989 $28~~ 1990 $34. 1991 $36;

(3) section 3. design application. ~~1988 $74. 1989 $77~~ 1990 $100. 1991 $107;

(4) section 4. design implementation. ~~1988 $69. 1989 $71~~ 1990 $95. 1991 $101; and

(5) section 5. grading and drainage. ~~1988 $47. 1989 $52~~ 1990 $68. 1991 $75.

[For text of subp 7, see M.R.]

Board of Architecture, Engineering, Land Surveying, and Landscape Architecture

Proposed Permanent Rules Relating to Examination of Architect and Engineer Applicants

Notice of Intent to Adopt a Rule without a Public Hearing

NOTICE IS HEREBY GIVEN that the State Board of Architecture, Engineering, Land Surveying and Landscape Architecture ("board") intends to adopt the above-entitled rule without a public hearing following the procedures set forth in the Administrative Procedure Act for adopting rules without a public hearing in *Minnesota Statutes*, sections 14.22 to 14.28. The statutory authority to adopt the rule is section 326.06.

All persons have 30 days in which to submit comment in support of or in opposition of the proposed rule or any part or subpart of the rule. Comment is encouraged. Each comment should identify the portion of the proposed rule addressed, the reason for the comment, and any change proposed.

Any person may make a written request for a public hearing on the rule within the 30-day comment period. If 25 or more persons submit a written request for a public hearing within the 30-day comment period, a public hearing will be held unless a sufficient number withdraw their request in writing. Any person requesting a public hearing should state his or her name and address, and is encouraged to identify the portion of the proposed rule addressed, the reason for the request, and any change proposed. If a public hearing is required, the board will proceed pursuant to *Minnesota Statutes*, sections 14.131 to 14.20.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

Comments or written requests for a public hearing must be submitted to: Mr. Lowell E. Torseth, Executive Secretary, Board of Architecture, Engineering, Land Surveying and Landscape Architecture, 133 East Seventh Street, St. Paul, Minnesota, 55101, Telephone: (612) 296-2388.

The proposed rule may be modified if the modifications are supported by data and views submitted to the board and do not result in a substantial change in the proposed rule as noticed.

A copy of the proposed rule is attached to this Notice.

Copies of this Notice and the proposed rule are available and may be obtained by calling Lowell E. Torseth.

A STATEMENT OF NEED AND REASONABLENESS that describes the need for and reasonableness of each provision of the proposed rule and identifies the data and information relied upon to support the proposed rule has been prepared and is available from Lowell E. Torseth upon request.

You are hereby advised, pursuant to *Minnesota Statutes*, section 14.115 (1986), "Small business considerations in rulemaking," that the proposed rule amendments will have no adverse effect on small businesses.

If no hearing is required, upon adoption of the rule, the rule and the required supporting documents will be submitted to the Attorney General for review as to legality and form to the extent the form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the adopted rule, must submit the written request to Lowell E. Torseth.

Dated: 22 January 1990

Lowell E. Torseth
Executive Secretary, Board of
Architecture, Engineering,
Land Surveying and Landscape
Architecture

Rules as Proposed

1800.1000 EDUCATION AND EXPERIENCE.

Subpart 1. **Written examination requirement.** An applicant for licensure as an architect shall ~~be required to~~ pass a written examination as provided in part 1800.1200 ~~and may be required to appear before the board for an oral examination for the purpose of verifying personal experience qualifications~~. Written examinations are required of all applicants except those licensed under part 1800.0800, items D and G, that apply to those architects licensed in one or more states other than Minnesota. An applicant for licensure under part 1800.0800, items D and G, must satisfy the Minnesota licensing requirements that were in effect at the time of the applicant's original licensure in the other state.

Subp. 1a. **Admission to written examination.** To qualify for admission to the written examination, ~~applicants~~ an applicant shall present ~~satisfactory~~ evidence that ~~they have:~~ the applicant has obtained at least 13 qualifying credits as provided in this part. At least ten of the qualifying credits must be for education and at least three of the qualifying credits must be for experience. The qualifying credits shall be granted as provided in subparts 5 and 6.

~~A. Graduated from an architectural curriculum accredited by the National Architectural Accrediting Board at the time of their graduation or within two years subsequent to that graduation; and~~

~~B. Completed at least three years of satisfactory professional experience after graduation under the supervision of licensed architects. Experience is credited as provided in subpart 4, table III. In lieu of meeting the experience requirements set forth in subpart 4, table III, an applicant may participate in the intern development program under the auspices of the National Council of Architectural Registration Boards to satisfy the requisite experience requirements. A copy of the intern development program experience criteria may be obtained from the board office. An intern development program participant shall file annually with the board a report of training completed during the year being reported. The report is due within 30 days following the anniversary date of entry to the intern development program. The board shall notify the intern development program participant when the intern development program experience requirements have been completed to the satisfaction of the board.~~

~~C. Applicants may also qualify for admission to the examination provided that they submit to the board satisfactory evidence of education and subsequent experience substantially equivalent to the above requirements and as set forth in subpart 2, table I.~~

~~The basis for determination of educational qualifications and equivalents are set forth in subpart 3, table II.~~

~~The basis for determination of experience qualifications and equivalents are set forth in subpart 4, table III; provided, that the provisions of this paragraph shall terminate effective January 1, 1991, except that the provisions of subpart 4, table III, Experience Criteria, shall continue to be applicable pursuant to item B.~~

~~Effective January 1, 1991, admission to the registration examination process shall be limited to holders of an architectural degree from a curriculum accredited by the National Accreditation Board (NAAB), or an equivalent architectural degree acceptable to the board.~~

Subp. 2. to 4. [See Repealer.]

Subp. 5. **Credits for education.** Qualifying credits for education shall be granted as follows:

A. An applicant who has graduated from an architectural curriculum accredited by the National Architectural Accrediting Board (NAAB), shall, at the time of graduation or within two years after graduation, receive ten qualifying credits for education.

B. An applicant holding a four-year baccalaureate preprofessional degree in environmental design or architectural studies shall be granted credit depending on the number of years of architectural design courses successfully completed. An applicant with three years of design courses shall be granted eight qualifying credits. An applicant with two years of design courses will be granted six qualifying credits. In no case shall the applicant holding a preprofessional degree be granted less than six qualifying credits for education.

C. An applicant holding a four-year baccalaureate degree from the following curricula shall be given six qualifying credits for education:

(1) curricula in architectural, chemical, civil, electrical, mechanical, or structural engineering accredited by the Accreditation Board for Engineering and Technology (ABET);

(2) curricula in landscape architecture accredited by the American Society of Landscape Architects Committee on Education; or

(3) curricula in interior design accredited by the Foundation on Interior Design Education Research.

D. An applicant holding a two-year associate degree in architectural technology or architectural drafting from a community college or technical institute shall receive two qualifying credits for education.

E. For the purposes of this subpart, 32 semester credit hours or 48 quarter credit hours is considered to be one year of education. Fractions of a year of education shall be given credit in the amount earned.

F. An applicant holding a degree or having completed coursework from a foreign college or university shall be granted credit toward the requirements of this subpart on the same basis as a graduate of a United States college or university if the board determines that the educational requirements for the degree are equivalent to the requirements of this subpart. The applicant shall furnish a copy of the applicant's grade transcript, including course descriptions of courses successfully completed, in English, with the initial application for evaluation by the board.

Subp. 6. **Credits for experience.** Qualifying credits for experience shall be granted as follows:

A. The applicant's total experience must meet the requirements for qualifying experience in subpart 7.

B. Experience must be acquired after graduation, except that continuous experience in periods of ten or more weeks gained before graduation shall be counted if gained as specified in subpart 7 after graduation from high school.

C. Each year of experience gained under the direct supervision and control of a licensed architect shall count for one qualifying credit.

D. Each year of architecturally related experience gained under the direct supervision and control of a licensed professional engineer, licensed landscape architect, or an interior designer certified by the American Society of Interior Designers shall count for one-half qualifying credit.

Subp. 7. **Qualifying experience defined.** As used in this part, qualifying experience consists of experience gained in each of the following areas of the practice of architecture in accordance with the minimum number of hours shown.

A. Design and construction:

(1) programming and client contact, 80 hours;

(2) site and environmental analysis, 80 hours;

(3) schematic design, 120 hours;

(4) building code analysis, 80 hours;

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." **ADOPTED RULES SECTION** — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

(5) code research, 120 hours;

(6) design development, 320 hours;

(7) construction documents, 1,240 hours;

(8) specifications and materials, 120 hours; and

(9) document checking, 120 hours.

B. Construction and administration:

(1) bidding procedures, 80 hours;

(2) construction office, 120 hours; and

(3) construction observation, 120 hours.

C. Office management:

(1) office procedures, 120 hours; and

(2) professional activities, 80 hours.

The number of hours shown are minimum time requirements for the areas of practice listed and do not represent three years of experience. More experience may be gained in any of these areas of practice to total 5,600 hours or three years of experience. Persons requiring more than three years of experience shall document qualifying experience in the amount of 1,867 hours for each year required.

Subp. 8. **Future admission requirements.** Effective January 1, 1991, admission to the registration examination is limited to holders of a degree from a curriculum accredited by the National Architectural Accrediting Board (NAAB), or architectural education equivalent to that curriculum as determined by the board. Persons with board approved applications as of January 1, 1991, are permitted to continue the examination process until licensed to practice architecture in Minnesota.

1800.1100 ~~APPLICATION~~ PROCEDURES.

Subpart 1. **Completion date.** An applicant may request to be admitted to an examination if ~~such~~ the applicant has completed, or will have completed ~~by the time of the examination,~~ the educational and experience requirements ~~contained herein~~ in part 1800.1000 by the time of the examination.

