



**Dora**  
Department of Regulatory Agencies

Office of Policy, Research and Regulatory Reform

**2012 Sunset Review:  
State Board of Licensure for  
Architects, Professional Engineers,  
and Professional Land Surveyors**

October 15, 2012





**Executive Director's Office**

Barbara J. Kelley  
Executive Director

John W. Hickenlooper  
Governor

October 15, 2012

Members of the Colorado General Assembly  
c/o the Office of Legislative Legal Services  
State Capitol Building  
Denver, Colorado 80203

Dear Members of the General Assembly:

The mission of the Department of Regulatory Agencies (DORA) is consumer protection. As a part of the Executive Director's Office within DORA, the Office of Policy, Research and Regulatory Reform seeks to fulfill its statutorily mandated responsibility to conduct sunset reviews with a focus on protecting the health, safety and welfare of all Coloradans.

DORA has completed the evaluation of the State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors (Board). I am pleased to submit this written report, which will be the basis for my office's oral testimony before the 2013 legislative committee of reference. The report is submitted pursuant to section 24-34-104(8)(a), of the Colorado Revised Statutes (C.R.S.), which states in part:

The department of regulatory agencies shall conduct an analysis of the performance of each division, board or agency or each function scheduled for termination under this section...

The department of regulatory agencies shall submit a report and supporting materials to the office of legislative legal services no later than October 15 of the year preceding the date established for termination....

The report discusses the question of whether there is a need for the regulation provided under Article 25 of Title 12 C.R.S. The report also discusses the effectiveness of the Board and staff in carrying out the intent of the statutes and makes recommendations for statutory changes in the event this regulatory program is continued by the General Assembly.

Sincerely,

Barbara J. Kelley  
Executive Director





John W. Hickenlooper.  
Governor

Barbara J. Kelley  
Executive Director

## **2012 Sunset Review:**

### **State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors**

#### **Summary**

##### ***What Is Regulated?***

The General Assembly directs the State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors (Board) to regulate:

- Architects who design buildings to be functional, safe, economical, and suit the needs of the people who use them;
- Engineers who design and develop, test, produce, and maintain systems and products providing a link between scientific discoveries and commercial applications; and
- Land Surveyors who measure the Earth's surface to collect data that are used to draw maps, determine the shape and contour of parcels of land, and set land, airspace, and water property lines and boundaries.

##### ***Why Is It Regulated?***

The overriding rationale for licensing in these cases is that there is a potential for catastrophic harm if these practices are performed incompetently. These professionals generally carry an immense amount of trust in their competency. They all are trustees of the public financial welfare. Moreover, many architects and engineers, deal with health-safety issues on a daily basis.

##### ***Who Is Regulated?***

Inclusive of the three professions, the Board licensed more than 30,000 practitioners and enrolled more than 11,000 interns annually for the period examined for this sunset review. During fiscal year 10-11, the Board regulated:

- 7,187 architects;
- 22,326 professional engineers and 12,245 engineer interns; and
- 1,870 land surveyors and 299 land surveyor interns.

##### ***How Is It Regulated?***

Each of the professions is governed by its own practice act.

The Board is a Type 1 board, designated by the acts with qualifying and licensing each professional. It also has the power to deny, suspend, revoke, or refuse to renew licensure, limit the scope of practice, or place on probation, any professional who does not practice within the standards established in the acts or associated rules.

##### ***What Does It Cost?***

The program is cash funded. During fiscal year 10-11 the Board expended \$855,276 and employed 3.15 full-time equivalent employees.

##### ***What Disciplinary Activity Is There?***

During the period under review, the Board received an average of 161 complaints annually which resulted in an average of 81 disciplinary actions,

## Key Recommendations

### **Continue the Board and regulation for 11 years, until 2024.**

Board records indicate that there are very few practice-related complaints against architects, engineers, or land surveyors indicating that the practitioners are extremely competent. The overriding rationale for regulation is that there is a potential for catastrophic harm if these practices go unregulated.

A major purpose of licensing programs is to determine the minimum qualifications necessary to protect the public from incompetence. The data also indicate that while regulation should continue, any increase to the qualifications for entry into one of the professions is not justified.

### **Allow professional engineers and land surveyors licensed in other states to offer services in Colorado.**

The Architect Practice Act allows individuals who are licensed in other states and whose licenses are in good standing, to advertise their professional services in Colorado, as long as a Board licensed architect is responsible for any work performed in the state.

Extending this ability to engineers and land surveyors will create competition, promote choice, and present more options for consumers. In this age of mobility and portability of expertise it opens opportunities for different opinions, styles, and individual creativity. Still, all work will be performed under the provisions of Colorado law and by Colorado licensed professionals.

### **Major Contacts Made During This Review**

American Council of Engineering Companies  
American Institute of Architects – Colorado  
American Society of Civil Engineers – Colorado Section  
American Society of Landscape Architects – Colorado  
City and County of Denver  
Colorado Association of Geotechnical Engineers  
Colorado Association of Home Builders  
Colorado Building and Construction Trades Council  
Colorado Counties, Incorporated  
Colorado Interior Design Coalition  
Colorado Municipal League  
Colorado State Engineer  
Land Title Association of Colorado  
National Council of Architectural Registration Boards  
National Kitchen and Bath Association  
National Society of Professional Engineers - Colorado  
Office of the Colorado Attorney General  
Professional Land Surveyors of Colorado, Incorporated  
Structural Engineers Association of Colorado

### **What is a Sunset Review?**

A sunset review is a periodic assessment of state boards, programs, and functions to determine whether or not they should be continued by the legislature. Sunset reviews focus on creating the least restrictive form of regulation consistent with protecting the public. In formulating recommendations, sunset reviews consider the public's right to consistent, high quality professional or occupational services and the ability of businesses to exist and thrive in a competitive market, free from unnecessary regulation.

Sunset Reviews are Prepared by:  
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## Background

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### Introduction

Enacted in 1976, Colorado's sunset law was the first of its kind in the United States. A sunset provision repeals all or part of a law after a specific date, unless the legislature affirmatively acts to extend it. During the sunset review process, the Department of Regulatory Agencies (DORA) conducts a thorough evaluation of such programs based upon specific statutory criteria<sup>1</sup> and solicits diverse input from a broad spectrum of stakeholders including consumers, government agencies, public advocacy groups, and professional associations.

Sunset reviews are based on the following statutory criteria:

- Whether regulation by the agency is necessary to protect the public health, safety and welfare; whether the conditions which led to the initial regulation have changed; and whether other conditions have arisen which would warrant more, less or the same degree of regulation;
- If regulation is necessary, whether the existing statutes and regulations establish the least restrictive form of regulation consistent with the public interest, considering other available regulatory mechanisms and whether agency rules enhance the public interest and are within the scope of legislative intent;
- Whether the agency operates in the public interest and whether its operation is impeded or enhanced by existing statutes, rules, procedures and practices and any other circumstances, including budgetary, resource and personnel matters;
- Whether an analysis of agency operations indicates that the agency performs its statutory duties efficiently and effectively;
- Whether the composition of the agency's board or commission adequately represents the public interest and whether the agency encourages public participation in its decisions rather than participation only by the people it regulates;
- The economic impact of regulation and, if national economic information is not available, whether the agency stimulates or restricts competition;
- Whether complaint, investigation and disciplinary procedures adequately protect the public and whether final dispositions of complaints are in the public interest or self-serving to the profession;
- Whether the scope of practice of the regulated occupation contributes to the optimum utilization of personnel and whether entry requirements encourage affirmative action;
- Whether administrative and statutory changes are necessary to improve agency operations to enhance the public interest.

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<sup>1</sup> Criteria may be found at § 24-34-104, C.R.S.

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## **Types of Regulation**

Consistent, flexible, and fair regulatory oversight assures consumers, professionals and businesses an equitable playing field. All Coloradans share a long-term, common interest in a fair marketplace where consumers are protected. Regulation, if done appropriately, should protect consumers. If consumers are not better protected and competition is hindered, then regulation may not be the answer.

As regulatory programs relate to individual professionals, such programs typically entail the establishment of minimum standards for initial entry and continued participation in a given profession or occupation. This serves to protect the public from incompetent practitioners. Similarly, such programs provide a vehicle for limiting or removing from practice those practitioners deemed to have harmed the public.

From a practitioner perspective, regulation can lead to increased prestige and higher income. Accordingly, regulatory programs are often championed by those who will be the subject of regulation.

On the other hand, by erecting barriers to entry into a given profession or occupation, even when justified, regulation can serve to restrict the supply of practitioners. This not only limits consumer choice, but can also lead to an increase in the cost of services.

There are also several levels of regulation.

### Licensure

Licensure is the most restrictive form of regulation, yet it provides the greatest level of public protection. Licensing programs typically involve the completion of a prescribed educational program (usually college level or higher) and the passage of an examination that is designed to measure a minimal level of competency. These types of programs usually entail title protection – only those individuals who are properly licensed may use a particular title(s) – and practice exclusivity – only those individuals who are properly licensed may engage in the particular practice. While these requirements can be viewed as barriers to entry, they also afford the highest level of consumer protection in that they ensure that only those who are deemed competent may practice and the public is alerted to those who may practice by the title(s) used.

### Certification

Certification programs offer a level of consumer protection similar to licensing programs, but the barriers to entry are generally lower. The required educational program may be more vocational in nature, but the required examination should still measure a minimal level of competency. Additionally, certification programs typically involve a non-governmental entity that establishes the training requirements and owns and administers the examination. State certification is made conditional upon the individual practitioner obtaining and maintaining the relevant private credential. These types of programs also usually entail title protection and practice exclusivity.

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While the aforementioned requirements can still be viewed as barriers to entry, they afford a level of consumer protection that is lower than a licensing program. They ensure that only those who are deemed competent may practice and the public is alerted to those who may practice by the title(s) used.

### Registration

Registration programs can serve to protect the public with minimal barriers to entry. A typical registration program involves an individual satisfying certain prescribed requirements – typically non-practice related items, such as insurance or the use of a disclosure form – and the state, in turn, placing that individual on the pertinent registry. These types of programs can entail title protection and practice exclusivity. Since the barriers to entry in registration programs are relatively low, registration programs are generally best suited to those professions and occupations where the risk of public harm is relatively low, but nevertheless present. In short, registration programs serve to notify the state of which individuals are engaging in the relevant practice and to notify the public of those who may practice by the title(s) used.

### Title Protection

Finally, title protection programs represent one of the lowest levels of regulation. Only those who satisfy certain prescribed requirements may use the relevant prescribed title(s). Practitioners need not register or otherwise notify the state that they are engaging in the relevant practice, and practice exclusivity does not attach. In other words, anyone may engage in the particular practice, but only those who satisfy the prescribed requirements may use the enumerated title(s). This serves to indirectly ensure a minimal level of competency – depending upon the prescribed preconditions for use of the protected title(s) – and the public is alerted to the qualifications of those who may use the particular title(s).

Licensing, certification and registration programs also typically involve some kind of mechanism for removing individuals from practice when such individuals engage in enumerated proscribed activities. This is generally not the case with title protection programs.

### Regulation of Businesses

Regulatory programs involving businesses are typically in place to enhance public safety, as with a salon or pharmacy. These programs also help to ensure financial solvency and reliability of continued service for consumers, such as with a public utility, a bank or an insurance company.

Activities can involve auditing of certain capital, bookkeeping and other recordkeeping requirements, such as filing quarterly financial statements with the regulator. Other programs may require onsite examinations of financial records, safety features or service records.

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Although these programs are intended to enhance public protection and reliability of service for consumers, costs of compliance are a factor. These administrative costs, if too burdensome, may be passed on to consumers.

## **Sunset Process**

Regulatory programs scheduled for sunset review receive a comprehensive analysis. The review includes a thorough dialogue with agency officials, representatives of the regulated profession and other stakeholders. Anyone can submit input on any upcoming sunrise or sunset review via DORA's website at: [www.askdora.colorado.gov](http://www.askdora.colorado.gov).

