

HOUSE OF REPRESENTATIVES STAFF ANALYSIS

BILL #: CS/CS/HB 831 Licensure Requirements for Land Surveyors and Mappers

SPONSOR(S): Commerce Committee, Regulatory Reform Subcommittee, Mariano

TIED BILLS: IDEN./SIM. **BILLS:** SB 1286

| REFERENCE | ACTION | ANALYST | STAFF DIRECTOR or BUDGET/POLICY CHIEF |
|-----------------------------------|------------------|----------|---------------------------------------|
| 1) Regulatory Reform Subcommittee | 12 Y, 5 N, As CS | Thompson | Anstead |
| 2) Commerce Committee | 18 Y, 2 N, As CS | Thompson | Hamon |

SUMMARY ANALYSIS

Chapter 472, F.S., governs the practice of land surveying and mapping in Florida. Through the Florida Board of Professional Surveyors and Mappers (Board), the Department of Agriculture and Consumer Services (DACs) licenses and regulates professional surveyors and mappers in the state. Current law provides education and experience prerequisites that must be met in order to be eligible to take the licensure examination to practice as a surveyor and mapper.

Currently, applicants must **at least** have a **bachelor's degree** in a related course of study and a minimum of **four years of experience** working under a professional surveyor in order to take the licensure examination.

Applicants with a bachelor's degree in an unrelated course of study must have **six years of experience**, and complete a minimum of **25 semester hours** from a college or university approved by the board in surveying and mapping related subjects **in order to take the licensure examination**.

The bill provides **additional pathways** to qualify to take the **licensure examination** as follows:

- Allows applicants with a **high school diploma** or an **associate's degree**, who complete **25 hours of coursework in surveying and mapping**, and **six** years of experience under a professional surveyor and mapper, **five** years of which must be in responsible charge of the work performed, to be eligible to take the licensure examination.
- Allows applicants who qualified to obtain a surveying and mapping license in another state that hold a **license to practice in another state** and have **two years of experience in the active practice** of surveying and mapping to be eligible to take the **licensure examination**.
- Allows applicants with a **registered apprenticeship certificate** in surveying and mapping and an **experience record of two** or more years in the active practice of mapping to be eligible to take the licensure examination.

The bill does not appear to have a fiscal impact on state or local government.

The effective date of the bill is July 1, 2022.

FULL ANALYSIS

I. SUBSTANTIVE ANALYSIS

A. EFFECT OF PROPOSED CHANGES:

Background

Land Surveying and Mapping

Chapter 472, F.S., governs the practice of land surveying and mapping in Florida. Through the Florida Board of Professional Surveyors and Mappers (Board), the Department of Agriculture and Consumer Services (DACS) licenses and regulates professional surveyors and mappers in the state.¹

These regulations include, but are not limited to:²

- Examination;
- Licensure, including certificates of authorization;
- Continuing education;
- Seals;
- Standards of practice;
- Prohibitions and penalties;
- Disciplinary guidelines;
- Investigative procedures;
- Power to administer oaths, take depositions, and issue subpoenas;
- Unlicensed activities; and
- Elevation certificates.

According to DACS, licensed surveyors and mappers make exact measurements and determine property boundaries. They provide data relevant to the shape, contour, gravitation, location, elevation or dimension of land or land features on or near the earth's surface for engineering, mapmaking, mining, land evaluation, construction and other purposes.³

The Board has authority to adopt rules to implement ch. 472, F.S., subject to approval by DACS.⁴ Effective October 1, 2009, the regulation of professional surveyors and mappers by the Board was transferred from the Department of Business and Professional Regulation (DBPR) to DACS.⁵

According to DACS, there are 2,579 surveyors and mappers currently licensed in Florida.⁶

Licensing Examinations

Current law provides education and experience prerequisites that must be met in order to be eligible to take the licensure examination to practice as a surveyor and mapper or as a surveyor and mapper intern.⁷ All applicants must be approved by the Board prior to taking any examination.

All pathways to licensure as a professional surveyor and mapper in Florida require **at least a four-year college degree**. The prerequisites to take the licensure examination to practice as a surveyor and mapper are as follows:

¹ S. 472.007, F.S.

² See ch. 472, F.S.

³ Florida Department of Agriculture and Consumer Services, Consumer Services, *Surveyors and Mappers*, <https://www.fdacs.gov/Business-Services/Surveyors-and-Mappers> (last visited Jan. 5, 2022).

⁴ S. 472.008, F.S.

⁵ Ch. 2009-66, Laws of Fla.

⁶ Email from Carlos Nathan, Legislative Affairs Director, Department of Agriculture and Consumer Services, Re: Surveyors Data, (Jan. 6, 2022).

⁷ S. 472.013, F.S.