Subp. 2. **Preliminary admission request.** Applicants shall submit to the board a preliminary request for admission to the licensing examination. The request shall be submitted on a form provided by the board and must include a detailed listing of all architecturally related experience gained in accordance with part 1800.1000. The experience listing shall include the name and mailing address of the applicant's supervising licensed architect or other supervisor for each period of employment. A transcript of grades showing the date of award of any degree earned shall accompany the submittal. Upon approval of the preliminary request by the board, the applicant shall be provided formal application materials. The preliminary request shall be submitted to the board by February 1 for the June examination and by August 1 for the December examination.

Subp. 3. **Formal admission application.** Applicants shall by April 1 for the June examination and by October 1 for the December examination submit a formal application for admission to the licensing examination on a form provided by the board. The formal application shall include one signed copy of board rules of professional conduct and a fee as specified in part 1800.0500, subpart 5, item A.

Subp. 4. **Obtaining application.** Application materials may be obtained by calling or writing the board office.

1800.1200 WRITTEN EXAMINATION.

Subpart 1. ~~Qualifying test.~~ Architect Registration Examination. The ~~qualifying test~~ Architect Registration Examination (ARE) shall be administered ~~once~~ twice annually at a time and place determined by the board to those applicants ~~approved~~ determined by the board to meet the requirements of part 1800.1000 for admission to the examination. ~~Qualification requirements for admission to the qualifying test include ten years of combined architectural education and experience as provided in part 1800.1000, tables I, II, and III, or a degree from an architectural curriculum accredited by the National Architectural Accrediting Board. All persons applying for registration as architect by examination after April 1, 1992, will be required to take and pass the qualifying test before being admitted to a section B, professional examination.~~ Any person failing one or more parts of the ~~qualifying test must~~ ARE shall retake the failed parts.

Subp 2. to 4. [See Repealer.]

Subp. 5. **Equipment during examinations.** ~~Handbooks, tables, reference books, and~~ Silent, hand-held, battery-operated electronic calculators may be used ~~only when authorized by the board~~ as required during the ARE.

1800.2500 EDUCATION AND EXPERIENCE.

Subpart 1. **Written examination requirement.** An applicant for ~~registration~~ licensure as a professional engineer shall ~~be required to~~ pass ~~an oral and~~ a written examination as provided ~~hereinafter~~ in this subpart. ~~The submission of one exhibit of engineering work accomplished along with a written critique of such exhibit may be substituted in lieu of the oral examination upon the approval of the board. Oral and~~ Written examinations ~~will be~~ are required of all applicants except those ~~registered~~ licensed under part 1800.0800, items E and ~~F which~~ G, that apply to those ~~registered~~ professional engineers licensed in one or more states other than Minnesota. ~~In these cases the same minimum requirements for these applicants will be required as existed in Minnesota at the time of the original registration of the applicant in the other state~~ An applicant for licensure under part 1800.0800, items E and G, must satisfy the Minnesota licensing requirements that were in effect at the time of the applicant's original licensure in the other state. The written fundamentals of engineering (EIT) examination ~~may~~ shall be waived by the board if the applicant meets the requirements ~~stated~~ in part ~~1800.0800, item D~~ 1800.2800.

Subp. 2. **Admission to written examination.** To qualify for admission to ~~such oral and~~ the written examination, the applicant shall present ~~satisfactory~~ evidence ~~that he/she has~~ of:

A. ~~Graduated~~ Graduation from an engineering curriculum accredited by the ~~Engineers' Council for Professional Development (ECPD) and appearing on the list of Accredited Programs Leading to Degrees in Engineering current~~ Engineering Accrediting Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) at the time of ~~his~~ graduation ~~as published by the ECPD or the educational equivalent thereof.~~; and

B. ~~Completed~~ Completion of a minimum of four years of qualifying engineering experience, ~~satisfactory to the board, after graduation~~ if the applicant has graduated from a baccalaureate ~~program~~ curriculum in engineering accredited by the ~~ECPD, or~~ ABET-EAC. Three years of qualifying engineering experience is required, ~~satisfactory to the board, after graduation~~ if the applicant has graduated from a masters or doctoral ~~program~~ curriculum in engineering from an institution with an ~~ECPD~~ ABET-EAC accredited baccalaureate ~~program~~ curriculum in that discipline of engineering. ~~Up to~~ Not more than two years credit shall be allowed for ~~diversified,~~ qualifying engineering experience, gained ~~prior to~~ before graduation from an ~~approved~~ accredited engineering curriculum~~, may be granted by the board when evaluated on an individual basis~~. The two years experience ~~prior to~~ before graduation must have been gained after completion of the second year of approved engineering education. ~~Such~~ The experience shall be credited at the rate of 50 percent up to the maximum allowable credit of two years.

~~C~~ Subp. 3. **Exception for nonaccredited education.** An applicant who does not meet the requirements of subpart 2 may qualify for admission to the examinations ~~provided that satisfactory~~ if evidence is submitted to the board that education and qualifying engineering experience completed meet the following requirements ~~set forth in the following table~~:

~~Classification~~	~~Education in years~~	~~Experience in years~~	~~Total Education and Experience~~
~~Graduate of Engineering Curriculum Accredited by Engineers' Council for Professional Development (ECPD)~~			
~~5-year Course with M.S. or PhD.~~	~~5~~	~~3~~	~~8~~
~~4 or 5-year Course~~	~~4~~	~~4~~	~~8~~
~~Graduate of Non-ECPD Accredited Engineering Curriculum Approved by the Board~~			
~~5-year Course~~	~~4~~	~~5~~	~~9~~
~~4-year Course~~	~~3~~	~~6~~	~~9~~

~~D~~ A. The education requirements of an applicant whose education was not obtained in an engineering curriculum accredited by the ~~Engineers' Council for Professional Development will~~ Accreditation Board for Engineering and Technology shall be accepted

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

only if ~~such~~ the education is determined by the board to be equivalent to the content of the accredited curriculum required for a bachelor of science degree in engineering. The applicant ~~will~~ shall be required to submit a transcript of grades, along with descriptions of courses taken from the educational institution from which ~~he~~ the applicant graduated, for evaluation by the board to determine the credit to be allowed for ~~such nonaccredited engineering~~ that education.

B. If the applicant holds a degree from a nonaccredited four-year engineering curriculum, that person will be required to document six years of qualifying and verifiable engineering experience following graduation. If the applicant also holds a master's or doctoral degree in engineering, the applicant shall document five years of qualifying and verifiable engineering experience following graduation. Up to two years credit shall be allowed for qualifying and verifiable engineering experience gained before graduation, as provided in subpart 2, item B.

1800.2600 ORAL EXAMINATION.

An applicant ~~may be required to~~ shall appear before the board for oral examination and submit two exhibits of engineering work the applicant has performed ~~in the event that~~ if:

A. the experience record does not clearly indicate ~~four years of~~ the required qualifying engineering experience~~, or~~;

B. the applicant does not hold a degree from an approved engineering ~~program.~~ curriculum; or

C. the applicant qualifies for waiver of the fundamentals of engineering examination as provided in part 1800.2800.

An applicant residing in an overseas area ~~may be required to~~ shall submit one exhibit of the applicant's engineering work with a written critique of that exhibit in ~~the event that the experience record does not clearly indicate four years of qualifying engineering experience~~ lieu of the oral examination.

1800.2700 WRITTEN EXAMINATION.

Subpart 1. **~~Part I~~ Two-part examination.** The written examination consists of the two parts described in subparts 1a and 2.

Subp. 1a. **Fundamentals examination.** Part I is ~~a preliminary examination.~~ the fundamentals of engineering examination ~~(FE), which~~ that may be taken upon graduation from an engineering curriculum ~~approved by the board~~ meeting the requirements of part 1800.2500. The passing of this ~~preliminary~~ examination ~~will give~~ gives the applicant the status of engineer-in-training as defined in *Minnesota Statutes*, section 326.10, subdivision 7~~, and such~~. The applicant ~~will~~ shall not again be required to take this examination. The applicant shall take and pass the fundamentals of engineering examination (EIT) before being permitted to take the professional examination.

Subp. 2. **~~Part II~~ Professional examination.** Part II is the professional examination ~~(part II)~~ covering the principles and practice of engineering examination, is an examination in a field of major practice and is required as ~~hereinafter~~ outlined in this subpart. Examinations are presently offered in the following fields of major practice in engineering: aeronautical/aerospace, agricultural, ceramic, chemical, civil, electrical, fire protection, geological, industrial, manufacturing, mechanical, metallurgical, mining/minerals, nuclear, petroleum, sanitary, and structural. ~~An applicant who is a graduate with a degree in architectural engineering from an accredited curriculum will be considered for registration by the board as a professional engineer by examination in a field of major practice based on his experience record.~~

Subp. 3. **Scope of examinations.** The scope of the fundamentals of engineering examination, EIT ~~(part I)~~ and the principles and practice of engineering examination ~~(part II)~~ is as follows:

A. Fundamentals of engineering examination, EIT ~~(part I)~~: multiple-choice questions in ~~fundamental~~ mathematics and the basic and engineering sciences as presented in accredited college or university engineering curriculum. Allotted time: eight hours.

B. Principles and practice of engineering examination ~~(part II)~~: problems embracing knowledge of professional practice and applied economics ~~such~~ as ~~should be~~ acquired in connection with the planning, design, and construction of engineering work during the ~~statutory~~ required period ~~leading to registration as professional engineer~~ of qualifying engineering experience. This part of the examination, together with the oral examination or exhibit with written critique, ~~will~~ shall not be ~~required~~ permitted until the full ~~statutory~~ required period of qualifying engineering experience has been completed. Allotted time: eight hours.