The regulatory functions of the State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors (Board) enumerated in Article 25 of Title 12, Colorado Revised Statutes (C.R.S.), shall terminate on July 1, 2013, unless continued by the General Assembly. During the year prior to this date, it is the duty of DORA to conduct an analysis and evaluation of the administration of the program by the Division of Professions and Occupations pursuant to section 24-34-104, C.R.S.

The purpose of this review is to determine whether the currently prescribed regulation of architects, engineers, and land surveyors should be continued for the protection of the public and to evaluate the performance of the Board. During this review, the Board must demonstrate that the regulation serves to protect the public health, safety or welfare, and that the regulation is the least restrictive regulation consistent with protecting the public. DORA's findings and recommendations are submitted via this report to the Office of Legislative Legal Services.

## **Methodology**

As part of this review, DORA staff attended Board meetings; interviewed Board staff; reviewed Board records and minutes including complaint and disciplinary actions; interviewed practitioner educators, individual practitioners, and officials with state and national professional associations; attended professional association conferences; and reviewed Colorado statutes, Board rules, and the laws of other states.

## **Profiles of the Professions**

### Architects

Architects develop the concepts for structures and turn those concepts into images and plans. They design a building's appearance, but they also plan more. Buildings must be functional, safe, economical, and suit the needs of the people who use them. Architects consider all these factors when they design structures. Therefore, an architect should be proficient at designing, managing, supervising, and communicating with clients and builders.<sup>2</sup>

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<sup>2</sup> Student Scholarships.org, *Architects – What they do*. Retrieved August 30, 2012, from <http://www.studentscholarships.org/salary/556/architects.php>

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About 21 percent of architects are self-employed. This ratio is almost triple the proportion for all occupations. Architects often work with engineers, urban planners, interior designers, landscape architects, and other professionals.<sup>3</sup>

All states and the District of Columbia require some form of licensure for individuals prior to calling themselves architects or contracting to provide architectural services. To become licensed, in most states, architects must hold a professional degree in architecture from one of the 117 schools of architecture that have degree programs accredited by the National Architectural Accrediting Board and pass each division, or section, of the Architect Registration Examination. Most states also require some form of continuing education.<sup>4</sup>

### Engineers<sup>5</sup>

Engineers provide a link between scientific discoveries and commercial applications. They design and develop, test, produce, and maintain systems and products. Most engineers specialize. The federal government's Standard Occupational Classification system lists 17 engineering specialties:

- Aerospace engineers;
- Agricultural engineers;
- Biomedical engineers;
- Chemical engineers;
- Civil engineers;
- Computer hardware engineers;
- Electrical engineers;
- Electronics engineers, except computer;
- Environmental engineers;
- Health and safety engineers;
- Industrial engineers;
- Marine engineers;
- Materials engineers;
- Mechanical engineers;
- Mining and geological engineers;
- Nuclear engineers; and
- Petroleum engineers.

While the federal government classifies several specialties, Colorado licenses only one category, Professional Engineer. Engineers typically obtain a bachelor's degree in a specialty. Most engineering degrees are granted in electrical and electronics engineering, mechanical engineering, and civil engineering.

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<sup>3</sup> U.S. Bureau of Labor and Statistics: *Occupational Outlook Handbook 2010-11 Edition. Architects, Except Landscape and Navel*. Retrieved December 1, 2011, from <http://www.bls.gov/oco/ocos038.htm>

<sup>4</sup> Student Scholarships.org, *Architects –What they do*. Retrieved August 30, 2012, from <http://www.studentscholarships.org/salary/556/architects.php>

<sup>5</sup> U.S. Bureau of Labor and Statistics: *Occupational Outlook Handbook 2010-11 Edition. Engineers*. Retrieved November 28, 2011, from <http://www.bls.gov/oco/ocos027.htm>

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In addition to the standard engineering degree, many colleges offer degree programs in engineering technology. Graduates of four-year technology programs may get jobs similar to those obtained by graduates with a bachelor's degree, but typically are not licensed in engineering. Additionally, various certification programs are offered in specific fields of engineering.

All 50 states and the District of Columbia require licensure for engineers who offer their services directly to the public. Licensure generally requires a degree from an Accreditation Board for Engineering and Technology (ABET)-accredited engineering program, four years of relevant work experience, and completion of an examination.

The licensing process involves a two-stage examination. The initial Fundamentals of Engineering examination may be taken after graduation or while in the senior year of an ABET-accredited engineering degree program. Those who pass are engineers in training (EITs) or engineer interns (EIs). Colorado uses the term "EI". After completing the requisite experience, EITs and EIs can take the second examination, called the Principles and Practice of Engineering examination.

### Land Surveyors

Surveyors establish land, airspace, and water boundaries. They measure the Earth's surface to collect data that are used to draw maps, determine the shape and contour of parcels of land, and set property lines and boundaries. They also define airspace for airports and measure construction and mining sites. They provide data about the shape, contour, location, elevation, or dimension of land or land features. Surveyors also measure distances, directions, and angles between points on, above, and below the Earth's surface.<sup>6</sup>

Technology can play an important role in surveying. Surveying may be done with Global Positioning Systems (GPS) where surveyors interpret and check the results produced by GPS. Surveyors gather data that is fed into a Geographic Information System (GIS), which is then used to create detailed maps.<sup>7</sup>

Surveyors record their results, verify the accuracy of data, prepare plots, maps, and reports and sometimes perform legal research. They look for evidence of previous boundaries, and analyze data to determine the location of boundary lines.<sup>8</sup>

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<sup>6</sup> U.S. Bureau of Labor and Statistics. *Occupational Outlook Handbook*. Retrieved August 30, 2012, from <http://www.bls.gov/ooh/architecture-and-engineering/surveyors.htm#tab-2>

<sup>7</sup> U.S. Bureau of Labor and Statistics. *Occupational Outlook Handbook*. Retrieved August 30, 2012, from <http://www.bls.gov/ooh/architecture-and-engineering/surveyors.htm#tab-2>

<sup>8</sup> U.S. Bureau of Labor and Statistics. *Occupational Outlook Handbook*. Retrieved August 30, 2012, from <http://www.bls.gov/ooh/architecture-and-engineering/surveyors.htm#tab-2>

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All 50 states and all U.S. territories license surveyors. For licensure, most states require that individuals pass examinations given by the National Council of Examiners for Engineering and Surveying (NCEES). The Fundamentals of Surveying is the first examination. Passage allows candidates to work under the supervision of an experienced surveyor before taking a second examination, the Principles and Practice of Surveying. Some states, including Colorado, also require surveyors to pass a written examination prepared by the licensing authority.<sup>9</sup>

Specific requirements for training and education vary among the states. Some states require the degree to be from a school accredited by the ABET.<sup>10</sup>

The demand for traditional surveying services is closely tied to construction activity and opportunities will vary by year and geographic region, depending on local economic conditions. When real estate sales and construction slow down, surveyors may face greater competition for jobs. However, because surveyors can work on many different types of projects, they may have steadier work than others when construction slows.<sup>11</sup>

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<sup>9</sup> U.S. Bureau of Labor and Statistics. *Occupational Outlook Handbook*. Retrieved August 30, 2012, from <http://www.bls.gov/ooh/architecture-and-engineering/surveyors.htm#tab-4>

<sup>10</sup> U.S. Bureau of Labor and Statistics. *Occupational Outlook Handbook*. Retrieved August 30, 2012, from <http://www.bls.gov/ooh/architecture-and-engineering/surveyors.htm#tab-4>

<sup>11</sup> U.S. Bureau of Labor and Statistics. *Occupational Outlook Handbook*. Retrieved August 30, 2012, from <http://www.bls.gov/ooh/architecture-and-engineering/surveyors.htm#tab-6>

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## Legal Framework

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### ***History of the State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors***

The first iteration of what is now the State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors (Board) was created in 1919. At that time, it was named the Colorado State Board of Engineer Examiners, both engineers and land surveyors were licensed, and engineers were authorized to practice land surveying.

The name of the regulating entity changed several times over the ensuing decades but the functions remained the same: licensing and regulating professional engineers and land surveyors.

Though there were changes in the Board composition and to the definitions and scope of the professions, no major regulatory changes took place until 1981. At that time the name was changed to the State Board of Registration for Professional Engineers and Professional Land Surveyors (ES Board) and the surveyor quorum was created. The surveyor quorum was tasked with administering specifically to land surveying issues and was composed of at least two land surveyor ES Board members and one engineer ES Board member.

Additionally in 1981, the registration and certification requirements for Professional Engineers, Engineers-in-Training, and Professional Land Surveyors were changed, certification for Surveyors-in-Training was initiated, and minimum age requirements were eliminated for all applicants.

A sunset review of the ES Board led to more change in 1988. At that time many of the “modern” regulatory policies were amended into the practice act. An exemption for persons employed by and performing engineering services for the federal government was added. Revisions authorized the ES Board to issue letters of admonition, and eliminated "good character" requirements for licensure. Several grounds for discipline were also added including:

- Using false, deceptive, or misleading advertising;
- Performing services beyond one's competency, training, or education;
- Failing to report to the ES Board any registered engineer known to have violated any provision of the act;
- Excessive use of any habit-forming drug; and
- Failing to report any malpractice claim regarding engineering services that is settled or in which judgment is rendered.

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Moreover, at that time the ES Board was granted the authority to enforce violations of Title 38, Colorado Revised Statutes (C.R.S.). Title 38, C.R.S., governs real estate and personal property but also contains specific standards of practice provisions for land surveying.

In 1994 the Board was granted authority to fine unlicensed persons and issue cease and desist orders.

The next major modification in regulation occurred following a 2005 sunset review of the State Board of Examiners of Architects (Architect Board). The General Assembly adopted a recommendation that the Architect Board and the ES Board merge to improve governmental efficiency and the Board was created in its current form.

Prior to merging, the Architect Board and the regulation of architects had somewhat of a turbulent past. Regulation has existed in various forms off and on since 1909. During that period the Architect Board had been repealed and reenacted four times. The degree of regulation has gone from none at all, to a single occupation board, and finally its current iteration as one of three occupations regulated by the Board.

### **Summary of Colorado Law**

Architects, engineers, and land surveyors are licensed professions authorized by Article 25 of Title 12 (Article), C.R.S. Each profession has its own practice act. Part 1 of the Article is the Engineer Act, Part 2 is the Land Surveyor Act, and Part 3 is the Architect Act. The Article also bestows regulatory authority for each profession with the Board.<sup>12</sup>

The Board is a Governor-appointed, 13-member, Type 1 board. Four members must be professional engineers, with no more than two of the four engaged in the same discipline; three members must be practicing professional land surveyors; three members must be practicing licensed architects; and three members must be from the general public who have been state residents for at least one year and who have not practiced architecture, engineering, or land surveying.<sup>13</sup>

The Board independently governs these professions. Though the Board's functions and policies are administered and enforced by the Department of Regulatory Agencies' (DORA) Division of Professions and Occupations (Division), because it is a Type 1 board, statute grants it a large degree of autonomy. Section 105 of Title 24, Article 1, C.R.S., which authorized the placement of the Board in DORA reads, in part:

(A Type 1 board transfer) ... shall exercise its prescribed statutory powers, duties, and functions, including rule-making, regulation, licensing, and registration, the promulgation of rules, rates, regulations, and standards, and the rendering of findings, orders, and adjudications, independently of the head of the principal department.

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<sup>12</sup> § 12-25-106(1), C.R.S.

<sup>13</sup> § 12-25-106(3), C.R.S.

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The Article enumerates specific regulatory powers and duties of the Board. The Board is charged with qualifying and licensing each professional who chooses to practice in Colorado, promulgating and adopting rules to enforce the individual practice acts, holding meetings, and making a record of all proceedings and applications.<sup>14</sup>

It also has the power to deny, suspend, revoke, or refuse to renew a license,<sup>15</sup> limit the scope of practice, or place on probation, any professional who is found guilty of specific acts. These specific acts fall into general categories: standard of practice violations, fraud/ethics violations, administrative violations, and being convicted of a felony related to one's professional practice.<sup>16</sup>

The Board has the ability to investigate the activities of any licensee if a complaint is initiated against that licensee.<sup>17</sup>

When a complaint or investigation discloses an instance of misconduct that the Board feels does not warrant formal action but that should not be dismissed, it may issue a letter of admonition (LOA). When a LOA is sent, the recipient is advised that he or she has the right to request, within 20 days of receipt, that formal disciplinary proceedings be initiated. If the request is timely, the LOA is vacated and the matter will be processed by means of a formal disciplinary hearing<sup>18</sup>.