- A bachelor's degree in surveying and mapping or in a similarly titled program:
 - Four or more years of work experience under a professional surveyor;
 - All four years of work experience must have been in responsible charge of the accuracy and correctness of the surveying work performed; or
- A bachelor's degree in a course of study other than surveying and mapping:
 - Six or more years of work experience under a professional surveyor;
 - Five of the six years of experience must have been in responsible charge of the accuracy and correctness of the surveying work performed.
 - These applicants must also complete a minimum of **25 semester hours** from a college or university approved by the board in surveying and mapping subjects or in any combination of courses in civil engineering, surveying, mapping, mathematics, photogrammetry, forestry, or land law and the physical sciences.

The following is a chart outlining these education and work experience prerequisites:

| Type of Applicant | Type of Degree | Work Experience |
|-----------------------------------|---|--|
| Surveyor and Mapper (Option 1) | Surveying and Mapping Bachelor's Degree | 4 or more years subordinate to surveyor and mapper and in "responsible charge" of work performed |
| Surveyor and Mapper (Option 2) | Non-Surveying and Mapping Bachelor's Degree; and 25 semester hours surveying and mapping subjects | 6 or more years subordinate to surveyor and mapper of which 5 years must be in "responsible charge" of work performed |

The board, by rule,⁸ is authorized to establish fees for examination. The initial application and examination fee must not exceed \$125 plus the actual per applicant cost to DACS to purchase the examination from the National Council of Engineering Examiners or a similar national organization. The examination fee must be sufficient to cover the cost of obtaining and administering the examination and is refundable if the applicant is found ineligible to sit for the examination. The application fee is nonrefundable.⁹

Exiled Foreign-Trained Professionals

Exiled foreign-trained professionals that wish to become surveyors and mappers must have graduated with an appropriate college degree from a college or university and must have lawfully practiced the profession for at least three years. Specifically, an exiled professional is eligible for examination if the exiled professional satisfies all of the following seven requirements:

- Immigrated to the United States after leaving the person's home country because of political reasons, provided the country is located in the Western Hemisphere and does not have diplomatic relations with the United States;
- Applied to DACS and submits a fee;
- Was a resident of this state immediately preceding the person's application;
- Demonstrated to DACS, through submission of documentation verified by the applicant's respective professional association in exile, that the applicant graduated with an appropriate professional or occupational degree from a college or university.

⁸ R. 5J-17.070, F.S.

⁹ S. 472.011, F.S.

- However, DACS may not require receipt of any documentation from the Republic of Cuba as a condition of eligibility under this section;
- Lawfully practiced the profession for at least 3 years;
- Prior to 1980, successfully completed an approved course of study pursuant to chapters 74-105 and 75-177, Laws of Florida; and
- Presented a certificate demonstrating the successful completion of a continuing education program, which offers a course of study that will prepare the applicant for the examination.
 - The department shall develop rules for the approval of such programs for the board.¹⁰

Upon request of a person who meets the requirements for foreign-trained professionals and submits an examination fee, DACS, for the Board, is required to conduct a written practical examination that tests the person's current ability to practice the profession competently in accordance with the actual practice of the profession. The fees charged for the examinations are established by DACS, for the board, by rule,¹¹ and must be sufficient to develop or to contract for the development of the examination and its administration, grading, and grade reviews.¹²

Licensure by Endorsement – Out of State Applicants

The board is required to certify as qualified for a license by endorsement an applicant who, at the time of application, holds a valid license to practice surveying and mapping **issued by another state** or territory of the United States, if:

- The license was issued before July 1, 1999; the applicant has passed a national, regional, state, or territorial licensing examination that is substantially equivalent to the examination required by s. 472.013, F.S.; and the applicant has a specific experience record of **at least eight years** as a subordinate to a registered surveyor and mapper in the active practice of surveying and mapping, **six years** of which must be of a nature indicating that the applicant was in responsible charge of the accuracy and correctness of the surveying and mapping work performed; or
- The criteria for issuance of the license by another state are **substantially the same** as the licensure criteria that existed in Florida at the time the license was issued.¹³

All applicants for licensure by endorsement **must also pass the Florida law and rules** portion of the examination prior to licensure.¹⁴

Florida law **does not** provide practicing surveyors and mappers from other states with less than a four-year degree a pathway to licensure unless they were licensed in the other state **prior to July 1, 1999, or prior to Florida having a four-year degree requirement.**

Recent Trends

According to the Bureau of Labor Statistics, in 2020 there were 45,000 working surveyors in the U.S., 15,000 were 34 years of age or younger, and 11,000 were over the age of 55.¹⁵ Many in the profession are baby boomers who will be retiring and need to be replaced.¹⁶

The average age of a surveyor in the U.S. is 45 and 69% of surveyors are over the age of 40. In addition, reports indicate that 45% of surveyors in the U.S. hold a bachelor's degree, 42 % hold an associate's degree or a certificate and 18% hold a high school diploma.¹⁷

¹⁰ S. 472.001(1), F.S.

