

COLORADO DEPARTMENT OF REGULATORY AGENCIES  
OFFICE OF POLICY AND RESEARCH

# COLORADO ELECTRICAL BOARD

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## 2000 SUNSET REVIEW



October 15, 2000

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 Colorado Department of Regulatory Agencies has completed the evaluation of the Colorado Electrical Board. I am pleased to submit this written report, which will be the basis for my office's oral testimony before the 2001 Legislative Committees of Reference. The report is submitted pursuant to §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 23 of Title 12, C.R.S. The report also discusses the effectiveness of the Board and staff in carrying out the intention of the statutes and makes recommendations for statutory and administrative changes in the event this regulatory program is continued by the General Assembly.

Sincerely,

M. Michael Cooke  
Executive Director

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## **Background**

### *Sunset Process*

The regulation of electricians and electrical contractors by the State Electrical Board (Board) terminates July 1, 2001, unless continued by the General Assembly. Pursuant to §24-34-104(9)(b), of the Colorado Revised Statutes (C.R.S.), the Department of Regulatory Agencies, (DORA) is required to conduct a review of the Board's performance in the operation of the program. In accordance with the Sunset Evaluation Criteria, found in Appendix A of this report, the Board must demonstrate there is a need for the program to continue, and that the existing regulation is the least restrictive form of regulation consistent with the public interest.

The sunset review process includes an analysis of the statute and regulations promulgated under its authority, interviews with program staff, other departments, and interested parties affected by the provision of law. Research of current literature, related statutes and the procedures in other states is also conducted.

### *History*

Prior to 1959, electricians in Colorado were regulated at the discretion of local jurisdictions. In 1959, the Colorado General Assembly passed legislation requested by the industry to provide relief from multiple license and regulatory requirements enforced by local governments. This legislation created the Board and placed the administration of the Board in the Office of the Secretary of State. This program licensed electricians and electrical contractors at the state level. Permitting and inspections were left to the discretion of local governments.

In 1965, the General Assembly adopted the National Electrical Code (NEC) as the state electrical standard and required the Secretary of State to establish an inspection and enforcement program for jurisdictions in the state that did not regulate electrical installations.

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The Board was transferred to the Department of Labor and Employment as a Type I agency in the Administrative Organization Act of 1968. In 1975, the General Assembly again transferred the Board, this time to DORA as a Type I agency. The requirement that the Board enforce the NEC as adopted was retained.

The Board has undergone three previous sunset reviews. Each review has recommended continuing the regulation of electricians by the Board. However, each review also made recommendations for changes to the regulatory structure. The 1978 review resulted in the elimination of contract inspectors by the state based on findings that contract inspections were inconsistent and in some cases enforcement was arbitrary. The 1987 review resulted in legislation allowing the Board to modify the NEC when adopting it as the state electrical code.

The 1997 review addressed several controversial issues including issues raised by both the electrical and construction industries. They specifically addressed the shortage of qualified electricians in Colorado. Debate in the Colorado Senate was not successful in resolving the issue of the apprenticeship ratio, which at that time was a strict one apprentice for each licensed electrician. As a result, none of the sunset recommendations were acted upon and the program was continued until July 1, 2001 with no changes.

During the 1999 legislative session, HB 99-1312 amended the statute to authorize licensed electricians to supervise up to three apprentices. The bill did not distinguish between the level of experience the apprentices must have, did not establish qualifications for the supervising electrician, nor require a formal training program for apprentices. All of these issues were discussed during the 1997 sunset hearings. SB 00-52 was introduced the following year to require formal training for apprentices. The sponsor withdrew the bill after an agreement was reached with industry representatives to negotiate a more comprehensive bill for the 2001 legislative session.