In addition to any other discipline issued by the Board, it may impose a fine for violations.<sup>19</sup> In the cases of engineers and land surveyors, the first violation can garner a fine from \$50 to \$500 and subsequent violations range from \$250 to \$5,000.<sup>20</sup> Architects may be fined up to \$5,000 for any violation.<sup>21</sup>

An engineer, land surveyor, or architect may receive a confidential letter of concern from the Board. This may happen when an instance of potentially unacceptable conduct is reported but does not warrant formal action. In the case of engineers and land surveyors, these dismissed letters are kept confidential unless the Board is a party in a court action.<sup>22</sup>

All disciplinary hearings, whether conducted by the Board or an Administrative Law Judge, must be conducted according to the State Administrative Procedure Act.<sup>23</sup> Unless dismissed by the Board, charges made against an engineer or land surveyor must have a hearing within five years after the filing date.<sup>24</sup> The Board is also authorized to apply for an injunction to enforce the provisions of the individual practice acts if Board orders are not followed.<sup>25</sup>

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<sup>14</sup> §§ 12-25-107, 207, and 307, C.R.S.

<sup>15</sup> There are several different types/levels of licensure regulated among the three professions.

<sup>16</sup> §§ 12-25-108, 208, and 308, C.R.S.

<sup>17</sup> §§ 12-25-109(1), 209(1), and 309(1), C.R.S.

<sup>18</sup> §§ 12-25-108(2), 208(2), and 308(2), C.R.S.

<sup>19</sup> §§ 12-25-108(4), 208(4), and 308(4), C.R.S.

<sup>20</sup> §§ 12-25-108(4)(a), and 208(4)(a), C.R.S.

<sup>21</sup> § 12-25-308(4)(a), C.R.S.

<sup>22</sup> §§ 12-25-108(5), 208(5), and 308(2)(d), C.R.S.

<sup>23</sup> §§ 12-25-109(4), 209(2), and 309(4), C.R.S.

<sup>24</sup> §§ 12-25-109(3), and 209(3), C.R.S.

<sup>25</sup> §§ 12-25-105(6)(a), 109(8), 109(8.7), 209(8), 209(8.7), 305(7), and 308(4), C.R.S.

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When the Board decides formal action should be taken on a complaint, no deferred settlement, action, judgment, or prosecution can resolve the complaint.<sup>26</sup> However the Board may, at its sole discretion, reconsider a disciplinary action. Conversely, any person may appeal a Board order according to the State Administrative Procedure Act.<sup>27</sup>

Any member of the Board, Board staff, any Board witness or consultant, or any person who lodges a complaint, is immune from liability in any civil action brought against him or her for acts while acting in good faith within the scope of his or her respective capacity.<sup>28</sup>

## Licensing

### *Exceptions from Licensure*

It is unlawful for a person to practice one of these professions in Colorado without first obtaining a license unless he or she works under a statutory exemption. For example, a person who works as an engineer solely for a municipality works under an exemption to the Engineer Act and is not required to obtain a professional engineer's license. Exemptions to the Engineer Act include:<sup>29</sup>

- Partnerships, professional associations, joint stock companies, limited liability companies, or corporations, or the employees of any such organizations, who perform engineering services for themselves or their affiliates;
- Individuals who normally operate and maintain machinery or equipment;
- Individuals who perform engineering services for themselves;
- Individuals who perform engineering services under the responsible charge of a professional engineer;
- Individuals whose work is of a strictly agricultural nature and which is not required to be of public record;
- Individuals who are employed by and perform engineering services solely for a county, city and county, or municipality;
- Individuals who are employed by and perform engineering services solely for the federal government;
- Licensed architects;
- Licensed professional land surveyors; and
- Utilities or their employees or contractors when performing services for another utility during times of natural disasters or emergency situations.

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<sup>26</sup> §§ 12-25-109(11), 209(11), and 309(6), C.R.S.

<sup>27</sup> §§ 12-25-109(10), 109.5, 209(10), 209.5, 309(6), and 309.5, C.R.S.

<sup>28</sup> §§ 12-25-118, 218, and 318, C.R.S.

<sup>29</sup> § 12-25-103, C.R.S.

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The Land Surveyor Act has exemptions for employees of the federal government surveying within the course of their federal employment and for individuals under the responsible charge of a professional land surveyor.<sup>30</sup>

The Architect Act includes exemptions that cover dwellings that house up to four families, certain types of commercial buildings that are not designed for occupancy by more than 10 persons, and nonstructural alterations of any nature to any building if such alterations do not affect the life safety of the occupants of the building.<sup>31</sup>

The Architect Act also exempts employees of the federal government<sup>32</sup> and allows interior designers a limited exemption. Interior designers with certain enumerated qualifications may prepare design documents and specifications for interior finishes and nonstructural elements within and surrounding interior spaces of a building or structure.<sup>33</sup>

#### *Licensing Qualifications*

Each applicant for licensure must declare whether he or she has ever been convicted of a felony or has ever been disciplined by another state in the profession in which he or she is applying for a license. When the Board reviews or considers the conviction of a crime by an applicant, it must follow procedures set out in Section 101 of Title 5, Article 24, C.R.S.<sup>34</sup>

If a person's Colorado license has been revoked, no reapplication will be considered sooner than two years from the revocation.

Each individual licensed pursuant to the Article obtains a seal for professional use. The licensee is the only individual authorized to use his or her seal and is responsible and accountable for its care, custody, control, and use.<sup>35</sup>

#### *Engineer Eligibility and Qualifications*

##### *Engineer-Interns*

There are four pathways for an applicant to become an enrolled engineer-intern (EI):

An applicant may qualify for enrollment by **endorsement** if he or she is enrolled as an engineer-intern in another jurisdiction. The other jurisdiction must have qualifications substantially equivalent to Colorado's at the time of initial enrollment.<sup>36</sup>

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<sup>30</sup> § 12-25-203(1), C.R.S.

<sup>31</sup> § 12-25-303(1), C.R.S.

<sup>32</sup> § 12-25-303(4), C.R.S.

<sup>33</sup> § 12-25-303(6)(a), C.R.S.

<sup>34</sup> §§ 12-25-110, 210, and 310, C.R.S.

<sup>35</sup> Board Rule 3.1.3.

<sup>36</sup> § 12-25-112(1)(a), C.R.S.

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An applicant may qualify for enrollment by **graduation and examination** if he or she passes the Fundamentals of Engineering examination. To sit for the examination, the applicant must be a senior or have graduated from a Board-approved engineering or engineering technology curriculum of at least four years.<sup>37</sup>

An applicant may qualify for enrollment by **graduation, experience, and examination** if he or she passes the Fundamentals of Engineering examination and has a total of six years combined experience and education. Prior to sitting for the examination, the applicant must have graduated from a non-Board-approved engineering program of at least four years or from a related science program of at least four years, and have the practical experience necessary to make up the six year total.<sup>38</sup>

An applicant may qualify for enrollment by **experience and examination** if he or she passes the Fundamentals of Engineering examination. To sit for the examination, the applicant must have a high school diploma or equivalent and six years of progressive engineering experience, some of which may be education.<sup>39</sup>

#### *Professional Engineer*

Unlike the other professions examined in this review, engineer applicants may be required to have a personal interview by the Board. The Board may require the interview if a submitted application does not show that the applicant has the minimum qualifications necessary to qualify to take the written licensing examination.<sup>40</sup>

There are three paths for an applicant to become licensed as a professional engineer: **endorsement; graduation, experience, and examination;** and **experience and examination.**

An applicant may qualify for a license by **endorsement** if he or she is licensed as a professional engineer in another jurisdiction. The other jurisdiction must have licensing requirements substantially equivalent to Colorado's.<sup>41</sup>

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<sup>37</sup> § 12-25-112(2), C.R.S.

<sup>38</sup> § 12-25-112(3), C.R.S.

<sup>39</sup> § 12-25-112(4), C.R.S.

<sup>40</sup> § 12-25-110(3), C.R.S.

<sup>41</sup> § 12-25-114(1), C.R.S.

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An applicant may qualify for licensure by **graduation, experience, and examination** if he or she passes the Principles and Practice of Engineering examination. If an applicant chooses this path to licensure, to sit for the examination then he or she must:<sup>42</sup>

- Have graduated from a Board-approved engineering curriculum of at least four years;
- Have eight years of progressive engineering experience some of which may be education; and
- Have been enrolled in Colorado as an EI.

**OR**

- Have graduated from a Board-approved engineering technology curriculum of at least four years;
- Have 10 years of progressive engineering experience some of which may be education; and
- Have been enrolled in Colorado as an EI.

**OR**

- Have graduated from a non-Board-approved engineering program of at least four years or from a related science curriculum of at least four years;
- Have 10 years of progressive engineering experience some of which may be education; and
- Have been enrolled as a Colorado EI.

**OR**

- Have graduated from an engineering curriculum of at least four years or from a related science curriculum of at least four years; and
- Have 20 years of progressive engineering experience some of which may be education.

An applicant may qualify for licensure as a professional engineer by **experience and examination** if he or she passes the Principles and Practice of Engineering examination. If an applicant chooses this path to licensure, to sit for the examination, the applicant must:<sup>43</sup>

- Have 12 years of progressive engineering experience some of which may be education; and
- Have been enrolled in Colorado as an EI.

Once issued by the Board, a license is renewed or reinstated according to a schedule established by the Director of the Division. If not renewed on time, according to the renewal schedule, then the licensee is subject to penalties to have it reinstated.<sup>44</sup>

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<sup>42</sup> § 12-25-114(2), C.R.S.

<sup>43</sup> § 12-25-114(3), C.R.S.

<sup>44</sup> § 12-25-115(4), C.R.S.

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A licensed professional engineer over 65 years old who no longer practices can be classified as a retired professional engineer upon payment of a fee. If a retired professional engineer chooses to become active again, a license can be reinstated by payment of the renewal and no other fee. However, if he or she has been retired for two or more years, the Board may require reexamination.<sup>45</sup>

### *Seal*

Once a professional engineer receives a certificate of licensure, the engineer may obtain a crimp, a rubber stamp, or an electronic seal. The seal must be of a design approved by the Board and contain the licensee's name, license number, and the designation "Colorado licensed professional engineer".<sup>46</sup> The seal and signature are to be used by an engineer only when the work being stamped was under the engineer's "responsible charge."<sup>47</sup> The Engineer Act defines "responsible charge" as personal responsibility for the control and direction of engineering work within a professional engineer's scope of competence.<sup>48</sup>

## Surveyor Eligibility and Qualifications

### *Land Surveyor-Intern*

There are three paths an applicant may follow in becoming an enrolled land surveyor-intern (LSI):

An applicant may qualify for enrollment by **endorsement** if he or she is enrolled as a land surveyor-intern in another jurisdiction. The other jurisdiction must have licensing requirements substantially equivalent to Colorado's.<sup>49</sup>

An applicant may qualify for enrollment as a land surveyor-intern by **graduation and examination** when he or she passes the Fundamentals of Surveying examination. To sit for the examination, the applicant must either be a senior or have graduated from a Board-approved surveying technology curriculum of at least four years.<sup>50</sup>

An applicant may qualify for enrollment by **education, experience, and examination**. To sit for the examination, the applicant must have a high school diploma or a high school equivalent and four years of progressive land surveying experience, of which one year of educational credit may be substituted; or have graduated from a Board-approved two-year surveying program, and have a cumulative record of two or more years of progressive land surveying experience.<sup>51</sup>

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<sup>45</sup> § 12-25-114(4), C.R.S.

<sup>46</sup> § 12-25-117(1), C.R.S.

<sup>47</sup> § 12-25-117(3), C.R.S.