¹¹ R. 5J-17.210, F.A.C.

¹² S. 472.0101, F.S.

¹³ S. 472.015, F.S.

¹⁴ *Id.*

¹⁵ U.S. Bureau of Labor Statistics, *Labor Force Statistics from the Current Population Survey*, <https://www.bls.gov/cps/cpsaat11b.pdf> (last visited Jan. 5, 2022).

¹⁶ U.S. Bureau of Labor Statistics, Occupational Outlook Handbook, <https://www.bls.gov/ooh/architecture-and-engineering/surveyors.htm#tab-6> (last visited Jan. 5, 2022).

¹⁷ Florida Surveying & Mapping Society, *FAQ: How to Become a Licensed Surveyor*, <https://www.fsms.org/how-to-become-a-surveyor> (Last visited Jan. 21, 2022); See also, Zippa, The Career Expert, *Surveyor, Demographics and Statistics in the US*, <https://www.zippia.com/surveyor-jobs/demographics/>

Some in the industry have indicated that a shortage may exist in the profession because of extensive education expectations and cost. Many state boards require a four-year degree before beginning work in the surveying field. These requirements might hinder those from pursuing a surveying path. Nationally there appears to be a decline in the number of students graduating from surveying programs.¹⁸

In Florida, the number of licensed surveyors has decreased by 305 licensees, from 2,884 licensees in 2013 to 2,579 licensees in 2021.¹⁹

Other States

Each state and territory in the U.S. require those who perform the tasks defined as the practice of surveying to hold a professional surveying license. Most states require professional surveyors to meet a combination of requirements in education and exams.²⁰

Generally, while each state board for surveyors has its own requirements for licensure, potential licensees will follow a similar path of prerequisites to obtain a license in any state. Prerequisites typically include:

- An education requirement - Sometimes a high school diploma but some states also require a four-year degree from an accredited surveying program.
- Successful completion of a Fundamentals of Surveying (FS) written examination - testing an applicant's breadth of understanding of basic surveying principles.
- Successful completion of a written Principles and Practice of Surveying (PS) examination - testing an applicant's knowledge and competency of surveying skills.
- A requisite amount of surveying experience - which for most states is four years and is usually under the supervision of a professional surveyor.²¹

According to research, in 2020, the education and experience requirements in all 50 states appear to indicate the following patterns:

- Most states require at least a four-year degree and four years of professional experience.
- Typically, the extent of the degree is relative to the amount of professional experience required.
- Fourteen states provide an option that requires only a high school diploma (or do not have any educational requirements) along with a certain amount of professional experience.
- Six states provide an option that does not require the completion of a degree, but requires the completion of a certain amount of survey and mapping coursework and professional experience.
- The degrees that are required are typically in a surveying and mapping curriculum, a curriculum related to surveying and mapping, or an unrelated curriculum but with a certain amount of coursework in a surveying related curriculum.
- States that allow postgraduate coursework in a surveying curriculum allow the coursework to be substituted for professional experience.
- Twenty-eight states do not provide an education-less alternative method of licensure.²²

One example of a state that allows a number of different pathways to licensure is North Carolina:

¹⁸ Nearterm Blog, *Is There a Shortage of Land Surveyors?* (Nov. 2, 2020), <https://nearterm.com/is-there-a-shortage-of-land-surveyors/> (last visited Jan. 5, 2022).

¹⁹ Email from Carlos Nathan, Legislative Affairs Director, Department of Agriculture and Consumer Services, Re: Surveyors Data, (Jan. 6, 2022).

²⁰ The National Council of Examiners for Engineering and Surveying (NCEES), *Surveying Licensure*, <https://ncees.org/surveying/surveying-licensure/> (last visited Jan. 5, 2022).

²¹ The National Council of Examiners for Engineering and Surveying (NCEES), *NCEES Member Licensing Boards*, <https://ncees.org/member-licensing-boards/> (last visited Jan. 5, 2022).

²² NCEES, *supra* note 19.

- Graduates with a **Bachelor's degree** can take the **licensing exam** after **two years** of practical land surveying experience. At least one year of experience must be under the supervision of a professional land surveyor.
- Graduates with a two-year **Associate's degree** in surveying can take the licensing exam with **four years** of progressive experience.
- Graduates with a **high school diploma** can take the licensing exam after **seven years**.²³

Effect of the Bill

The bill changes language in the licensing requirements that allowed the Board to approve educational institutions and coursework to specify that applicants can obtain the required degree from “a college or university accredited by an accrediting body recognized by the United States Department of Education.”