Subp. 4. **Purpose of ~~part II~~ the principles and practice of engineering examination.** The principles and practice of engineering examination is given ~~for the purpose of determining~~ to determine the proficiency of the applicant in professional practice. This examination ~~will~~ shall include questions designed to test whether ~~training and experience have taught~~ the applicant has learned to apply the knowledge and understanding of the basic and engineering sciences gained through training and experience to the solution of engineering problems.

Subp. 5. [Unchanged.]

1800.2800 ENGINEERS QUALIFIED BY GRADUATION, LONG EXPERIENCE, AND EXAMINATION.

The ~~applicant must have graduated~~ fundamentals of engineering examination must be waived in those cases where the applicant furnishes evidence of:

A. graduation from an accredited engineering curriculum, or ~~have received~~ receipt of a graduate degree based upon at least one academic year of resident study in a department whose undergraduate curriculum is accredited by the Accreditation Board for Engineering and Technology (ABET); ~~be not less than~~ being at least 40 years of age; ~~have~~ and having a verified professional engineering record of 20 years or more~~, as defined by and of a character satisfactory to the board~~ of qualifying engineering experience; ~~and~~

B. holding membership in a British Institute of Engineering as a chartered engineer by examination or other national certification by examination as approved by the board; or

C. having a doctorate degree in engineering from an educational institution whose baccalaureate curriculum is accredited by ABET-EAC or whose education is equivalent thereto.

An applicant qualifying under item A, B, or C shall pass a written professional practice examination of at least eight hours duration. To qualify for waiver of the fundamentals of engineering examination under item A, the applicant's engineering experience shall show responsible charge of engineering projects for at least ten years and advancement in the character of the work performed. The experience gained ~~prior to his~~ before reaching the age of 20 years shall not be credited as a part of the required engineering experience, except that graduation from an accredited baccalaureate engineering curriculum shall be considered equivalent to four years of engineering experience. Credit shall not be given for more than a total of four years experience because of undergraduate educational qualifications.

1800.2805 QUALIFYING EXPERIENCE DEFINED.

As used in this part and parts 1800.2600, 1800.2700, and 1800.2800, qualifying experience consists of varied, progressive, nonrepetitive, practical experience at engineering work, developing the ability to apply the theoretical knowledge gained during academic training in making sound judgments in solving engineering problems. The varied experience must include increments of design, planning, technical specification, codes and standards research and analysis, engineering economics, safety, observation, and inspection of construction of products. Experience shall be written in detail and submitted with the application for evaluation and approval by the board.

1800.2900 ~~ENGINEER-IN-TRAINING~~ PROCEDURES.

~~Any applicant who is a graduate of an ECPD accredited engineering curriculum, or who has education equivalent thereto as determined by the board, may be permitted to take the fundamentals of engineering examination (EIT).~~

Subpart 1. **Application deadline.** An applicant shall submit an application for admission to the fundamentals of engineering examination explained in part 1800.2700, subpart 1a, by February 1 for the April examination or by August 1 for the October examination. Application shall be made on a form provided by the board and shall include the fee specified in part 1800.0500, subpart 5, item B, subitem (1). A transcript of grades showing the date of award of the degree earned shall be submitted before the applicant may be certified as engineer-in-training.

Subp. 2. **Preliminary request for professional examination.** An applicant shall submit a preliminary request for admission to the principles and practice of engineering examination explained in part 1800.2700, subpart 2, by November 1 for the April examination or by June 1 for the October examination. The request shall be made on a form provided by the board and shall include a detailed listing of engineering experience gained. The experience listing shall include the name and mailing address of the applicant's supervisor for each period of employment. The board shall verify listed experience by sending an employer reference form to each listed supervisor. A transcript of grades showing the date of award of the degree earned shall accompany the completed form, unless previously submitted. Upon approval of the preliminary request by the board, the applicant will be so notified and provided formal application materials.

Subp. 3. **Formal application for professional examination.** An applicant shall submit a formal application for admission to the principles and practice of engineering examination by January 2 for the April examination or by August 1 for the October examination. Application shall be made on a form provided by the board and shall include one signed copy of board rules of professional conduct and a fee as specified in part 1800.0500, subpart 5, item B, subitem (2).

Subp. 4. **Obtaining application material.** Application materials may be obtained by calling or writing the board office.

REPEALER. *Minnesota Rules*, parts 1800.1000, subparts 2, 3, and 4; 1800.1200, subparts 2, 3, and 4; and 1800.3000 are repealed.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

Department of Commerce

In the Matter of the Proposed Adoption of the Rule of the State Board of Architecture, Engineering, Land Surveying and Landscape Architecture Governing the Examination of Architect Applicants

NOTICE OF INTENT OF ADOPT A RULE WITHOUT A PUBLIC HEARING

(1) Notice is hereby given that the State Board of Architecture, Engineering, Land Surveying and Landscape Architecture ("board") intends to adopt the above-entitled rule without a public hearing following the procedures set forth in the Administrative Procedure Act for adopting rules without a public hearing in Minnesota Statutes, sections 14.22 to 14.28. The statutory authority to adopt the rule is section 326.06.

(2) All persons have 30 days in which to submit comment in support of or in opposition of the proposed rule or any part or subpart of the rule. Comment is encouraged.(3) Each comment should identify the portion of the proposed rule addressed, the reason for the comment, and any change proposed.

Any person may make a written request for a public hearing on the rule within the 30-day comment period.(4) If 25 or more persons submit a written request for a public hearing within the 30-day comment period, a public hearing will be held unless a sufficient number withdraw their request in writing.(6) Any person requesting a public hearing should state his or her name and address, and is encouraged to identify the portion of the

proposed rule addressed, the reason for the request, and any change proposed. (7) If a public hearing is required, the board will proceed pursuant to Minnesota Statutes, sections 14.131 to 14.20.

(5) Comments or written requests for a public hearing must be submitted to: Mr. Lowell E. Torseth, Executive Secretary, Board of Architecture, Engineering, Land Surveying and Landscape Architecture, 133 East Seventh Street, St. Paul, Minnesota, 55101, Telephone: (612) 296-2388.

(8) The proposed rule may be modified if the modifications are supported by data and views submitted to the board and do not result in a subtantial change in the proposed rule as noticed.

(11) A copy of the proposed rule is attached to this Notice.

Copies of this Notice and the proposed rule are available and may be obtained by calling Lowell E. Torseth.

(12) A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule and identifies the data and information relied upon to support the proposed rule has been prepared and is available from Lowell E. Torseth upon request.

(13) You are hereby advised, pursuant to Minnesota Statutes, section 14.115 (1986), "Small business considerations in rulemaking," that the proposed rule amendments will have no adverse effect on small businesses.

(9) If no hearing is required, upon adoption of the rule, the rule and the required supporting documents will be submitted to the Attorney General for review as to legality and form to the extent the form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the adopted rule, must submit the written request to Lowell E. Torseth.

January 22, 1990

Lowell E. Torseth
Executive Secretary, Board of
Architecture, Engineering,
Land Surveying and Landscape
Architecture

Board of Architecture, Engineering, Land Surveying, and Landscape Architecture

Proposed Permanent Rules Relating to Examination of Architect and Engineer Applicants

Rules as Proposed

1800.1000 EDUCATION AND EXPERIENCE.

Subpart 1. **Written examination requirement.** An applicant for licensure as an architect shall ~~be required to~~ pass a written examination as provided in part 1800.1200 ~~and may be required to appear before the board for an oral examination for the purpose of verifying personal experience qualifications~~. Written examinations are required of all applicants except those licensed under part 1800.0800, items D and G, that apply to those architects licensed in one or more states other than Minnesota. An applicant for licensure under part 1800.0800, items D and G, must satisfy the Minnesota licensing requirements that were in effect at the time of the applicant's original licensure in the other state.

Subp. 1a. **Admission to written examination.** To qualify for admission to the written examination, ~~applicants~~ an applicant shall present ~~satisfactory~~ evidence that ~~they have:~~ the applicant has obtained at least 13 qualifying credits as provided in this part. At least ten of the qualifying credits must be for education and at least three of the qualifying credits must be for experience. The qualifying credits shall be granted as provided in subparts 5 and 6.

~~A.--Graduated from an architectural curriculum accredited by the National Architectural Accrediting Board at the time of their graduation or within two years subsequent to that graduation; and~~

~~B.--Completed at least three years of satisfactory professional experience after graduation under the supervision of licensed architects.--Experience is credited as provided in~~

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~~subpart 4, table III. In lieu of meeting the experience requirements set forth in subpart 4, table III, an applicant may participate in the intern development program under the auspices of the National Council of Architectural Registration Boards to satisfy the requisite experience requirements. A copy of the intern development program experience criteria may be obtained from the board office. An intern development program participant shall file annually with the board a report of training completed during the year being reported. The report is due within 30 days following the anniversary date of entry to the intern development program. The board shall notify the intern development program participant when the intern development program experience requirements have been completed to the satisfaction of the board.~~

~~C. Applicants may also qualify for admission to the examination provided that they submit to the board satisfactory evidence of education and subsequent experience substantially equivalent to the above requirements and as set forth in subpart 2, table I.~~

~~The basis for determination of educational qualifications and equivalents are set forth in subpart 3, table II.~~

~~The basis for determination of experience qualifications and equivalents are set forth in subpart 4, table III, provided that the provisions of this paragraph shall terminate effective January 1, 1991, except that the provisions of subpart 4, table III, Experience Criteria, shall continue to be applicable pursuant to item B.~~

~~Effective January 1, 1991, admission to the registration examination process shall be limited to holders of an architectural degree from a curriculum accredited by the National Accreditation Board (NAAB), or an equivalent architectural degree acceptable to the board.~~

Subp. 2. to 4. [See Repealer.]