<sup>48</sup> § 12-25-102(14), C.R.S.

<sup>49</sup> § 12-25-212(1)(a), C.R.S.

<sup>50</sup> § 12-25-212(2), C.R.S.

<sup>51</sup> § 12-25-212(3), C.R.S.

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*Professional Land Surveyor*

An applicant can obtain a Colorado professional land surveyor license by **endorsement**, through an **education, experience, and examination pathway**, or through an **experience and examination** pathway.

An applicant qualifies for licensure by **endorsement** if he or she is licensed in another jurisdiction that has substantially equivalent qualifications to those in Colorado and passes any other required examinations.<sup>52</sup>

To sit for the examination, if an applicant chooses the **education, experience, examination** pathway, the applicant must:<sup>53</sup>

- Have graduated from a Board-approved surveying program of at least four years;
- Have two years of land surveying experience under the supervision of a professional land surveyor or an exempted federal employee; and
- Have been enrolled in Colorado as a LSI.

**OR**

- Have graduated from a surveying program of at least four years which has not been approved by the Board;
- Have four years of land surveying experience with two of those under the supervision of a professional land surveyor or an exempted federal employee; and
- Have been enrolled in Colorado as a LSI.

**OR**

- Have graduated from a Board-approved two-year surveying curriculum or from a four-year engineering curriculum that included surveying course work specified by Board rule;
- Have six years of progressive land surveying experience with four years under the supervision of a professional land surveyor or an exempted federal employee; and
- Have been enrolled in Colorado as a LSI.

**OR**

- Have graduated with a Bachelor's degree from a non-surveying program;
- Have completed surveying and other related course work specified by Board rule;
- Have six years of progressive land surveying experience, with four years under the supervision of a professional land surveyor or an exempted federal employee; and
- Have been enrolled in Colorado as a LSI.

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<sup>52</sup> § 12-25-214(1), C.R.S.

<sup>53</sup> § 12-25-214 (2), C.R.S.

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To be admitted to the examination pursuant to the ***experience and examination*** pathway, the applicant must have a high school diploma or the equivalent, have been enrolled in Colorado as a LSI, and have 10 years of progressive land surveying experience with six years under the supervision of a professional land surveyor or an exempted federal employee.<sup>54</sup>

The Board may substitute one academic year in a curriculum approved by the Board for one year of experience concerning any pathway. However, this substitution may not exceed three years.<sup>55</sup>

As with professional engineers, a licensed land surveyor over 65 years old who no longer works as a land surveyor has the ability to be classified as a retired professional land surveyor, for a fee. If a retired professional land surveyor chooses to become active again, a license can be reinstated by payment of the renewal, and no other fee. However, if he or she has been retired for two or more years, the Board may require reexamination.<sup>56</sup>

### *Seal*

Once a land surveyor receives a certificate of licensure, he or she may obtain a crimp, a rubber stamp, or an electronic seal. The seal must be of a design approved by the Board and contain the licensee's name, license number, and the designation "Colorado licensed professional land surveyor." All documents, plats, and reports resulting from the practice of land surveying must have the seal or facsimile, and signature of the land surveyor, and only when the work is performed under the "responsible charge" of the licensee.<sup>57</sup> The Land Surveyor Act defines "responsible charge" as personal responsibility for the control and direction of professional land surveying work.<sup>58</sup>

In addition to his or her seal, a land surveyor is responsible for maintaining control of any unused monument caps bearing his or her license number.<sup>59</sup>

### Architect Eligibility and Qualifications

An applicant may apply for a license by endorsement directly to the Board if he or she is licensed as an architect in another jurisdiction. The other jurisdiction must have licensing requirements substantially equivalent to Colorado's. The Board may also provide an alternative procedure so that an applicant may apply through a clearinghouse designated by the Board if he or she chooses. The clearinghouse must forward the application to the Board.<sup>60</sup>

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<sup>54</sup> § 12-25-214(4), C.R.S.

<sup>55</sup> §§ 12-25-214(3), and 214(4)(d), C.R.S.

<sup>56</sup> § 12-25-214(5), C.R.S.

<sup>57</sup> § 12-25-217, C.R.S.

<sup>58</sup> § 12-25-202(10), C.R.S.

<sup>59</sup> Board Rule 3.1.3.1.

<sup>60</sup> § 12-25-314(3), C.R.S.

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The Architect Act provides three other pathways to licensure:

- Up to three years of practical experience under the direct supervision of an exempted federal employee or a licensed architect, combined with a degree from a program accredited by the National Architectural Accrediting Board (NAAB). The Board may approve substantially equivalent education or experience but not require more than five years of education and experience.<sup>61</sup>
- Up to 10 years of practical experience under the direct supervision of an exempted federal employee or a licensed architect.<sup>62</sup>
- A combination of practical experience and education not exceeding 10 years.<sup>63</sup>

Additionally, of the required experience, up to one year may be in on-site building construction operations, physical analyses of existing buildings, or teaching or research in a program accredited by the NAAB<sup>64</sup> and full credit must be given for a four-year Baccalaureate in architecture or environmental design.<sup>65</sup>

After successfully negotiating one of these pathways an applicant is eligible to examine for a license. The examination(s) must be given at least twice each year and ensure that a passing score measures the minimum level of competency needed to practice.<sup>66</sup>

### *Seal*

Every licensed architect is required to have a stamp.<sup>67</sup> The stamp, the architect's signature, and the date signed, must be on drawings to establish a record set of drawings. Record drawings may not be reproduced unless required by federal contract. A record set is a permanent record for the architect, the project owner, and the regulatory authorities that have jurisdiction over the project.<sup>68</sup> The architect must keep an original record set for a minimum of three years following the project's beneficial use.<sup>69</sup>

The Architect Act requires that in order to renew a license to practice architecture, a licensee must complete a continuing education requirement.<sup>70</sup> The Board has established the requirement at 12 hours each year.<sup>71</sup>

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<sup>61</sup> § 12-25-314(1)(a)(I), C.R.S.

<sup>62</sup> § 12-25-314(1)(a)(B)(II), C.R.S.

<sup>63</sup> § 12-25-314(1)(a)(B)(III), C.R.S.

<sup>64</sup> § 12-25-314(1)(b), C.R.S.

<sup>65</sup> § 12-25-314(1)(c), C.R.S.

<sup>66</sup> § 12-25-314(2), C.R.S.

<sup>67</sup> § 12-25-307(1)(e), C.R.S.

<sup>68</sup> §§ 12-25-317(1)(a), and 317(1)(c), C.R.S.

<sup>69</sup> § 12-25-317(1)(d), C.R.S.

<sup>70</sup> § 12-25-315.5(1), C.R.S.

<sup>71</sup> Board Rule 4.9.3.1.2.5.

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## Professional Land Surveyor Standards of Practice

Professional land surveyors have standards of practice codified in Colorado law. Title 38 of the C.R.S., which governs real and personal property, contains multiple articles governing the practice of surveying:

- Article 50 Survey Plats and Monument Records - General Provisions;
- Article 51 Minimum Standards for Land Surveys and Plats;
- Article 52 Colorado Coordinate System; and
- Article 53 Perpetuation of Land Survey Monuments.

Though these articles are not specifically covered in this sunset review, because statutory standards of practice are not a common occurrence and they are an intricate portion of the legal framework pertaining to professional land surveyors, they must be acknowledged.

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## Program Description and Administration

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The State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors (Board) and its staff are charged with the duty of implementing the practice acts which govern the professional conduct of the licensees in each of the three professions. The Board is a Governor-appointed, 13-member, Type 1 board. Of the 13 members, 10 must be licensees including four engineers, three architects, and three land surveyors. In addition, three members must be from the public but cannot have practiced architecture, engineering, or land surveying.

Though there are three separate professions regulated by the Board, it generally operates as one regulatory program. Business, discipline, and statements are made in the name of the Board. The sole deviation from this principle is that there is a land surveyor quorum (Quorum).

The Quorum consists of the professional land surveyor members of the Board and one public member. The Quorum meets prior to full-Board meetings to discuss technical issues relating to surveying complaints. After conducting a preliminary review, it briefs the full Board about the issues during the normal complaint resolution process.

All Board proceedings, with the exception of licensee discipline discussions, are open to the public. The Colorado Attorney General's Office has determined disciplinary discussions to be a matter of attorney-client privilege and they are held in a closed executive session. However, all actions taken by the Board as a result of executive session discussions must be taken in an open session.

The program is cash funded. Its full-time equivalent (FTE) employees and expenditures vary little on a year to year basis. Table 1 shows average annual monetary expenditures were approximately \$792,000 and the annual FTE average was 2.82.

**Table 1**  
**Board Expenditures**  
**Fiscal Years 06-07 through 10-11**

<b>Fiscal Year</b>	<b>Total Program Expenditures</b>	<b>FTE</b>
06-07	\$797,963.19	2.70
07-08	\$775,584.99	2.35
08-09	\$801,193.88	2.85
09-10	\$734,247.29	3.05
10-11	\$855,276.12	3.15

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As of October 2011 the FTE were allotted as follows:

Technician IV	1.40
Administrative Assistant III	1.30
General Professional VII	0.12
General Professional VI	0.60

The FTE in Table 1 do not include staffing in the centralized offices of the Division of Professions and Occupations (Division). However, the cost of those FTE is reflected in the Total Program Expenditures. The Board pays for those FTE through a cost allocation methodology developed by the Division and the Department of Regulatory Agencies' (DORA) Executive Director's Office.

## **Licensing**

The Board licenses all three professions and enrolls engineer and land surveyor interns. Initial licensing is similar to other Division-regulated professions.

If a person wishes to obtain a license, the applicant must substantiate required education and experience to qualify for licensure. Applicants must also provide an Affidavit of Eligibility. The affidavit is used to determine if an applicant is lawfully present in the U.S.<sup>72</sup> All records must be provided with the license application.<sup>73</sup>

Upon receipt, the Division's Office of Licensing (Licensing) reviews the application packet to ensure it is complete. If it is complete, Licensing examines the various components to determine if an applicant is qualified for licensure. Because each of these professions has multiple pathways to licensure, the verification of the application packet is often more intensive than with other professions.

The following tables list the aggregate licensing numbers for the three professions regulated by the Board. For a listing by profession, see Appendix A. Table 2 depicts the number of new, original licenses, as well as renewals and reinstatements issued in the given fiscal year.

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<sup>72</sup> § 24-34-107(1)(a), C.R.S.

<sup>73</sup> Division of Registrations-Office of Licensing, *Applicant Checklist*. Retrieved April 30, 2012, from <http://www.dora.state.co.us/aes/licensing/PEinstructions.pdf>

**Table 2**  
**Licenses Issued**  
**Fiscal Years 06-07 through 10-11**

Fiscal Year	New Licenses Issued				Renewal	Reinstatement
	Examination	Endorsement	Transfer of Grades	Total New Licenses		
06-07	1,083	929	14	2,026	11,460	434
07-08	1,071	1,040	17	2,128	16,764	562
08-09	1,587	1,294	12	2,893	12,277	626
09-10	1,163	1,066	22	2,251	16,957	635
10-11	1,332	1,001	22	2,355	16,320	524

The “Transfer of Grades” category applies to those applicants that start the licensing process in another state but want to become licensed in Colorado. Those individuals have their examination grades transferred to the Board.

Table 3 depicts the total number of professionals of all license types licensed by the Board during the period under review. The number recorded is as of June 30<sup>th</sup>, the last day of the state fiscal year.

**Table 3**  
**Total Licensees**  
**All License Categories**  
**Fiscal Years 06-07 through 10-11**

Fiscal Year	Inactive	Retired	Active	Total
06-07	Not Applicable	887	28,771	29,658
07-08	Not Applicable	732	28,846	29,578
08-09	11	589	29,138	29,738
09-10	26	590	29,985	30,601
10-11	39	543	30,871	31,453

The “Inactive” category applies to architects. That option was not available to licensees prior to fiscal year 08-09.