The bill creates additional pathways for people to become licensed as a surveyor and mapper, while maintaining the prerequisite to take the licensure examination. Applicants are no longer required to obtain a four year bachelor's degree if the applicant:

- Received an **associate degree or a high school diploma** and completes a minimum of 25 semester hours specific to surveying and mapping at a college or university accredited by an accrediting body recognized by the United States Department of Education.
 - The hours may be from courses in civil engineering, surveying, mapping, mathematics, photogrammetry, forestry, or land law and the physical sciences.
- Such applicants must have **six or more years' experience** as a subordinate to a professional surveyor and mapper in the active practice of surveying and mapping, **five years of which must be of a nature indicating that the applicant was in responsible charge of the work performed.**

The bill amends the licensure by endorsement requirements allowing an out of state applicant to be eligible to take the licensure examination if they:

- Hold a **valid license** to practice surveying and mapping **in another state**, jurisdiction, or territory; and
- Have **two years of experience in the active practice** of surveying and mapping, which experience is of a nature indicating that the applicant was in responsible charge of the accuracy and correctness of the surveying and mapping work performed.

In addition, the bill creates a pathway to be eligible to take the licensure examination for applicants who have:

- Received a **registered apprenticeship certificate** in surveying and mapping after completing a registered apprenticeship program approved by the Department of Education; and
- Have an experience record of **two or more years as a subordinate** to a professional surveyor and mapper in the active practice of surveying and mapping, which experience is of a nature indicating that the applicant was in responsible charge of the accuracy and correctness of the surveying and mapping work performed.

Work experience acquired as a part of the education requirement may not be construed as experience in responsible charge.

The bill allows exiled foreign-trained professionals who have practiced the profession for three years to substitute this experience for the current education requirement.

B. SECTION DIRECTORY:

Section 1: amends s. 472.0101, F.S., relating to foreign-trained professionals, special examination and license provisions.

²³ North Carolina Society of Surveyors, *Licensure Requirements in North Carolina*, https://www.ncsurveyors.com/education/licensure_requirements (last visited Jan. 20, 2022).

Section 2: amends s. 472.013, F.S., relating to examinations, prerequisites.

Section 3: amends s. 472.003, F.S., conforming a cross-reference to changes made by the act.

Section 4: provides an effective date of July 1, 2022.

II. FISCAL ANALYSIS & ECONOMIC IMPACT STATEMENT

A. FISCAL IMPACT ON STATE GOVERNMENT:

1. Revenues:

Indeterminate. The bill may have a positive impact on examination and licensing revenue, to the extent that additional individuals will take the licensure examination and become licensed. All funds collected are deposited into the DACS General Inspection Trust Fund. According to DACS, the bill will not have a fiscal impact on the Department.²⁴

2. Expenditures:

Indeterminate. The bill may result in DACS processing additional applications for examination and licensure. However, DACS can likely absorb the related cost within existing resources. According to DACS, the bill will not have a fiscal impact on the Department.²⁵

B. FISCAL IMPACT ON LOCAL GOVERNMENTS:

1. Revenues:

None.

2. Expenditures:

None.

C. DIRECT ECONOMIC IMPACT ON PRIVATE SECTOR:

The bill creates additional pathways so that applicants are no longer required to obtain a bachelor's degree to qualify to take the licensure examination to practice as a surveyor and mapper, which will lower the cost and time it takes to become licensed, and allow more people to practice their chosen profession.

D. FISCAL COMMENTS:

None.

III. COMMENTS

A. CONSTITUTIONAL ISSUES:

1. Applicability of Municipality/County Mandates Provision:

Not applicable. The bill does not appear to effect county or municipal governments.

2. Other:

None.

B. RULE-MAKING AUTHORITY:

²⁴ Department of Agriculture and Consumer Services, Agency Analysis of 2022 HB 831, p. 3 (Jan. 3, 2022).

²⁵ *Id.*

Agency rules may have to be amended to change current education and work experience requirements. Current law appears to provide sufficient rulemaking authority for DACS to implement the bill.

C. DRAFTING ISSUES OR OTHER COMMENTS:

None.

IV. AMENDMENTS/ COMMITTEE SUBSTITUTE CHANGES

On January 20, 2022, the Regulatory Reform Subcommittee adopted two amendments and reported the bill favorably as a committee substitute. The committee substitute:

- Removes the definition for “accredited colleges and universities” from the bill.
- Specifies that the colleges and universities referenced in the bill must be accredited by an accrediting body recognized by the United States Department of Education.

On February 1, 2022, the Commerce Committee adopted one amendment and reported the bill favorably as a committee substitute. The committee substitute revises the work experience requirements for applicants for the surveying and mapping state licensure examination to be six or more years total work experience, five years of which must be in responsible charge of the work performed for applicants who have:

- A bachelor’s degree in non-surveying and mapping subjects.
- An associate degree.
- A high school diploma.

This analysis is drafted to the committee substitute as passed by the Commerce Committee.