Subp. 5. **Credits for education.** Qualifying credits for education shall be granted as follows:

A. An applicant who has graduated from an

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architectural curriculum accredited by the National Architectural Accrediting Board (NAAB), shall, at the time of graduation or within two years after graduation, receive ten qualifying credits for education.

B. An applicant holding a four-year baccalaureate preprofessional degree in environmental design or architectural studies shall be granted credit depending on the number of years of architectural design courses successfully completed. An applicant with three years of design courses shall be granted eight qualifying credits. An applicant with two years of design courses will be granted six qualifying credits. In no case shall the applicant holding a preprofessional degree be granted less than six qualifying credits for education.

C. An applicant holding a four-year baccalaureate degree from the following curricula shall be given six qualifying credits for education:

(1) curricula in architectural, chemical, civil, electrical, mechanical, or structural engineering accredited by the Accreditation Board for Engineering and Technology (ABET);

(2) curricula in landscape architecture accredited by the American Society of Landscape Architects Committee on Education; or

(3) curricula in interior design accredited by the Foundation on Interior Design Education Research.

D. An applicant holding a two-year associate degree in architectural technology or architectural drafting from a community college or technical institute shall receive two qualifying credits for education.

E. For the purposes of this subpart, 32 semester credit hours or 48 quarter credit hours is considered to be one year of education. Fractions of a year of education shall be given credit in the amount earned.

F. An applicant holding a degree or having completed coursework from a foreign college or university shall be granted credit toward the requirements of this subpart on the same basis as a graduate of a United States college or university if the

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board determines that the educational requirements for the degree are equivalent to the requirements of this subpart. The applicant shall furnish a copy of the applicant's grade transcript, including course descriptions of courses successfully completed, in English, with the initial application for evaluation by the board.

Subp. 6. **Credits for experience.** Qualifying credits for experience shall be granted as follows:

A. The applicant's total experience must meet the requirements for qualifying experience in subpart 7.

B. Experience must be acquired after graduation, except that continuous experience in periods of ten or more weeks gained before graduation shall be counted if gained as specified in subpart 7 after graduation from high school.

C. Each year of experience gained under the direct supervision and control of a licensed architect shall count for one qualifying credit.

D. Each year of architecturally related experience gained under the direct supervision and control of a licensed professional engineer, licensed landscape architect, or an interior designer certified by the American Society of Interior Designers shall count for one-half qualifying credit.

Subp. 7. **Qualifying experience defined.** As used in this part, qualifying experience consists of experience gained in each of the following areas of the practice of architecture in accordance with the minimum number of hours shown.

A. Design and construction:

(1) programming and client contact, 80 hours;

(2) site and environmental analysis, 80 hours;

(3) schematic design, 120 hours;

(4) building code analysis, 80 hours;

(5) code research, 120 hours;

(6) design development, 320 hours;

(7) construction documents, 1,240 hours;

(8) specifications and materials, 120 hours; and

(9) document checking, 120 hours.

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B. Construction and administration:

(1) bidding procedures, 80 hours;

(2) construction office, 120 hours; and

(3) construction observation, 120 hours.

C. Office management:

(1) office procedures, 120 hours; and

(2) professional activities, 80 hours.

The number of hours shown are minimum time requirements for the areas of practice listed and do not represent three years of experience. More experience may be gained in any of these areas of practice to total 5,600 hours or three years of experience. Persons requiring more than three years of experience shall document qualifying experience in the amount of 1,867 hours for each year required.

Subp. 8. **Future admission requirements.** Effective January 1, 1991, admission to the registration examination is limited to holders of a degree from a curriculum accredited by the National Architectural Accrediting Board (NAAB), or architectural education equivalent to that curriculum as determined by the board. Persons with board approved applications as of January 1, 1991, are permitted to continue the examination process until licensed to practice architecture in Minnesota.

1800.1100 ~~APPLICATION~~ PROCEDURES.

Subpart 1. **Completion date.** An applicant may request to be admitted to an examination if ~~such~~ the applicant has completed, or will have completed ~~by the time of the examination,~~ the educational and experience requirements ~~contained herein~~ in part 1800.1000 by the time of the examination.

Subp. 2. **Preliminary admission request.** Applicants shall submit to the board a preliminary request for admission to the licensing examination. The request shall be submitted on a form provided by the board and must include a detailed listing of all architecturally related experience gained in accordance with part 1800.1000. The experience listing shall include the name

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and mailing address of the applicant's supervising licensed architect or other supervisor for each period of employment. A transcript of grades showing the date of award of any degree earned shall accompany the submittal. Upon approval of the preliminary request by the board, the applicant shall be provided formal application materials. The preliminary request shall be submitted to the board by February 1 for the June examination and by August 1 for the December examination.

Subp. 3. **Formal admission application.** Applicants shall by April 1 for the June examination and by October 1 for the December examination submit a formal application for admission to the licensing examination on a form provided by the board. The formal application shall include one signed copy of board rules of professional conduct and a fee as specified in part 1800.0500, subpart 5, item A.

Subp. 4. **Obtaining application.** Application materials may be obtained by calling or writing the board office.

1800.1200 WRITTEN EXAMINATION.

Subpart 1. ~~**Qualifying-test**~~ **Architect Registration Examination.** The ~~qualifying-test~~ Architect Registration Examination (ARE) shall be administered ~~once~~ twice annually at a time and place determined by the board to those applicants ~~approved~~ determined by the board to meet the requirements of part 1800.1000 for admission to the examination. ~~Qualification requirements for admission to the qualifying test include ten years of combined architectural education and experience as provided in part 1800.1000, tables I, II, and III, or a degree from an architectural curriculum accredited by the National Architectural Accrediting Board. All persons applying for registration as architect by examination after April 1, 1982, will be required to take and pass the qualifying test before being admitted to a section B, professional examination.~~ Any person failing one or more parts of the ~~qualifying test must~~ ARE shall retake the failed parts.

Subp 2. to 4. [See Repealer.]

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Subp. 5. **Equipment during examinations.** ~~Handbooks, tables, reference books, and~~ Silent, hand-held, battery-operated electronic calculators may be used ~~only when authorized by the board~~ as required during the ARE.

1800.2500 EDUCATION AND EXPERIENCE.

Subpart 1. **Written examination requirement.** An applicant for ~~registration~~ licensure as a professional engineer shall ~~be required to~~ pass ~~an oral and~~ a written examination as provided ~~hereinafter~~ in this subpart. ~~The submission of one exhibit of engineering work accomplished along with a written critique of such exhibit may be substituted in lieu of the oral examination upon the approval of the board. Oral and~~ Written examinations ~~will be~~ are required of all applicants except those ~~registered~~ licensed under part 1800.0800, items E and ~~F which~~ G, that apply to those ~~registered~~ professional engineers licensed in one or more states other than Minnesota. ~~In these cases the same minimum requirements for these applicants will be required as existed in Minnesota at the time of the original registration of the applicant in the other state~~ An applicant for licensure under part 1800.0800, items E and G, must satisfy the Minnesota licensing requirements that were in effect at the time of the applicant's original licensure in the other state. The written fundamentals of engineering (EIT) examination ~~may~~ shall be waived by the board if the applicant meets the requirements ~~stated~~ in part ~~1800.0800, item D~~ 1800.2800.

Subp. 2. **Admission to written examination.** To qualify for admission to ~~such oral and~~ the written examination, the applicant shall present ~~satisfactory~~ evidence ~~that he/she has~~ of:

A. ~~Graduated~~ Graduation from an engineering curriculum accredited by the ~~Engineers' Council for Professional Development (ECPD) and appearing on the list of Accredited Programs leading to Degrees in Engineering current~~ Engineering Accrediting Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) at the time of ~~his~~ graduation ~~as published by the ECPD or the educational equivalent thereof.~~;

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and

B. ~~Completed~~ Completion of a minimum of four years of qualifying engineering experience, ~~satisfactory-to-the-board, after-graduation~~ if the applicant has graduated from a baccalaureate ~~program~~ curriculum in engineering accredited by the ~~ECPD, or~~ ABET-EAC. Three years of qualifying engineering experience is required, ~~satisfactory-to-the-board, after graduation~~ if the applicant has graduated from a masters or doctoral ~~program~~ curriculum in engineering from an institution with an ~~ECPD~~ ABET-EAC accredited baccalaureate ~~program~~ curriculum in that discipline of engineering. ~~Up-to~~ Not more than two years credit shall be allowed for ~~diversified,~~ qualifying engineering experience, gained ~~prior-to~~ before graduation from an ~~approved~~ accredited engineering curriculum, ~~may-be-granted-by-the-board-when-evaluated-on-an-individual basis.~~ The two years experience ~~prior-to~~ before graduation must have been gained after completion of the second year of approved engineering education. ~~Such~~ The experience shall be credited at the rate of 50 percent up to the maximum allowable credit of two years.

~~C~~ Subp. 3. **Exception for nonaccredited education.** An applicant who does not meet the requirements of subpart 2 may qualify for admission to the examinations ~~provided-that satisfactory~~ if evidence is submitted to the board that education and qualifying engineering experience completed meet the following requirements ~~set-forth-in-the-following-table:~~

~~Classification~~	~~Education in years~~	~~Experience in years~~	~~Total Education and Experience~~
~~Graduate of Engineering Curriculum Accredited by Engineers' Council for Professional Development (ECPD)~~			
~~5 year Course with M.S. or PhD.~~	~~5~~	~~3~~	~~8~~
~~4 or 5 year Course~~	~~4~~	~~4~~	~~8~~
~~Graduate of Non-ECPD Accredited Engineering Curriculum Approved by the Board~~			
~~5 year Course~~	~~4~~	~~5~~	~~9~~
~~4 year Course~~	~~3~~	~~6~~	~~9~~

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Þ A. The education requirements of an applicant whose education was not obtained in an engineering curriculum accredited by the ~~Engineers' Council for Professional Development will~~ Accreditation Board for Engineering and Technology shall be accepted only if ~~such~~ the education is determined by the board to be equivalent to the content of the accredited curriculum required for a bachelor of science degree in engineering. The applicant ~~will~~ shall be required to submit a transcript of grades, along with descriptions of courses taken from the educational institution from which ~~he~~ the applicant graduated, for evaluation by the board to determine the credit to be allowed for ~~such nonaccredited engineering~~ that education.