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## Endorsement Licensing

For professional engineers or land surveyors the endorsement process is similar to the experience and education pathways. Education and experience must be documented on the application and verified by Licensing. The advantage to licensing via this pathway is that the applicant does not have to enroll as an intern prior to licensing.

Architects typically practice in multiple states so the industry has developed a streamlined method of verifying qualifications, the National Council of Architectural Registration Boards (NCARB) certification. NCARB is a membership organization consisting of the architectural regulatory authorities of 50 states and three U.S. territories. NCARB develops the Architect Registration Examination (ARE) which is required for licensure in every state.<sup>74</sup> NCARB also acts as a data collection center. Architects can keep up-to-date substantiation of their education, experience, and examination histories in the NCARB database. Thus, architect license candidates who pursue licensure by endorsement, have the option of doing so via the NCARB certification or by the same documentation and verification pathway as engineers and land surveyors.

NCARB charges a \$1,500 fee to compile and verify credentials and an annual renewal fee of \$225 to keep the certificate active. It also charges \$400 each time it transmits an architect's record to a licensing authority.<sup>75</sup>

## **Examinations**

Prior to obtaining a license in one of the professions, Colorado law requires that an applicant pass an examination(s).

Engineers and land surveyors are examined prior to enrollment as interns and again prior to becoming licensed in the profession. The National Council of Examiners for Engineering and Surveying (NCEES) is a nonprofit organization that develops, administers, and scores the examinations used for engineering and surveying licensure. The NCEES's membership consists of the licensing boards from 50 states, the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands.<sup>76</sup>

To sit for the engineering and surveying examinations, an individual must be approved by the Board. Examinations are given in April and October. Application deadlines are December 1, for the April examinations and June 1, for October.<sup>77</sup>

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<sup>74</sup> NCARB. *Architect Registration Examination*. Retrieved May 15, 2012, from <http://www.ncarb.org/ARE.aspx>

<sup>75</sup> NCARB. *NCARB Fees*. Retrieved May 15, 2012, from <http://www.ncarb.org/Getting-an-Initial-License/NCARB-Fees.aspx>

<sup>76</sup> NCEES. *About NCEES*. Retrieved May 16, 2012, from [http://www.ncees.org/About\\_NCEES.php](http://www.ncees.org/About_NCEES.php)

<sup>77</sup> NCEES. *Colorado exam registration*. Retrieved May 31, 2012, from <http://www.ncees.org/Exams/States/CO.php>

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## Engineers

### *Engineer Intern*

To enroll as an Engineer Intern, a candidate must have the required experience or education and then pass the Fundamentals of Engineering (FE) examination. The examination must be completed in eight hours. It is administered in April and October. The FE contains 180 multiple-choice questions and is split into a morning session and an afternoon session. During the morning session the test is the same for everyone but the examinee must select a discipline for the afternoon session.<sup>78</sup>

Table 4 indicates the number of candidates that took the FE examination during the period under review.

**Table 4**  
**Colorado FE Examinations**  
**Fiscal Years 06-07 through 10-11**

Fiscal Year	FE Examinations	Percent Passing
06-07	1,239	73
07-08	993	61
08-09	968	61
09-10	1,320	76
10-11	1,368	75

### *Professional Engineer*

Once the internship is complete, the candidate must pass the Professional Engineer (PE) examination. The PE examination tests a candidate's ability to practice competently in a specific engineering discipline even though Colorado does not license by discipline. The PE examination is an open book examination that must be completed in eight hours. It is offered semi-annually, in April and October. A candidate may examine in the following disciplines:<sup>79</sup>

- Agricultural;
- Architectural;
- Chemical;
- Civil;
- Control Systems;
- Electrical and Computer;
- Environmental;
- Fire Protection;
- Industrial;
- Mechanical;

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<sup>78</sup> NCEES. *FE exam*. Retrieved May 16, 2012, from [http://www.ncees.org/Exams/FE\\_exam.php](http://www.ncees.org/Exams/FE_exam.php)

<sup>79</sup> NCEES. *PE exam*. Retrieved May 16, 2012, from [http://www.ncees.org/Exams/PE\\_exam.php](http://www.ncees.org/Exams/PE_exam.php)

- Metallurgical and Materials;
- Mining and Mineral Processing;
- Naval Architecture and Marine;
- Nuclear; and
- Petroleum.

Table 5 indicates the number of candidates that took the PE examination during the period under review.

**Table 5**  
**Colorado PE Examinations**  
**Fiscal Years 06-07 through 10-11**

Fiscal Year	PE Examinations	Percent Passing
06-07	662	58
07-08	611	57
08-09	737	60
09-10	780	56
10-11	702	58

Comparing Table 4 and Table 5, note the drop off in the number of individuals who choose to take both the FE examination and the PE examination. The change is due, in part, to the fact that most students choose to take the FE examination at the end of their schooling. However, rather than working toward a PE license many, some estimates are as high as 60 percent, choose to work under an industrial or government exemption for which no license is required.

### Land Surveyors

#### *Land Surveyor Intern*

To enroll as a land surveyor intern, a candidate must have the required experience or education and then pass the Fundamentals of Surveying (FS) examination. The closed-book examination must be completed in eight hours and is administered in April and October. The examination is split into morning and afternoon sessions and contains 170 multiple-choice questions. The U.S. Customary System of Units (USCS) is used in the examination.<sup>80</sup>

<sup>80</sup> NCEES, *FS exam: FS exam specifications*. Retrieved May 31, 2012, from [http://www.ncees.org/Exams/FS\\_exam.php](http://www.ncees.org/Exams/FS_exam.php)

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Table 6 indicates the number of candidates that took the FS examination during the period under review.

**Table 6**  
**Colorado FS Examination**  
**Fiscal Years 06-07 through 10-11**

Fiscal Year	FS Examinations	Percent Passing
06-07	81	59
07-08	42	57
08-09	65	65
09-10	43	74
10-11	43	51

Once the internship is complete the candidate must pass the Principles and Practice of Surveying (PS) examination. The PS examination tests a candidate's ability to practice surveying. It is designed for individuals with at least four years' experience. The examination contains 100 multiple-choice questions, it must be completed in six hours, and is split into a four-hour morning session (67 questions) and a two-hour afternoon session (33 questions). The PS examination uses USCS measurements.<sup>81</sup>

Candidates are examined in five areas:<sup>82</sup>

- Standards and Specifications;
- Legal Principles;
- Professional Survey Practices;
- Business/Professional Practices; and
- Types of Surveys.

Table 7 lists the number of candidates that took the PS examination and the passing rate.

**Table 7**  
**Colorado PS Examinations**  
**Fiscal Years 06-07 through 10-11**

Fiscal Year	PS Examinations	Percent Passing
06-07	49	65
07-08	55	65
08-09	50	64
09-10	52	69
10-11	45	76

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<sup>81</sup> NCEES. *PS exam*. Retrieved May 30, 2012, from [http://www.ncees.org/Exams/PS\\_exam.php](http://www.ncees.org/Exams/PS_exam.php)

<sup>82</sup> NCEES. *PS exam; PS exam specifications*. Retrieved May 30, 2012, from [http://www.ncees.org/Exams/PS\\_exam.php](http://www.ncees.org/Exams/PS_exam.php)

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Examination results for all the NCEES examinations are released to the Colorado Board typically within 8 to 10 weeks. NCEES emails the examinee that the results are accessible.<sup>83</sup>

Because many of the standards of practice are actually defined in statute (see page 19), the Board requires that candidates for licensure also pass a state-specific examination. The overwhelming majority of the examination, 75 percent, covers the examinee's knowledge of statutory requirements and Board rules. The other subjects covered are record sources and boundary principles.<sup>84</sup> The NCEES also administers this examination.

Table 8 lists the number of individuals that took the Colorado-specific examination and the passing rate for each year under review.

**Table 8**  
**Colorado-Specific Surveying Examinations**  
**Fiscal Years 06-07 through 10-11**

<b>Fiscal Year</b>	<b>Colorado-Specific Surveying Examinations</b>	<b>Percent Passing</b>
06-07	78	74
07-08	80	65
08-09	92	61
09-10	102	66
10-11	74	53

The number of individuals who took the Colorado-specific examination is significantly higher compared to the PS examination. Board staff explains that prior to becoming licensed by endorsement in Colorado an applicant must pass this examination. In addition to those examinees, the Board occasionally requires licensees who are on probation to retake the examination.

### Architects

Candidates for licensure as an architect must take the ARE once they have completed the required education and/or experience. The ARE is used by all 50 states.

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<sup>83</sup> NCEES. *Colorado examination registration*. Retrieved May 31, 2012, from <http://www.ncees.org/Exams/States/CO.php>

<sup>84</sup> DORA. *Colorado State Specific Surveying Examination*. Retrieved June 4, 2012, from <http://www.dora.state.co.us/aes/licensing/SurveyExamOutline.pdf>

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The ARE is comprised of seven divisions, or sections, which can be taken in any order. Examinations include a combination of multiple-choice, check-all-that-apply, fill-in-the-blank questions, and graphic vignettes. The divisions are:<sup>85</sup>

- Programming, Planning, and Practice;
- Site Planning and Design;
- Building Design and Construction Systems;
- Schematic Design;
- Structural Systems;
- Building Systems; and
- Construction Documents and Services.

All divisions of the ARE are administered year round on computers at Prometric test centers, located throughout the United States. Prometric has test centers in Colorado Springs, Grand Junction, Greenwood Village, and Longmont. The fee for each division of the examination is \$210.

Table 9 indicates the number of Colorado license candidates who completed the ARE, and the rate at which they passed, during the period under review.

**Table 9**  
**Colorado**  
**ARE Data**  
**Fiscal Years 06-07 through 10-11**

<b>Fiscal Year</b>	<b>ARE</b>	<b>Percent Passing</b>
06-07	1,210	75
07-08	1,243	77
08-09	1,808	70
09-10	996	70
10-11	931	76

Though there is variation in the number of candidates that take the examination year-to-year, the percentage that pass is relatively consistent at approximately 74 percent annually.

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<sup>85</sup> NCARB. *ARE 4.0 Divisions*. Retrieved May 15, 2012, from <http://www.ncarb.org/ARE/Taking-the-ARE/ARE4-Divisions.aspx>

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## **Complaints/Disciplinary Actions**

Though there is some variation, as Chart 1 illustrates, complaints follow the same general route(s). When the Board staff receives a complaint, it sends a packet to the individual whom the complaint identifies. The packet contains the case presented by the complainant and instructs the licensee to respond. In most cases, following a licensee's reply, which must be made within 30 days, the complaint is sent to the Board for review. The Board first chooses whether to dismiss or pursue the complaint, or send the complaint to the Division's Office of Investigations (OI) to obtain more facts. In some rare cases that pose an imminent threat to the public, the complaint is sent directly to OI upon receipt. Once it is satisfied that it has all pertinent information, the Board acts. It must choose one of two basic options. It may dismiss the charge, with or without a confidential letter of concern (LOC) or take disciplinary action, i.e., a letter of admonition (LOA), a fine, probation, license suspension, license revocation, or some combination of disciplinary actions. The licensee may choose to accept the discipline, ending the process, or contest it in a hearing.

Occasionally, the Board sends cases directly to the Colorado Attorney General's Office (AGO), to begin the hearing process. Most complaints, however, go to the Division's Office of Expedited Settlement (ESP), which confers with the licensee to resolve the disputed issues. Post negotiations, the Board and licensee may enter into a stipulated settlement. A stipulated settlement may contain one or more of the disciplinary actions available to the Board. However, if ESP and the licensee cannot reach a settlement, the Board may issue a letter of admonition or forward the case to the AGO to commence other formal disciplinary action.

**Chart 1  
Complaint and Discipline  
Flow Chart**

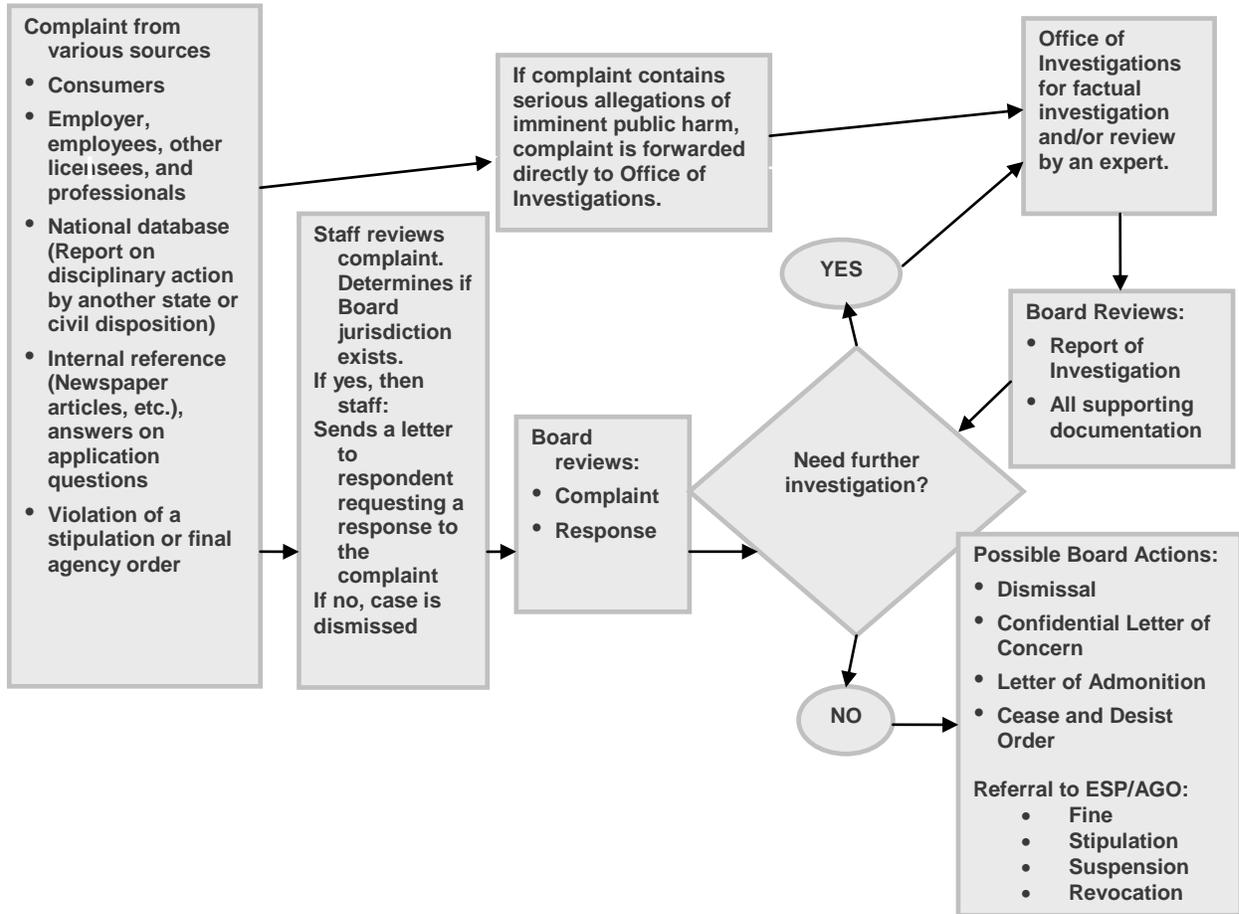


Table 10 lists the aggregate complaints received by the Board during the period under review. Complaints are segregated by profession in Appendix B.

**Table 10**  
**Total Complaints**  
**Fiscal Years 06-07 through 10-11**

<b>Complaint</b>	<b>FY 06-07</b>	<b>FY 07-08</b>	<b>FY 08-09</b>	<b>FY 09-10</b>	<b>FY 10-11</b>
Practicing without a License	61	43	89	142	128
Standard of Practice	71	36	47	51	35
Scope of Practice	0	2	3	4	3
Responsible Control/Charge	2	2	4	1	1
Felony Conviction	5	0	1	1	0
Disciplinary Action by Another State	11	12	8	7	5
Fraudulent Obtaining License	8	2	1	0	2
Fraudulent Practicing	0	1	0	3	0
Violation of Act or Rule	3	3	4	1	4
<b>TOTAL</b>	<b>161</b>	<b>101</b>	<b>157</b>	<b>210</b>	<b>178</b>

Complaints filed for practicing without a license jumped more than 45 percent from fiscal year 06-07 to fiscal year 08-09 and by fiscal year 10-11 they increased an additional 44 percent. These complaints were initiated against licensees who had failed to renew their licenses on time.

Table 11 lists the final actions taken by the Board during the period under review.

**Table 11**  
**Final Board Actions**  
**Fiscal Years 06-07 through 10-11**

<b>Type of Action</b>	<b>FY 06-07</b>	<b>FY 07-08</b>	<b>FY 08-09</b>	<b>FY 09-10</b>	<b>FY 10-11</b>
Revocation	2	6	1	0	4
Suspension	1	1	0	0	1
Stipulation	9	28	36	31	33
Letters of Admonition	64	38	39	33	30
Other: Cease & Desist, Final Agency Order, Agreements & Fines	10	10	8	10	9
<b>TOTAL DISCIPLINARY ACTIONS</b>	<b>86</b>	<b>83</b>	<b>84</b>	<b>74</b>	<b>77</b>
Dismiss	69	45	73	67	43
Letter of Concern	11	9	5	90	77
<b>TOTAL DISMISSALS</b>	<b>80</b>	<b>54</b>	<b>78</b>	<b>157</b>	<b>120</b>

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Notice that there is an increase in the number of letters of concern issued during the time period following the increase in violations for practicing without a license from Table 10. It is the Board policy to dismiss such cases with a confidential letter of concern if the problem is corrected within one year. If a licensed has lapsed for a period of time between one and two years, it issues a LOA. If a licensee practices with an expired license for longer than two years, the Board issues a LOA and assesses a fine.

The Board also has the ability to issue fines for violations of the practice acts. Table 12 indicates the number of fines issued by the Board and the total amount of fines paid into the State General Fund during the period under review.

**Table 12**  
**Fine Data**  
**Fiscal Years 06-07 through 10-11**

<b>Fiscal Year</b>	<b>Number of Fines</b>	<b>Total Value of Fines Collected/Paid</b>
06-07	23	\$9,500
07-08	24	\$15,250
08-09	32	\$20,500
09-10	28	\$20,250
10-11	23	\$12,250

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## **Analysis and Recommendations**

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### ***Recommendation 1 – Continue the State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors and regulation for 11 years, until 2024.***

The State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors (Board), is a Type 1 board housed in the Division of Professions and Occupations (Division) of the Department of Regulatory Agencies (DORA). The major link among the professions qualifying the Board as a joint regulating entity is that they all shape the physical and built environments.

The Board's licensing mandate encompasses evaluating and examining prospective licensees to ensure they are minimally qualified to practice, and then enforcing standards of practice as defined by the individual profession.

Analysis of Board records indicates that the Board receives very few practice-related complaints against architects, engineers, or land surveyors. During the five year period studied for this sunset review, the Board saw a total of 263 complaints concerning standard of practice, scope of practice, or for being the licensee in charge of a project, roughly 53 per year, and the Board suspended or revoked approximately three licenses per year. During that time there was an annual average of 30,250 licensees. This means that less than one licensee out of every 10,000, lost his or her ability to practice because of not performing up to the expected standards. These data indicate that the practitioners are extremely competent, which begs the question: Why continue to regulate these professions?

The overriding rationale for licensing in these cases is that there is a potential for catastrophic harm if these practices go unregulated. These professionals sometimes carry an immense amount of trust in their competency. They all are trustees of the public financial welfare to varying degrees. Moreover, many architects and engineers deal with health-safety issues on a daily basis. In addition to the potential for harm, is the consideration that each of the professions is technical to the extent that it makes their work mostly indecipherable to anyone who is not directly involved in these or ancillary professions.

A major purpose of regulation is to ensure that licensees practice with a minimal level of competency. A license gives the public some measure of confidence in a practitioner's ability. To accomplish this, states develop requirements that must be satisfied before an individual may obtain a license. Colorado's requirements are generally consistent with those of other states because states collaborate through the National Council of Examiners for Engineering and Surveying (NCEES) and the National Council of Architectural Registration Boards (NCARB).

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NCEES and NCARB membership consists of all the states' regulatory authorities. Together they determine what the suggested minimum level of experience and education should be for licensure. NCEES and NCARB also develop the licensing examinations used by each state. To have input into NCEES and NCARB processes, Colorado must be a member, and to be a member, there must be a regulatory scheme in place.

A practical inference relating to the low complaint and disciplinary numbers for these professions could be that the pre-licensing qualification practices developed by NCEES and NCARB are largely responsible for the high quality of practitioners.

Notwithstanding the need to license these professions, sunset reviews must also consider the effect licensing has on marketplace competition. Given the low number of complaints and disciplinary actions it appears that a loosening of licensing standards may be in order. However, if Colorado's licensing requirements are not out of line with other states, then it would appear that the Board has not raised the bar for entry into the professions too high compared to other states.

Colorado is one of 13 states that allow an architect to become licensed via an experience and examination only pathway. It is one of 17 states that allow an experience and examination only pathway for a professional engineer license. Currently, Colorado is one of 30 states that allow an experience and examination only pathway for a professional land surveyor license, but that is changing. During the 2010 session of the General Assembly, this licensing pathway for surveyors was repealed effective in 2020. With the licensing requirements generally in line with other states, there does not appear to be a compelling market-based motivation to ease license requirements.

Still, the stringency of regulation is salient in this particular sunset review for another reason. During the course of this review several industry advocacy groups contacted DORA with the desire to increase regulation and raise the bar for entry into the professions. The desired changes include making education requirements more rigorous, mandating continuing education, introducing discipline-specific licensing, and eliminating exemptions to the practices acts, to name but a few. All of these initiatives would make it more difficult to obtain a license, limit the number of people that practice, and ultimately restrict the options consumers have in procuring services.

The sunset review process is designed to help the General Assembly decide where and when competition is justifiably restricted by regulation, and when it is not. Licensing programs are in place to determine the minimum qualifications necessary to protect the public from incompetence. The data gleaned during this review clearly show that the people who practice these professions in Colorado are overwhelmingly competent. Any increase to the barriers for entry into one of the professions is not justified.

Accordingly the General Assembly should continue the Board and regulation of these professions for 11 years, until 2024.

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***Recommendation 2 – Allow professional engineers and land surveyors licensed in other states to offer services in Colorado.***

The Architect Practice Act allows individuals who are licensed in other states and whose licenses are in good standing to advertise their professional services in Colorado. However, prior to providing professional architectural services in this state, these individuals must become Board-licensed or retain the services of a Board-licensed architect.

Extending the ability to “fish,” as the practice is commonly known, for work in Colorado to the two other professions regulated by the Board will present more options for the consumer. In this age of mobility and portability of expertise it opens opportunities for different opinions, styles, and individual creativity. Still, all work that is begun will be performed under the provisions of Colorado law because the person ultimately responsible would be a Board-licensed professional.

A key to this recommendation is that the NCEES plays a major role in the development of the licensing examinations and standards nationwide. While each state has state-specific concerns, the foundation of licensing is, at minimum, similar. This means that not only should all licensed professionals speak a similar language but they should also have the parallel codes of ethics regardless of the jurisdiction or licensing authority.

Section 12-25-303(7), Colorado Revised Statutes (C.R.S.), contains the exemption to the Architect Act that should serve as the model for the Engineer and Land Surveyor Acts. Multiple sections of the article should be modified to some degree to accommodate this exemption. The sections include those that define what constitutes the lawful and unlawful practice of engineering, land surveying, and architecture, those that limit the use of terms that are reserved for use only by those who are Board-licensed, the sections that prohibit “attempting to practice,” or any other sections that may cause a conflict for those offering services in the state prior to receiving a license.

Allowing professional engineers and land surveyors licensed in other states to offer services in Colorado will benefit consumers by creating competition and promoting choice. Consumers will not be subjected to excessive harm because all work will be performed by Board-licensed professionals. Therefore, the General Assembly should allow professional engineers and land surveyors licensed in other states to offer services in Colorado.