B. If the applicant holds a degree from a nonaccredited four-year engineering curriculum, that person will be required to document six years of qualifying and verifiable engineering experience following graduation. If the applicant also holds a master's or doctoral degree in engineering, the applicant shall document five years of qualifying and verifiable engineering experience following graduation. Up to two years credit shall be allowed for qualifying and verifiable engineering experience gained before graduation, as provided in subpart 2, item B.

1800.2600 ORAL EXAMINATION.

An applicant ~~may be required to~~ shall appear before the board for oral examination and submit two exhibits of engineering work the applicant has performed ~~in the event that~~ if:

A. the experience record does not clearly indicate ~~four years of~~ the required qualifying engineering experience~~,~~ ~~or~~;

B. the applicant does not hold a degree from an approved engineering ~~program,~~ curriculum; or

C. the applicant qualifies for waiver of the fundamentals of engineering examination as provided in part 1800.2800.

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An applicant residing in an overseas area ~~may be required to~~ shall submit one exhibit of the applicant's engineering work with a written critique of that exhibit in ~~the event that the experience record does not clearly indicate four years of qualifying engineering experience~~ lieu of the oral examination.

1800.2700 WRITTEN EXAMINATION.

Subpart 1. ~~Part I~~ **Two-part examination.** The written examination consists of the two parts described in subparts 1a and 2.

Subp. 1a. **Fundamentals examination.** Part I is ~~a preliminary examination,~~ the fundamentals of engineering examination ~~(FE),~~ ~~which~~ that may be taken upon graduation from an engineering curriculum ~~approved by the board~~ meeting the requirements of part 1800.2500. The passing of this ~~preliminary~~ examination ~~will give~~ gives the applicant the status of engineer-in-training as defined in Minnesota Statutes, section 326.10, subdivision 7~~, and such~~. The applicant ~~will~~ shall not again be required to take this examination. The applicant shall take and pass the fundamentals of engineering examination (EIT) before being permitted to take the professional examination.

Subp. 2. ~~Part II~~ **Professional examination.** Part II is the professional examination ~~(part II),~~ covering the principles and practice of engineering examination, is an examination in a field of major practice and is required as ~~hereinafter~~ outlined in this subpart. Examinations are presently offered in the following fields of major practice in engineering: aeronautical/aerospace, agricultural, ceramic, chemical, civil, electrical, fire protection, geological, industrial, manufacturing, mechanical, metallurgical, mining/minerals, nuclear, petroleum, sanitary, and structural. ~~Any applicant who is a graduate with a degree in architectural engineering from an accredited curriculum will be considered for registration by the board as a professional engineer by examination in a field of major practice based on his experience record.~~

Subp. 3. **Scope of examinations.** The scope of the

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fundamentals of engineering examination, EIT ~~(part I)~~ and the principles and practice of engineering examination ~~(part II)~~ is as follows:

A. Fundamentals of engineering examination, EIT ~~(part I)~~: multiple-choice questions in ~~fundamental~~ mathematics and the basic and engineering sciences as presented in accredited college or university engineering curriculum. Allotted time: eight hours.

B. Principles and practice of engineering examination ~~(part II)~~: problems embracing knowledge of professional practice and applied economics ~~such~~ as ~~should be~~ acquired in connection with the planning, design, and construction of engineering work during the ~~statutory~~ required period ~~leading to registration as professional engineer~~ of qualifying engineering experience. This part of the examination, together with the oral examination or exhibit with written critique, ~~will~~ shall not be ~~required~~ permitted until the full ~~statutory~~ required period of qualifying engineering experience has been completed. Allotted time: eight hours.

Subp. 4. **Purpose of ~~part II~~ the principles and practice of engineering examination.** The principles and practice of engineering examination is given ~~for the purpose of determining~~ to determine the proficiency of the applicant in professional practice. This examination ~~will~~ shall include questions designed to test whether ~~training and experience have taught~~ the applicant has learned to apply the knowledge and understanding of the basic and engineering sciences gained through training and experience to the solution of engineering problems.

Subp. 5. [Unchanged.]

1800.2800 ENGINEERS QUALIFIED BY GRADUATION, LONG EXPERIENCE, AND EXAMINATION.

The ~~applicant must have graduated~~ fundamentals of engineering examination must be waived in those cases where the applicant furnishes evidence of:

A. graduation from an accredited engineering

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curriculum, or ~~have received~~ receipt of a graduate degree based upon at least one academic year of resident study in a department whose undergraduate curriculum is accredited by the Accreditation Board for Engineering and Technology (ABET); ~~be not less than~~ being at least 40 years of age; ~~have~~ and having a verified professional engineering record of 20 years or more~~, as defined by and of a character satisfactory to the board~~ of qualifying engineering experience; ~~and~~

B. holding membership in a British Institute of Engineering as a chartered engineer by examination or other national certification by examination as approved by the board; or

C. having a doctorate degree in engineering from an educational institution whose baccalaureate curriculum is accredited by ABET-EAC or whose education is equivalent thereto.

An applicant qualifying under item A, B, or C shall pass a written professional practice examination of at least eight hours duration. To qualify for waiver of the fundamentals of engineering examination under item A, the applicant's engineering experience shall show responsible charge of engineering projects for at least ten years and advancement in the character of the work performed. The experience gained ~~prior to his~~ before reaching the age of 20 years shall not be credited as a part of the required engineering experience, except that graduation from an accredited baccalaureate engineering curriculum shall be considered equivalent to four years of engineering experience. Credit shall not be given for more than a total of four years experience because of undergraduate educational qualifications.

1800.2805 QUALIFYING EXPERIENCE DEFINED.

As used in this part and parts 1800.2600, 1800.2700, and 1800.2800, qualifying experience consists of varied, progressive, nonrepetitive, practical experience at engineering work, developing the ability to apply the theoretical knowledge gained during academic training in making sound judgments in

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solving engineering problems. The varied experience must include increments of design, planning, technical specification, codes and standards research and analysis, engineering economics, safety, observation, and inspection of construction of products. Experience shall be written in detail and submitted with the application for evaluation and approval by the board.

1800.2900 ~~ENGINEER-IN-TRAINING~~ PROCEDURES.

~~Any applicant who is a graduate of an ECPD accredited engineering curriculum, or who has education equivalent thereto as determined by the board, may be permitted to take the fundamentals of engineering examination (EIT).~~

Subpart 1. **Application deadline.** An applicant shall submit an application for admission to the fundamentals of engineering examination explained in part 1800.2700, subpart 1a, by February 1 for the April examination or by August 1 for the October examination. Application shall be made on a form provided by the board and shall include the fee specified in part 1800.0500, subpart 5, item B, subitem (1). A transcript of grades showing the date of award of the degree earned shall be submitted before the applicant may be certified as engineer-in-training.

Subp. 2. **Preliminary request for professional examination.** An applicant shall submit a preliminary request for admission to the principles and practice of engineering examination explained in part 1800.2700, subpart 2, by November 1 for the April examination or by June 1 for the October examination. The request shall be made on a form provided by the board and shall include a detailed listing of engineering experience gained. The experience listing shall include the name and mailing address of the applicant's supervisor for each period of employment. The board shall verify listed experience by sending an employer reference form to each listed supervisor. A transcript of grades showing the date of award of the degree earned shall accompany the completed form, unless previously

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submitted. Upon approval of the preliminary request by the board, the applicant will be so notified and provided formal application materials.

Subp. 3. **Formal application for professional examination.** An applicant shall submit a formal application for admission to the principles and practice of engineering examination by January 2 for the April examination or by August 1 for the October examination. Application shall be made on a form provided by the board and shall include one signed copy of board rules of professional conduct and a fee as specified in part 1800.0500, subpart 5, item B, subitem (2).

Subp. 4. **Obtaining application material.** Application materials may be obtained by calling or writing the board office.

REPEALER. Minnesota Rules, parts 1800.1000, subparts 2, 3, and 4; 1800.1200, subparts 2, 3, and 4; and 1800.3000 are repealed.

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Office of the Revisor of Statutes

Administrative Rules

TITLE: Proposed Permanent Rules Relating to Examination of Architect and Engineer Applicants

AGENCY: Board of Architecture, Engineering, Land Surveying, and Landscape Architecture

MINNESOTA RULES: Chapter 1800

The attached rules are approved for publication in the State Register

Carla M. Riehle
Assistant Revisor

CERTIFICATE OF THE BOARD'S

AUTHORIZING RESOLUTION

I, Thomas A. Vecchi, do hereby certify that I am a member and the Chairman, of the Board of Architecture, Engineering, Land Surveying and Landscape Architecture, a board duly authorized under the laws of the State of Minnesota, and that the following is a true, complete, and correct copy of a resolution adopted at a meeting of the Board of Architecture, Engineering, Land Surveying and Landscape Architecture duly and properly called and held on the 22nd day of January, 1990, that a quorum was present, and that a majority of those present voted for the resolution which has not been rescinded or modified.

> "RESOLVED, that Lowell E. Torseth, the Executive Secretary of the Board of Architecture, Engineering, Land Surveying and Landscape Architecture, is hereby granted the authority and directed to sign and to give the Notice of the Board's Intent to Adopt a rule without a public hearing governing the examination of architect applicants (Minnesota Rules, Part 1800.1000 to 1800.1200) to all persons who have registered their names with the Board for that purpose and publish the Notice and rule in the State Register, and to perform any and all acts incidental thereto."