***Recommendation 3 – Clarify what it means to “offer to practice architecture.”***

Article 25 of Title 12 (Article), C.R.S. contains the practice acts for architects, professional engineers, and professional land surveyors. The Article is inconsistent across the three professions in what constitutes offering to practice. The Article should be unequivocal in what constitutes an offer of performing a regulated act since it is a violation to offer to practice without a license.

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The Engineer Act and the Land Surveyor Act both contain language with specific types of communication that constitute offering to practice. This model language should be amended into the Architect Act as follows:

An individual shall be construed as practicing or offering to practice "architecture" within the meaning and intent of this section if the individual, by verbal claim, sign, advertisement, letterhead, card, or in any other way, represents himself or herself to be an architect; through the use of any other means implies that the individual is licensed under this part 3; or performs architectural services.

Clarity in law makes it easier for the public to understand, licensees to know what is expected with the privilege of practicing a profession, and the Board to interpret and regulate the professions.

Therefore, the General Assembly should clarify what it means to "offer to practice architecture."

**Recommendation 4 – Repeal the ownership requirements in the Architect and Engineer Acts.**

The Board is tasked with licensing individuals to practice architecture, engineering, and land surveying.<sup>86</sup> This entails making certain that individuals who practice the professions are minimally qualified by establishing licensing standards.

Board involvement in business practices is limited to requiring that a licensed professional is responsible for the work product of the business. In fact, the Article is explicit that it does not license engineering or land surveying, "partnerships, corporations, limited liability companies, or joint stock associations."<sup>87</sup> Similarly, the Board does not license architecture, "firms, partnerships, entities, or groups of persons to practice architecture."<sup>88</sup> If the Board does not license companies, it is not authorized to regulate or discipline them.

Notwithstanding these particulars, the Architect Act allows only partnerships, entities, or groups of persons in which a majority of the individual officers and directors, members, or partners are licensed architects, or those who qualify for licensure by endorsement to use the term "architect" in their name.<sup>89</sup>

The Engineer Act restricts partnerships to those that have at least one licensed engineer as a partner.<sup>90</sup>

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<sup>86</sup> §§ 12-25-101, 201, and 301, C.R.S.

<sup>87</sup> §§ 12-25-104(1), and 204(1), C.R.S.

<sup>88</sup> § 12-25-304(1), C.R.S.

<sup>89</sup> *ibid.*

<sup>90</sup> § 12-25-104(1)(b), C.R.S.

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The second criterion that informs the sunset review process asks, “If regulation is necessary, whether the existing statutes and regulations establish the least restrictive form of regulation consistent with the public interest[.]” There appears to be no compelling reason to limit ownership, to the extent their respective organic statutes do not regulate the business of architecture or engineering. The Architect, Engineer, and Land Surveyor Acts all require a licensed professional to be accountable for the work they perform and create. Public protection hinges on the notion that a qualified individual is accountable for the work product of a business, not on ownership of that business.

Therefore, the General Assembly should repeal the ownership requirements in the Architect and Engineer Acts.

***Recommendation 5 – Require architects to report any civil malpractice claim to the Board.***

Engineers and surveyors can be disciplined for failing to report to the Board any malpractice claim against them or a business they own, “that is settled or in which a judgment is rendered, within 60 days of the effective date of such settlement or judgment, if such claim concerned engineering services performed or supervised by such engineer.”<sup>91</sup>

The standard for reporting to the Board is different for architects. Architects must notify the Board of any judgment or settlement involving issues of the life safety of a building’s occupants.<sup>92</sup>

The bar is set much higher for architects. Architects must only notify the Board if there is a judgment or settlement involving the architect, resulting from a claim concerning the life safety of the occupants of a building, a smaller subset of actions upon which malpractice claims could be asserted against an architect.

There are many types of violations included in practice acts that do not rise to the level of endangering the health and safety of the public. Standards that guide the Board in regulating professionals are meant to ensure that all licensees are qualified. Once qualified, professionals are less likely to endanger the health, safety, and welfare of the public. To protect the public, the Board must be made aware of alleged practice violations.

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<sup>91</sup> §§ 12-25-108(1)(k), and 208(1)(k), C.R.S.

<sup>92</sup> § 12-25-312, C.R.S.

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Actions pursued in civil court generally are separate and distinct from Board actions and have no bearing on Board procedures. However, the conduct of licensees and the ongoing proficiency of those licensees are absolutely matters of concern to the Board. To enjoy the privilege of practicing a regulated profession, a licensee is obliged to uphold the standards of professional practice at all times. If there is a public claim that a licensee is not living up to the standards of the profession, the Board should be empowered to review that claim and make a decision on whether discipline is necessary. There could be a number of reasons that an aggrieved individual would choose not to pursue a complaint with the Board. That does not mean the Board should be kept uninformed of a settled or litigated claim of malpractice.

This is the rationale that justifies the reporting standard in both the Engineer and Land Surveyor Acts and should be the rationale for imposing the same reporting standard in the Architect Act.

To help ensure the integrity of all of the professionals licensed by the Board, the General Assembly should require architects to report to the Board any malpractice claim which is settled or reduced to judgment, under the same conditions as are required of engineers and land surveyors.

***Recommendation 6 - Repeal “mental incompetency” as a ground for discipline in the Architect Act.***

Section 308(1)(o), of the Architect Act, lists “mental incompetency” as a basis for discipline. The subjective language and the potential for creating harm make it necessary to repeal this piece of the Architect Act.

Mental incompetency is not defined in the statute. Without knowing what the phrase means it cannot be interpreted by the Board. The Board’s charge is to ensure that only capable licensees perform architecture in Colorado. What makes a person capable is being qualified for licensure and practicing up to the standards of the profession.

Another, more compelling argument for the repeal of this section applies if mental incompetency is defined as having a mental illness or disability as a basis for consideration of a complaint. Disciplining a practitioner for merely having a disability means that damaging stereotypes associated with such conditions are validated. Having a particular illness does not make a person a bad architect. Nonetheless, if the Architect Act is interpreted in this manner, individuals can be treated as if they had done something wrong. In no other context would having a disability be considered conduct worthy of discipline.

Furthermore, Title II of the Americans with Disabilities Act requires that state and local governments give people with disabilities an equal opportunity to benefit from all of their programs, services, and activities. Therefore, a state regulatory board cannot discipline using the mere existence of mental illness or mental disability as a basis for discipline.

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Lastly, in part because of the subjectivity in interpreting the phrase, the Board has not used this section as a reason for disciplining licensees.

For all of these reasons, the General Assembly should repeal mental incompetency as a ground for discipline in the Architect Act.

**Recommendation 7 – Amend the disclaimer in the Improvement Location Certificate.**

An Improvement Location Certificate (ILC) is a version of a land examination meant to be used one time, during the sale of a property. It helps the parties in a transaction determine whether the improvements made on a parcel of land contain any boundary intrusions to surrounding properties. If improvements such as fences, garages, or patios, overrun property lines, there could be liability issues. These types of improvements to a property often change, so merely noting them does not necessarily take a full survey. However, it does take the skill of a licensed land surveyor to do it correctly. ILCs are typically ordered by title companies.

Because an ILC is not a survey, it does not locate exact boundaries, and should not be legally relied upon for locations of property lines or future improvements. Even though the statute clearly states an ILC is not to be construed as a permanent record<sup>93</sup> and every ILC has a clear, precise disclosure printed on it, they are being reused in succeeding transactions, and used by people other than the original client.

All ILCs have the following disclosure:<sup>94</sup>

IMPROVEMENT LOCATION CERTIFICATE

I hereby certify that this improvement location certificate was prepared for .... (individual or firm) ....., that it is not a land survey plat or improvement survey plat, and that it is not to be relied upon for the establishment of fence, building, or other future improvement lines.

I further certify that the improvements on the above described parcel on this date, .... (insert date) ....., except utility connections, are entirely within the boundaries of the parcel, except as shown, that there are no encroachments upon the described premises by improvements on any adjoining premises, except as indicated, and that there is no apparent evidence or sign of any easement crossing or burdening any part of said parcel, except as noted.

Stamp  
or  
Seal Date .....  
By .....(Signed).....

A professional land surveyor who prepares an ILC is liable for the information on it but only as it existed on the day it was prepared. It is a description of what is on the property, not an exact description of the property itself. The document is not meant to be a precise permanent record; it is meant for use by a specific client and only that client.<sup>95</sup> However, a person who obtains a copy of the ILC after its initial use has no way of knowing that to be the case.

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<sup>93</sup> § 38-51-108(2)(a)(I), C.R.S.

<sup>94</sup> § 38-51-108(2)(a)(II), C.R.S.

<sup>95</sup> § 38-51-108(1), C.R.S.

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To avoid any confusion and harm to consumers, the ILC disclaimer should be amended by this addition placed at the end of the first paragraph, “This certificate is valid for use only by ... (individual or firm) ... and describes the parcel appearance on (insert date).”

Adding one sentence to the ILC disclaimer could save a consumer from the possibility of costly mistakes or law suits. Consequently, the General Assembly should amend the ILC disclaimer.

**Recommendation 8 - Revise the language relating to drug and alcohol use.**

All three practice acts contain drug and alcohol use as a premise for discipline.

Engineers or land surveyors can be disciplined for, “Being addicted to or dependent upon alcohol or any habit-forming drugs or controlled substances.”<sup>96</sup>

Architects can be disciplined for:

Habitual intemperance with respect to, or excessive use of, any habit-forming drug, any controlled substance as defined in section 12-22-303(7), C.R.S., or any alcoholic beverage, any of which renders him or her unfit to practice architecture;<sup>97</sup>

These clauses present two problems. First, it can be difficult to prove conclusively that someone is habitually intemperate, is addicted to, or dependent on alcohol or drugs. Second, because addiction is now understood as an illness, disciplining someone for being addicted may have legal ramifications.<sup>98</sup>

The “excessive use or abuse of alcohol” has been established as the standard for disciplinary action in Colorado. This standard establishes the excessive use or abuse of alcohol or drugs as grounds for discipline, rather than the condition of being addicted to or dependent on such substances.

The General Assembly should amend the provision to remove references to “habitual intemperance,” “addiction,” and “dependence,” and use “the habitual or excessive use or abuse of alcohol, controlled substances, or any habit-forming drug.”

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<sup>96</sup> §§ 12-25-108(1)(i), and 12-25-208(1)(i), C.R.S.

<sup>97</sup> § 12-25-308(1)(i), C.R.S.

<sup>98</sup> The U.S. Supreme Court ruled in *Robinson v. California*, 370 U.S. 660 (1962), that addiction is an illness, which may be contracted innocently or involuntarily, and, therefore, the State of California could not punish a person based on such grounds.

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***Recommendation 9 – Repeal the requirement that letters of admonition be sent by certified mail.***

Requiring that letters of admonition be sent via first-class mail would save money and streamline the administrative process for letters of admonition without compromising the Board's enforcement authority. Therefore, the General Assembly should repeal the requirement that letters of admonition be sent by certified mail.

Each of the practices acts in the Article requires the Director of the Division to send letters of admonition to licensees via certified mail. While this delivery method allows the Division to verify that a delivery attempt was made, it does not guarantee that the addressee actually receives the letter. The addressee can decline to sign for or pick up the letter, and then claim he or she never received it. This defeats the purpose of sending the letter by certified mail.

Certified mail also costs more than first-class mail.

The General Assembly should repeal the requirement that letters of admonition be sent by certified mail, requiring instead that such letters be sent via first-class mail. Licensees are required by Board Rule 4.11 to report changes of address to the Division within 30 days of the change. If the change is made in a timely manner, it is very unlikely that the licensee would not receive a properly addressed letter of admonition.

***Recommendation 10 – Update, streamline, and align the requirements for stamping and sealing documents in the three practice acts.***

Upon licensing, the Board authorizes licensees to use an official seal. A licensee is instructed to stamp each completed document he or she produces. The stamp is used to identify when the document was produced and by whom.