IN WITNESS WHEREOF, I have hereunto subscribed my name this 22nd day of January , 1990.

Thomas A. Vecchi, AIA
Chairman

Attest: David A. Kirscht, ASLA

Board of Architecture, Engineering, Land Surveying, and Landscape Architecture

Proposed Rules Relating to Examination of Architect and Engineer Applicants

Rules as Proposed

1800.1000 EDUCATION AND EXPERIENCE.

Subpart 1. **Written examination requirement.** An applicant for licensure as an architect shall ~~be required to~~ pass a written examination as provided in part 1800.1200 ~~and may be required to appear before the board for an oral examination for the purpose of verifying personal experience qualifications~~. Written examinations are required of all applicants except those licensed under part 1800.0800, items D and G, that apply to those architects licensed in one or more states other than Minnesota. An applicant for licensure under part 1800.0800, items D and G, must satisfy the Minnesota licensing requirements that were in effect at the time of the applicant's original licensure in the other state.

Subp. 1a. **Admission to written examination.** To qualify for admission to the written examination, ~~applicants~~ an applicant shall present ~~satisfactory~~ evidence that ~~they have:~~ the applicant has obtained at least 13 qualifying credits as provided in this part. At least ten of the qualifying credits must be for education and at least three of the qualifying credits must be for experience. The qualifying credits shall be granted as provided in subparts 5 and 6.

~~A.--Graduated from an architectural curriculum accredited by the National Architectural Accrediting Board at the time of their graduation or within two years subsequent to that graduation; and~~

~~B.--Completed at least three years of satisfactory professional experience after graduation under the supervision of licensed architects.--Experience is credited as provided in~~

~~subpart 4, table III. In lieu of meeting the experience requirements set forth in subpart 4, table III, an applicant may participate in the intern development program under the auspices of the National Council of Architectural Registration Boards to satisfy the requisite experience requirements. A copy of the intern development program experience criteria may be obtained from the board office. An intern development program participant shall file annually with the board a report of training completed during the year being reported. The report is due within 30 days following the anniversary date of entry to the intern development program. The board shall notify the intern development program participant when the intern development program experience requirements have been completed to the satisfaction of the board.~~

~~C. Applicants may also qualify for admission to the examination provided that they submit to the board satisfactory evidence of education and subsequent experience substantially equivalent to the above requirements and as set forth in subpart 2, table I.~~

~~The basis for determination of educational qualifications and equivalents are set forth in subpart 3, table II.~~

~~The basis for determination of experience qualifications and equivalents are set forth in subpart 4, table III, provided that the provisions of this paragraph shall terminate effective January 1, 1991, except that the provisions of subpart 4, table III, Experience Criteria, shall continue to be applicable pursuant to item B.~~

~~Effective January 1, 1991, admission to the registration examination process shall be limited to holders of an architectural degree from a curriculum accredited by the National Accreditation Board (NAAB), or an equivalent architectural degree acceptable to the board.~~

Subp. 2. to 4. [See Repealer.]

Subp. 5. **Credits for education.** Qualifying credits for education shall be granted as follows:

A. An applicant who has graduated from an

architectural curriculum accredited by the National Architectural Accrediting Board (NAAB), shall, at the time of graduation or within two years after graduation, receive ten qualifying credits for education.

B. An applicant holding a four-year baccalaureate preprofessional degree in environmental design or architectural studies shall be granted credit depending on the number of years of architectural design courses successfully completed. An applicant with three years of design courses shall be granted eight qualifying credits. An applicant with two years of design courses will be granted six qualifying credits. In no case shall the applicant holding a preprofessional degree be granted less than six qualifying credits for education.

C. An applicant holding a four-year baccalaureate degree from the following curricula shall be given six qualifying credits for education:

(1) curricula in architectural, chemical, civil, electrical, mechanical, or structural engineering accredited by the Accreditation Board for Engineering and Technology (ABET);

(2) curricula in landscape architecture accredited by the American Society of Landscape Architects Committee on Education; or

(3) curricula in interior design accredited by the Foundation on Interior Design Education Research.

D. An applicant holding a two-year associate degree in architectural technology or architectural drafting from a community college or technical institute shall receive two qualifying credits for education.

E. For the purposes of this subpart, 32 semester credit hours or 48 quarter credit hours is considered to be one year of education. Fractions of a year of education shall be given credit in the amount earned.

F. An applicant holding a degree or having completed coursework from a foreign college or university shall be granted credit toward the requirements of this subpart on the same basis as a graduate of a United States college or university if the

board determines that the educational requirements for the degree are equivalent to the requirements of this subpart. The applicant shall furnish a copy of the applicant's grade transcript, including course descriptions of courses successfully completed, in English, with the initial application for evaluation by the board.

Subp. 6. **Credits for experience.** Qualifying credits for experience shall be granted as follows:

A. The applicant's total experience must meet the requirements for qualifying experience in subpart 7.

B. Experience must be acquired after graduation, except that continuous experience in periods of ten or more weeks gained before graduation shall be counted if gained as specified in subpart 7 after graduation from high school.

C. Each year of experience gained under the direct supervision and control of a licensed architect shall count for one qualifying credit.

D. Each year of architecturally related experience gained under the direct supervision and control of a licensed professional engineer, licensed landscape architect, or an interior designer certified by the American Society of Interior Designers shall count for one-half qualifying credit.

Subp. 7. **Qualifying experience defined.** As used in this part, qualifying experience consists of experience gained in each of the following areas of the practice of architecture in accordance with the minimum number of hours shown.

A. Design and construction:

(1) programming and client contact, 80 hours;

(2) site and environmental analysis, 80 hours;

(3) schematic design, 120 hours;

(4) building code analysis, 80 hours;

(5) code research, 120 hours;

(6) design development, 320 hours;

(7) construction documents, 1,240 hours;

(8) specifications and materials, 120 hours; and

(9) document checking, 120 hours.

B. Construction and administration:

(1) bidding procedures, 80 hours;

(2) construction office, 120 hours; and

(3) construction observation, 120 hours.

C. Office management:

(1) office procedures, 120 hours; and

(2) professional activities, 80 hours.

The number of hours shown are minimum time requirements for the areas of practice listed and do not represent three years of experience. More experience may be gained in any of these areas of practice to total 5,600 hours or three years of experience. Persons requiring more than three years of experience shall document qualifying experience in the amount of 1,867 hours for each year required.

Subp. 8. **Future admission requirements.** Effective January 1, 1991, admission to the registration examination is limited to holders of a degree from a curriculum accredited by the National Architectural Accrediting Board (NAAB), or architectural education equivalent to that curriculum as determined by the board. Persons with board approved applications as of January 1, 1991, are permitted to continue the examination process until licensed to practice architecture in Minnesota.

1800.1100 ~~APPLICATION~~ PROCEDURES.

Subpart 1. **Completion date.** An applicant may request to be admitted to an examination if ~~such~~ the applicant has completed, or will have completed ~~by the time of the examination,~~ the educational and experience requirements ~~contained herein~~ in part 1800.1000 by the time of the examination.

Subp. 2. **Preliminary admission request.** Applicants shall submit to the board a preliminary request for admission to the licensing examination. The request shall be submitted on a form provided by the board and must include a detailed listing of all architecturally related experience gained in accordance with part 1800.1000. The experience listing shall include the name

and mailing address of the applicant's supervising licensed architect or other supervisor for each period of employment. A transcript of grades showing the date of award of any degree earned shall accompany the submittal. Upon approval of the preliminary request by the board, the applicant shall be provided formal application materials. The preliminary request shall be submitted to the board by February 1 for the June examination and by August 1 for the December examination.

Subp. 3. **Formal admission application.** Applicants shall by April 1 for the June examination and by October 1 for the December examination submit a formal application for admission to the licensing examination on a form provided by the board. The formal application shall include one signed copy of board rules of professional conduct and a fee as specified in part 1800.0500, subpart 5, item A.

Subp. 4. **Obtaining application.** Application materials may be obtained by calling or writing the board office.

1800.1200 WRITTEN EXAMINATION.

Subpart 1. ~~**Qualifying test**~~ **Architect Registration Examination.** The ~~qualifying test~~ Architect Registration Examination (ARE) shall be administered ~~once~~ twice annually at a time and place determined by the board to those applicants ~~approved~~ determined by the board to meet the requirements of part 1800.1000 for admission to the examination. ~~Qualification requirements for admission to the qualifying test include ten years of combined architectural education and experience as provided in part 1800.1000, tables I, II, and III, or a degree from an architectural curriculum accredited by the National Architectural Accrediting Board. All persons applying for registration as architect by examination after April 1, 1982, will be required to take and pass the qualifying test before being admitted to a section B, professional examination.~~ Any person failing one or more parts of the ~~qualifying test must~~ ARE shall retake the failed parts.

Subp 2. to 4. [See Repealer.]

Subp. 5. **Equipment during examinations.** ~~Handbooks, tables, reference books, and~~ Silent, hand-held, battery-operated electronic calculators may be used ~~only when authorized by the board~~ as required during the ARE.

1800.2500 EDUCATION AND EXPERIENCE.

Subpart 1. **Written examination requirement.** An applicant for ~~registration~~ licensure as a professional engineer shall ~~be required to~~ pass ~~an oral and~~ a written examination as provided ~~hereinafter~~ in this subpart. ~~The submission of one exhibit of engineering work accomplished along with a written critique of such exhibit may be substituted in lieu of the oral examination upon the approval of the board. Oral and~~ Written examinations ~~will be~~ are required of all applicants except those ~~registered~~ licensed under part 1800.0800, items E and ~~F which~~ G, that apply to those ~~registered~~ professional engineers licensed in one or more states other than Minnesota. ~~In these cases the same minimum requirements for these applicants will be required as existed in Minnesota at the time of the original registration of the applicant in the other state~~ An applicant for licensure under part 1800.0800, items E and G, must satisfy the Minnesota licensing requirements that were in effect at the time of the applicant's original licensure in the other state. The written fundamentals of engineering (EIT) examination ~~may~~ shall be waived by the board if the applicant meets the requirements ~~stated~~ in part ~~1800.0800, item D~~ 1800.2800.

Subp. 2. **Admission to written examination.** To qualify for admission to ~~such oral and~~ the written examination, the applicant shall present ~~satisfactory~~ evidence ~~that he/she has~~ of:

A. ~~Graduated~~ Graduation from an engineering curriculum accredited by the ~~Engineers' Council for Professional Development (ECPD) and appearing on the list of Accredited Programs leading to Degrees in Engineering current~~ Engineering Accrediting Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET) at the time of ~~his~~ graduation ~~as published by the ECPD or the educational equivalent thereof;~~;

and

B. ~~Completed~~ Completion of a minimum of four years of qualifying engineering experience, ~~satisfactory-to-the-board, after-graduation~~ if the applicant has graduated from a baccalaureate ~~program~~ curriculum in engineering accredited by the ~~ECPD, or~~ ABET-EAC. Three years of qualifying engineering experience is required, ~~satisfactory-to-the-board, after graduation~~ if the applicant has graduated from a masters or doctoral ~~program~~ curriculum in engineering from an institution with an ~~ECPD~~ ABET-EAC accredited baccalaureate ~~program~~ curriculum in that discipline of engineering. ~~Up to~~ Not more than two years credit shall be allowed for ~~diversified,~~ qualifying engineering experience, gained ~~prior to~~ before graduation from an ~~approved~~ accredited engineering curriculum, ~~may be granted by the board when evaluated on an individual basis.~~ The two years experience ~~prior to~~ before graduation must have been gained after completion of the second year of approved engineering education. ~~Such~~ The experience shall be credited at the rate of 50 percent up to the maximum allowable credit of two years.

~~C~~ Subp. 3. **Exception for nonaccredited education.** An applicant who does not meet the requirements of subpart 2 may qualify for admission to the examinations ~~provided that satisfactory~~ if evidence is submitted to the board that education and qualifying engineering experience completed meet the following requirements ~~set forth in the following table:~~

~~Classification~~	~~Education in years~~	~~Experience in years~~	~~Total Education and Experience~~
~~Graduate of Engineering Curriculum Accredited by Engineers' Council for Professional Development (ECPD)~~			
~~5 year Course with M.S. or PhD.~~	~~5~~	~~3~~	~~8~~
~~4 or 5 year Course~~	~~4~~	~~4~~	~~8~~
~~Graduate of Non-ECPD Accredited Engineering Curriculum Approved by the Board~~			
~~5 year Course~~	~~4~~	~~5~~	~~9~~
~~4 year Course~~	~~3~~	~~6~~	~~9~~

~~B~~ A. The education requirements of an applicant whose education was not obtained in an engineering curriculum accredited by the ~~Engineers' Council for Professional Development will~~ Accreditation Board for Engineering and Technology shall be accepted only if ~~such~~ the education is determined by the board to be equivalent to the content of the accredited curriculum required for a bachelor of science degree in engineering. The applicant ~~will~~ shall be required to submit a transcript of grades, along with descriptions of courses taken from the educational institution from which ~~he~~ the applicant graduated, for evaluation by the board to determine the credit to be allowed for ~~such nonaccredited engineering~~ that education.

B. If the applicant holds a degree from a nonaccredited four-year engineering curriculum, that person will be required to document six years of qualifying and verifiable engineering experience following graduation. If the applicant also holds a master's or doctoral degree in engineering, the applicant shall document five years of qualifying and verifiable engineering experience following graduation. Up to two years credit shall be allowed for qualifying and verifiable engineering experience gained before graduation, as provided in subpart 2, item B.

1800.2600 ORAL EXAMINATION.

An applicant ~~may be required to~~ shall appear before the board for oral examination and submit two exhibits of engineering work the applicant has performed ~~in the event that~~ if:

A. the experience record does not clearly indicate ~~four years of~~ the required qualifying engineering experience~~, or~~;

B. the applicant does not hold a degree from an approved engineering ~~program,~~ curriculum; or

C. the applicant qualifies for waiver of the fundamentals of engineering examination as provided in part 1800.2800.

An applicant residing in an overseas area ~~may be required to~~ shall submit one exhibit of the applicant's engineering work with a written critique of that exhibit in ~~the event that the experience record does not clearly indicate four years of qualifying engineering experience~~ lieu of the oral examination.

1800.2700 WRITTEN EXAMINATION.

Subpart 1. ~~Part I~~ Two-part examination. The written examination consists of the two parts described in subparts 1a and 2.

Subp. 1a. Fundamentals examination. Part I is ~~a preliminary examination,~~ the fundamentals of engineering examination ~~(PE),~~ ~~which~~ that may be taken upon graduation from an engineering curriculum ~~approved by the board~~ meeting the requirements of part 1800.2500. The passing of this ~~preliminary~~ examination ~~will give~~ gives the applicant the status of engineer-in-training as defined in Minnesota Statutes, section 326.10, subdivision 7~~, and such~~. The applicant ~~will~~ shall not again be required to take this examination. The applicant shall take and pass the fundamentals of engineering examination (EIT) before being permitted to take the professional examination.

Subp. 2. ~~Part II~~ Professional examination. Part II is the professional examination ~~(part II),~~ covering the principles and practice of engineering examination, is an examination in a field of major practice and is required as ~~hereinafter~~ outlined in this subpart. Examinations are presently offered in the following fields of major practice in engineering: aeronautical/aerospace, agricultural, ceramic, chemical, civil, electrical, fire protection, geological, industrial, manufacturing, mechanical, metallurgical, mining/minerals, nuclear, petroleum, sanitary, and structural. ~~Any applicant who is a graduate with a degree in architectural engineering from an accredited curriculum will be considered for registration by the board as a professional engineer by examination in a field of major practice based on his experience record.~~

Subp. 3. Scope of examinations. The scope of the

fundamentals of engineering examination, EIT ~~(part I)~~ and the principles and practice of engineering examination ~~(part II)~~ is as follows:

A. Fundamentals of engineering examination, EIT ~~(part I)~~: multiple-choice questions in ~~fundamental~~ mathematics and the basic and engineering sciences as presented in accredited college or university engineering curriculum. Allotted time: eight hours.

B. Principles and practice of engineering examination ~~(part II)~~: problems embracing knowledge of professional practice and applied economics ~~such~~ as ~~should be~~ acquired in connection with the planning, design, and construction of engineering work during the ~~statutory~~ required period ~~leading to registration as professional engineer~~ of qualifying engineering experience. This part of the examination, together with the oral examination or exhibit with written critique, ~~will~~ shall not be ~~required~~ permitted until the full ~~statutory~~ required period of qualifying engineering experience has been completed. Allotted time: eight hours.

Subp. 4. **Purpose of ~~part II~~ the principles and practice of engineering examination.** The principles and practice of engineering examination is given ~~for the purpose of determining~~ to determine the proficiency of the applicant in professional practice. This examination ~~will~~ shall include questions designed to test whether ~~training and experience have taught~~ the applicant has learned to apply the knowledge and understanding of the basic and engineering sciences gained through training and experience to the solution of engineering problems.

Subp. 5. [Unchanged.]

1800.2800 ENGINEERS QUALIFIED BY GRADUATION, LONG EXPERIENCE, AND EXAMINATION.

The ~~applicant must have graduated~~ fundamentals of engineering examination must be waived in those cases where the applicant furnishes evidence of:

A. graduation from an accredited engineering

curriculum, or ~~have received~~ receipt of a graduate degree based upon at least one academic year of resident study in a department whose undergraduate curriculum is accredited by the Accreditation Board for Engineering and Technology (ABET); ~~be not less than~~ being at least 40 years of age; ~~have~~ and having a verified professional engineering record of 20 years or more~~, as defined by and of a character satisfactory to the board~~ of qualifying engineering experience; ~~and~~

B. holding membership in a British Institute of Engineering as a chartered engineer by examination or other national certification by examination as approved by the board; or

C. having a doctorate degree in engineering from an educational institution whose baccalaureate curriculum is accredited by ABET-EAC or whose education is equivalent thereto.

An applicant qualifying under item A, B, or C shall pass a written professional practice examination of at least eight hours duration. To qualify for waiver of the fundamentals of engineering examination under item A, the applicant's engineering experience shall show responsible charge of engineering projects for at least ten years and advancement in the character of the work performed. The experience gained ~~prior to his~~ before reaching the age of 20 years shall not be credited as a part of the required engineering experience, except that graduation from an accredited baccalaureate engineering curriculum shall be considered equivalent to four years of engineering experience. Credit shall not be given for more than a total of four years experience because of undergraduate educational qualifications.

1800.2805 QUALIFYING EXPERIENCE DEFINED.

As used in this part and parts 1800.2600, 1800.2700, and 1800.2800, qualifying experience consists of varied, progressive, nonrepetitive, practical experience at engineering work, developing the ability to apply the theoretical knowledge gained during academic training in making sound judgments in

solving engineering problems. The varied experience must include increments of design, planning, technical specification, codes and standards research and analysis, engineering economics, safety, observation, and inspection of construction of products. Experience shall be written in detail and submitted with the application for evaluation and approval by the board.

1800.2900 ~~ENGINEER-IN-TRAINING~~ PROCEDURES.