The Architect Act does not allow for copies to be made of stamped documents and it is overly prescriptive as to when, where and how documents may have an architect's stamp affixed. The Architect Act also provides, in multiple sections, that a stamped set of drawings is a "record set" that may not be reproduced.<sup>99</sup> This provision puts building officials in violation of the Architect Act if they scan and file documents or provide copies to other individuals.

The professional stamping provisions in the Architect Act are outdated and should be updated for an electronic world.

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<sup>99</sup> §§ 12-25-317(1)(a) and (1)(c) C.R.S.

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The provisions concerning the professional seal in the Engineer and Land Surveyor Acts present a more streamlined modernized model for the Architect Act. Those practice acts allow for an electronic seal and for copies to be reproduced. However, given the changes and the possibility that many more sets of sealed documents will be in circulation, the Board should determine, by rule, how long and in what form sealed documents should be retained by a licensee in all three professions.

Therefore, the General Assembly should update, streamline, and align the requirements for stamping and sealing documents in the three practice acts.

**Recommendation 11 - Strike undefined, unnecessary terms.**

Article 51, of Title 38, C.R.S., addresses the minimum standards for land surveys and plats. There are two sections, 104(2) and 105(6), that use the term, “survey point.” However, the term is neither defined in statute nor is it a term of art in the profession. Its inclusion in the statute has led to multiple interpretations by licensees and the Board.

Not only is the term undefined, it is unneeded. Striking this term from the statute will not change the way either the Board or land surveyors conduct business.

Therefore, to eliminate confusion, the General Assembly should strike “survey point” from Article 51, Title 38, C.R.S.

**Recommendation 12 – Require all licensees to update address changes within 30 days.**

For a plethora of reasons it is important for the Board to have up-to-date contact information for licensees. Among those, not having an updated address may delay processes and increase expenditures related to the Board’s directive to investigate all complaints against licensees and leave consumers exposed to harm. Additionally, the Board must know how to contact a licensee when a licensing issue arises. This is true whether an issue is administrative or complaint-related.

The standard set in the Engineer and Land Surveyor Acts is, “A ...(licensee)... shall give **immediate** notice to the Board, in writing, of any change of address.”<sup>100</sup> (emphasis added) The “immediate” standard is vague and undefined. The acts should adopt a more finite standard to hold both the Board and licensees accountable.

Licensees should be required to update the contact information on record with the Board within 30 days of a change in the information. The change will eliminate vagueness and provide the needed benchmark. The standard should be adopted across all three of the practice acts.

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<sup>100</sup> §§ 12-25-115(7), and 215(6), C.R.S.

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Therefore, to ensure that the regulatory process is not impeded by unnecessary delays resulting in unnecessary added time and expense, the General Assembly should require all licensees to update address information within 30 days of a change.

***Recommendation 13 – Reinforce consumer protections by protecting derivatives of the word “architect.”***

Title protection plays a vital, fundamental role in protecting consumers from unqualified practitioners. The use of certain protected titles and phrases informs consumers that the individual is regulated, has undergone a certain level of scrutiny, and is qualified to practice under state law.

Some unlicensed/unqualified people skirt the intent and protections of the Architect Act by advertising that they perform “architecture” or “architectural design.” However, the use of these derivative terms sometimes confuses consumers who are procuring design services that are actually being performed under an exemption to the Architect Act. They believe they are hiring an architect because of the use of a derivative term.

The Engineer Act prohibits the use of the derivative words "engineer", "engineered", or "engineering" in any offer to perform the services to the public unless the person is a licensed professional engineer.<sup>101</sup>

Following the standard set by the Engineer Act, the General Assembly should extend a comparable scope of protections to the public in the Architect Act. Similarly, limiting the use of derivative terms in advertising to licensed architects will ensure that only qualified individuals represent themselves to consumers as architects.

The General Assembly should reinforce consumer protections by protecting derivatives of the word “architect.”

***Recommendation 14 - Reconcile fining provisions among the three practice acts.***

The Engineer and Land Surveyor Board and the Architect Board merged following the 2005 sunset review of the Architect Board. At that time staff attempted to make the administrative functions laid out in the practice acts the same across the professions. However, the fining provisions in the acts were inadvertently overlooked and the current standards are different for architects than for engineers and land surveyors.

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<sup>101</sup> § 12-25-105(3), C.R.S.

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Currently, the fining standard for architects is up to \$5,000 for a violation of the Architect Act.<sup>102</sup> A violation of the Engineer and Land Surveyor Acts permits fines from not less than \$50 and not more than \$500 for the first violation and a fine of not less than \$250 and not more than \$5,000 for subsequent violations.<sup>103</sup>

In reconciling the acts the General Assembly should adopt the standards set in the Architect Act. The Architect Act provides more discretion when considering fines. Rather than being forced to assess a fine for a minor violation at a minimum \$250, the Board may fine a licensee \$50 or \$100 to get his or her attention. Similarly, if a person commits a major violation that hurts several people and it is a first offense, the Board would have the ability to issue a fine of up to \$5,000 rather than being limited to \$500.

The Board has been appropriately circumspect in the use of its fining authority. Considering the number of licensees regulated by the Board, less than 0.1 percent were assessed a fine. When a fine was issued, the average amount was \$598, regardless of the severity of the violation or licensee's violation history, an amount significantly less than the \$5,000 maximum.

Therefore, to bring continuity to Board practices, the General Assembly should reconcile fining provisions among the three practice acts.

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<sup>102</sup> § 12-25-308(4)(a), C.R.S.

<sup>103</sup> §§ 12-25-108(4)(a), and 208(4)(a), C.R.S.

## Appendix A – License Data

### Architects

Fiscal Year	New Licenses Issued				Renewal	Reinstatement
	Exam	Endorsement	Transfer of Grades	Total New Licenses		
06-07	87	237	14	338	0	69
07-08	101	280	7	388	6,217	190
08-09	121	307	7	435	0	135
09-10	125	216	15	356	6,648	174
10-11	95	187	12	294	0	80

Architects renew July 31st of odd years.

Beginning in fiscal year 14-15, Architects will renew October of odd years.

Fiscal Year	Number of Licenses as of June 30 <sup>th</sup> *		Total
	Inactive	Active	
06-07	N/A	6,997	6,997
07-08	N/A	6,798	6,798
08-09	11	7,368	7,379
09-10	26	6,811	6,837
10-11	39	7,187	7,226

\*The state fiscal year runs July 1<sup>st</sup> through June 30<sup>th</sup>.  
Inactive Status for Architects began in 2009.

### Professional Engineers

Fiscal Year	New Licenses Issued				Renewal	Reinstatement
	Exam	Endorsement	Transfer of Grades	Total New Licenses		
06-07	404	522	6	932	8,410	341
07-08	378	590	10	978	9,807	351
08-09	593	728	5	1,326	10,521	454
09-10	433	631	7	1,071	11,034	438
10-11	402	622	10	1,034	13,018	421

Professional Engineers renew two years after issue date.

Beginning in fiscal year 14-15, licenses will expire October 31st of odd years.

Fiscal Year	Number of Licenses as of June 30th		Total
	Retired	Active	
06-07	832	20,801	21,633
07-08	687	20,955	21,682
08-09	546	21,552	22,098
09-10	546	21,954	22,506
10-11	503	22,326	22,829

### Engineer Interns

Fiscal Year	New Enrollments Issued			Active Enrollments as of June 30th
	Exam	Endorsement	Total New Enrollment	
06-07	515	145	660	10,501
07-08	454	159	613	10,910
08-09	779	222	1,001	11,398
09-10	542	182	724	11,715
10-11	777	178	955	12,245

Engineer Intern enrollments do not renew.

### Professional Land Surveyors

Fiscal Year	New Licenses Issued			Renewal	Reinstatement
	Exam	Endorsement	Total New Licenses		
06-07	29	21	50	815	24
07-08	24	15	39	740	21
08-09	39	30	69	869	37
09-10	31	34	65	1,097	23
10-11	34	12	46	1,185	23

Professional Land Surveyors renew two years after issue date.  
Beginning in fiscal year 14-15, licenses will expire October 31st of odd years.

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Fiscal Year	Number of Licenses as of June 30th		Total
	Retired	Active	
06-07	55	1,860	1,915
07-08	45	1,825	1,870
08-09	43	1,818	1,861
09-10	44	1,836	1,880
10-11	40	1,830	1,870

### **Land Surveyor Interns**

Fiscal Year	New Enrollments Issued			Active Enrollments as of June 30th
	Exam	Endorsement	Total New Enrollment	
06-07	48	4	52	285
07-08	11	5	16	276
08-09	55	7	62	301
09-10	32	3	35	304
10-11	24	2	26	299

Land Surveyor Intern enrollments do not renew.

## Appendix B - Complaint Information

### Architects

Nature of Complaints	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Practicing w/o a License	19	8	41	50	15
Standard of Practice	7	9	6	5	3
Scope of Practice	0	1	0	2	0
Felony Conviction	0	0	0	1	0
Responsible Control/Charge	1	1	2	1	0
Disciplinary Action by Another State	1	6	0	1	0
Fraudulent Obtaining License	2	1	0	0	0
Fraudulent Practicing	0	1	0	0	0
Violation of Act or Rule	0	0	0	1	0
<b>TOTAL</b>	<b>30</b>	<b>27</b>	<b>49</b>	<b>61</b>	<b>18</b>

### Professional Engineers

Nature of Complaints	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Practicing w/o a License	37	29	38	76	102
Standard of Practice	35	12	21	24	19
Scope of Practice	0	0	3	1	3
Felony Conviction	3	0	1	0	0
Responsible Control/Charge	1	1	0	0	1
Disciplinary Action by Another State	10	6	0	6	5
Fraudulent Obtaining License	1	0	1	0	2
Fraudulent Practicing	0	0	0	1	0
Violation of Act or Rule	1	2	1	0	3
<b>TOTAL</b>	<b>88</b>	<b>50</b>	<b>65</b>	<b>108</b>	<b>135</b>

### Professional Land Surveyors

Nature of Complaints	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Practicing w/o a License	4	4	7	9	8
Standard of Practice	28	15	20	19	13
Scope of Practice	0	1	0	1	0
Felony Conviction	0	0	0	0	0
Responsible Control/Charge	0	0	2	0	0
Disciplinary Action by Another State	0	0	0	0	0
Fraudulent Obtaining License	1	1	0	0	0
Fraudulent Practicing	0	0	0	2	0
Violation of Act or Rule	2	1	3	0	1
<b>TOTAL</b>	<b>35</b>	<b>22</b>	<b>32</b>	<b>31</b>	<b>22</b>

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**Engineer Interns**

<b>Nature of Complaints</b>	<b>FY 06-07</b>	<b>FY 07-08</b>	<b>FY 08-09</b>	<b>FY 09-10</b>	<b>FY 10-11</b>
Practicing w/o a License	0	1	3	6	3
Standard of Practice	1	0	0	1	0
Scope of Practice	0	0	0	0	0
Felony Conviction	1	0	0	0	0
Responsible Control/Charge	0	0	0	0	0
Disciplinary Action by Another State	0	0	8	0	0
Fraudulent Obtaining License	4	0	0	0	0
Fraudulent Practicing	0	0	0	0	0
Violation of Act or Rule	0	0	0	0	0
<b>TOTAL</b>	<b>6</b>	<b>1</b>	<b>11</b>	<b>7</b>	<b>3</b>

**Land Surveyor Interns**

<b>Nature of Complaints</b>	<b>FY 06-07</b>	<b>FY 07-08</b>	<b>FY 08-09</b>	<b>FY 09-10</b>	<b>FY 10-11</b>
Practicing w/o a License	1	1	0	1	0
Standard of Practice	0	0	0	2	0
Scope of Practice	0	0	0	0	0
Felony Conviction	1	0	0	0	0
Responsible Control/Charge	0	0	0	0	0
Disciplinary Action by Another State	0	0	0	0	0
Fraudulent Obtaining License	0	0	0	0	0
Fraudulent Practicing	0	0	0	0	0
Violation of Act or Rule	0	0	0	0	0
<b>TOTAL</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>