~~Any applicant who is a graduate of an EECPD accredited engineering curriculum, or who has education equivalent thereto as determined by the board, may be permitted to take the fundamentals of engineering examination (EIT).~~

Subpart 1. **Application deadline.** An applicant shall submit an application for admission to the fundamentals of engineering examination explained in part 1800.2700, subpart 1a, by February 1 for the April examination or by August 1 for the October examination. Application shall be made on a form provided by the board and shall include the fee specified in part 1800.0500, subpart 5, item B, subitem (1). A transcript of grades showing the date of award of the degree earned shall be submitted before the applicant may be certified as engineer-in-training.

Subp. 2. **Preliminary request for professional examination.** An applicant shall submit a preliminary request for admission to the principles and practice of engineering examination explained in part 1800.2700, subpart 2, by November 1 for the April examination or by June 1 for the October examination. The request shall be made on a form provided by the board and shall include a detailed listing of engineering experience gained. The experience listing shall include the name and mailing address of the applicant's supervisor for each period of employment. The board shall verify listed experience by sending an employer reference form to each listed supervisor. A transcript of grades showing the date of award of the degree earned shall accompany the completed form, unless previously

submitted. Upon approval of the preliminary request by the board, the applicant will be so notified and provided formal application materials.

Subp. 3. **Formal application for professional examination.** An applicant shall submit a formal application for admission to the principles and practice of engineering examination by January 2 for the April examination or by August 1 for the October examination. Application shall be made on a form provided by the board and shall include one signed copy of board rules of professional conduct and a fee as specified in part 1800.0500, subpart 5, item B, subitem (2).

Subp. 4. **Obtaining application material.** Application materials may be obtained by calling or writing the board office.

REPEALER. Minnesota Rules, parts 1800.1000, subparts 2, 3, and 4; 1800.1200, subparts 2, 3, and 4; and 1800.3000 are repealed.

In the Matter of the Proposed Adoption of the Rule of the State Board of Architecture, Engineering, Land Surveying and Landscape Architecture Governing the Examination of Architect Applicants

AFFIDAVIT OF MAILING THE NOTICE OF INTENT TO ADOPT A RULE WITHOUT A PUBLIC HEARING AND CERTIFICATE OF MAILING LIST

STATE OF MINNESOTA)
) §
COUNTY OF RAMSEY)

Lowell E. Torseth, being sworn says:

I hereby certify that the list of persons and associations who have requested, pursuant to Minnesota Statutes, sections 14.14, subdivision 1a and 14.22 or 14.30, that their names be placed on the State Board of Architecture, Engineering, Land Surveying and Landscape Architecture rulemaking mailing list is accurate, complete, and current as of this 20th day of March, 1990.

That on the 20th day of March, 1990, at the City of Saint Paul, County of Ramsey, State of Minnesota, I mailed the attached Notice of Intent to Adopt a Rule Without a Public Hearing by depositing in the United States mail, a copy thereof, with postage prepaid, to all persons and associations on the aforementioned mailing list.

Lowell E. Torseth
Executive Secretary

Subscribed and sworn to before me
this 20th day of March, 1990.

Karen A. O'Connor

KAREN A. O'CONNOR
NOTARY PUBLIC-MINNESOTA
ANOKA COUNTY
MY COMMISSION EXPIRES DECEMBER 8, 1993

RULEMAKING NOTICE LIST

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CERTIFICATE OF THE

BOARD OF ARCHITECTURE, ENGINEERING,
LAND SURVEYING AND LANDSCAPE ARCHITECTURE

RESOLUTION ADOPTING THE RULE

I, David A. Kirscht, do hereby certify that I am a member and the Chairman of the Board of Architecture, Engineering, Land Surveying and Landscape Architecture, a Board duly authorized under the laws of the State of Minnesota, and that the following is a true, complete, and correct copy of a resolution adopted at a meeting of the Board, duly and properly called and held on the 10th day of May, 1990, that a quorum was present, and that a majority of those present voted for the resolution which has not been rescinded or modified.

> "RESOLVED, that the rule relating to the examination of architect applicants is approved and adopted, pursuant to authority vested in the Board by Minnesota Statutes 326.06. Lowell E. Torseth, the Executive Secretary of the Board of Architecture, Engineering, Land Surveying and Landscape Architecture, is authorized to sign the findings of fact, conclusions, and order adopting the rule and to perform the necessary acts to provide that the rule shall have the force and effect of law."

IN WITNESS WHEREOF, I have hereunto subscribed my name this 10th day of May, 1990.

David A. Kirscht, ASLA
Chairman

Attest: John F. Sweet, P.E.
Vice Chairman

In the Matter of the Adoption
of the Rule of the State Board of
Architecture, Engineering, Land
Surveying and Landscape Architecture
Governing the Examination of
Engineer Applicants.

DECLARATION OF COUNSEL

I, Gregory P. Huwe, Assistant Attorney General, do hereby declare that I have examined the above-captioned rule, and the supporting rulemaking record, and that, based on my examination, the Administrative Procedure Act and Minnesota rules, chapter 2010 have been followed. Any exceptions are listed below. For Attorney General billing purposes, the four-digit docket client code is 25.5A24.0134.

Dated: May 18, 1990.

Gregory P. Huwe
Assistant Attorney General

H.fc8

STATE OF MINNESOTA

DEPARTMENT OF COMMERCE

In the Matter of the Proposed Adoption of the Rule of the State Board of Architecture, Engineering, Land Surveying and Landscape Architecture Amending Rules Parts 1800.1000 - 1800.1200 Governing the Examination of Architect Applicants

FINDINGS OF FACT, CONCLUSIONS, AND ORDER ADOPTING RULE WITHOUT PUBLIC HEARING

(1) Notice of the Board's intent to adopt the above-entitled rule was published in the State Register on April 9, 1990 and was sent by United States mail to all persons on the list maintained by the agency pursuant to Minnesota Statutes, sections 14.14, subdivision 1a and 14.22 on March 20, 1990. (2) The statement of need and reasonableness was prepared before the notice of intent to adopt a rule without a public hearing was mailed to all persons on the rulemaking mailing list and published in the State Register and was available to the public.

(4) All persons were given the opportunity to submit comment on the rule for 30 days after notice of proposed rulemaking. (5) No requests for a public hearing on the rule were received by the agency.

(7) No submissions or comments on the rule were received by the agency. No requests for notice of submission to the attorney general were received by the agency.

Based on the comments and evidence in the record before the agency, I make the following findings and conclusions:

(6) There has been no change from the rule as proposed. The rule adopted is the same as the rule proposed.

(8) This rule is needed and reasonable because it was last revised effective December 29, 1981 and it did not adequately explain the procedures of the Board as required by Minnesota Statutes, Section 14.06 (1988).

The Board believes many of the standards in the rules may be made more specific and may be presented in a more understandable format.

The proposed rule includes specific procedures for applying for admission to examination as well as specific education and experience requirements.

(9) NOW, THEREFORE, IT IS ORDERED that the examination of architect applicant rule is adopted this 10th day of May, 1990, pursuant to authority vested in the Board by Minnesota Statutes, section 214.06 and 326.06.

Lowell E. Torseth
Executive Secretary

Stat Authority - ~~Contract~~ Architect Rule 326.06

The board shall adopt and have an official seal, which shall be fixed to all licenses granted; shall make all rules not inconsistant with law

no certificate for proposed rule
Rc 5-31-90

Rules 1800.2800 A

must be at least 40 years old - age discrimination

experience O.K but why age?

Architect Rule
Bd of Architecture etc.

AR943
MJC

RULE REVIEW CHECKLIST

File No. 1707 Docket No. 05-0009-0134

DATE RECEIVED 5-22-90 ADOPTED W/O HEARING X

REVIEW DATE 5-31-90 EMERGENCY RULE

DUE DATE 6-5-90 To Revisor 5-25-90

merged 6-4-90 - Note REVISOR APPROVED

APPROVED this rule was REVISOR DISAPPROVED

DISAPPROVED merged with #1708 FILED W/SEC. OF STATE

WITHDRAWN as is a duplicate RETURNED TO AGENCY

SNR is only difference + that was put in #1708 mjc

4 Rule as adopted (4 copies)

____ Notice to Solicit Outside Information/Opinion (if applicable)
____ Date published in State Register
____ Comments

0 Petition for Adoption of a Rule (if applicable)

✓ Board's Authorizing Resolution
Jan 22, 1990 Date adopted

✓ Proposed Rule
✓ Revisor's Certificate call, no cert Rec 5-31-90

✓ Notice of Intent to Adopt Rule
336.06 Statutory Authority
NA Small Business Statement
____ Expenditure of public money statement
Jan 22, 1990 Signature

✓ Statement of Need and Reasonableness (if applicable)
NA Small Business Statement
NA Fees - § 16A.128

✓ Affidavit of Mailing Notice of Intent to Adopt Rule
March 20, 1990 Date 30/25 days before adoption
indicated Notice attached
____ Copy of rule or summary attached

✓ Publication in State Register
April 9, 1990 Date 30/25 days before adoption

✓ 180-day deadline from:
✓ NA Effective date of law requiring rule (14.12) (both rules) not new material
✓ end of comment period (§ 14.26) (rules without hearing)
____ effective date of statutory authority (§ 14.29) (emergency rules)

✓ Resolution Adopting
May 10, 1990 Date adopted

✓ Findings of Fact, Conclusions & Order Adopting
May 10, 1990 Date

____ Written requests, submissions or comments

✓ Declaration of attorney
Gregory Hume Name of SAAG representing agency

____ Notice of Submission to Atty. Gen. (if applicable)

____ Aff. of Mailing Notice to Atty. Gen. (if applicable)

5-29-90 - called and told him we needed the