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## **Summary of Statute**

State regulation of electricians is found in §12-23-100.2, et. seq., C.R.S. (Act). The Act establishes a nine member board responsible for the licensing of residential wiremen, journeymen, and master electricians as well as registering apprentices and electrical contractors. Board members are appointed by the Governor and serve staggered three year terms. Two members of the Board are required to be electrical contractors, two members are either journeymen or master electricians who are not contractors, two members represent either private, public or municipal utilities, one member is a building official from a political subdivision of the state that performs electrical inspections, one member is an active general contractor, and one member is from the general public.

The Board is located in the Division of Registrations (Division) in the Department of Regulatory Agencies. The Director of the Division (Director), in accordance with Section 13 of Article XI of the Colorado Constitution, appoints the program administrator for the Board.

The Board is required to meet at least once each month and to elect officers during the July meeting. The Board is a Type I agency and may adopt rules and regulations necessary to carry out its duties in accordance with the Act and the state Administrative Procedure Act (APA). The Board is required to adopt the most current edition of the National Electric Code (NEC) as the state electrical code for use in construction projects and remodeling throughout the state. Any city, town, county or city and county may adopt an electrical code, or modify standards in the state code, provided the code or standards adopted are more stringent than the code adopted by the Board. The Board, by a two-thirds majority, may modify any standard contained in the NEC.

The Board is required to register electrical apprentices and electrical contractors. The Board is also required to examine and license master electricians, journeymen electricians, and residential wiremen who meet the minimum standards for licensure established in the statute and regulations.

The Board is responsible for permits, inspections and approvals of electrical installations in all areas of the state that are without a local government permit and inspection program. The Board issues permits and inspects all state owned and public school buildings regardless of the presence of local inspection programs.

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The Board is required to establish fees for all licenses, permits and inspections issued or conducted under the authority of the statute. Fees are established to fund all anticipated expenses of the program. Fees are credited to the Division of Registrations cash fund and are subject to annual appropriations by the General Assembly.

### Licensing

To be licensed as a master electrician, an applicant must document to the Board that the applicant has completed one of several license qualification options before being permitted to take the written examination:

- A degree in electrical engineering from an accredited college or university with one year of practical electrical experience in the construction industry;
- A graduate of an electrical trade school or community college with four years of practical experience in electrical work; or
- One year of practical experience in planning, laying out, supervising, and installing wiring, apparatus, or equipment for electrical light, heat, and power beyond the requirements for a journeymen's license.

Prior to being qualified for the written examination for licensure as a journeyman, an applicant must document to the Board that the applicant has four years as an apprentice electrician or four years practical experience in wiring, installing, and repairing electrical apparatus and equipment for light, heat, and power. At least two years experience must be in commercial or industrial work. The statute and regulations provide some options for the experience requirements:

- A degree in electrical engineering from an accredited college or university or a graduate of an electrical trade school or community college shall be credited with one year of practical experience toward the journeymen license requirement.

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To be licensed as a residential wireman, an applicant must document to the Board that the applicant has two years of accredited training or two years practical experience wiring one, two, three, and four-family dwellings. Applicants are allowed to provide evidence of alternatives to the required experience for Board approval including:

- A degree in electrical engineering from an accredited college or university or a graduate of an electrical trade school or community college shall be credited with one year of practical experience toward the journeymen license requirement;
- The Board is required to adopt regulations to provide experience for other documented education and training, including military training that is not sufficient to qualify under the education provision of the statute.

The Board has adopted regulations to grant experience credit for documented education and training, including military training that is not sufficient to qualify under the education provision of the statute. Current regulations allow for a maximum of one-half of the experience requirement for any license to be obtained without the supervision of a licensed electrician.

Any person may register and work as an apprentice. Electrical contractors must register apprentices within 30 days of initial employment and notify the Board within 30 days of employment termination. No apprentice may perform electrical work unless it is under the supervision of a licensed electrician. Effective October 15, 1999, licensed electricians may supervise up to three apprentices at a job site.

The Board is authorized to approve an examination for all licenses issued by the Board. The Board or its designee is required to establish a passing score for the examination that reflects a minimum level of competence for applicants for licensure. All licensees must annually complete an open book, multiple choice examination, prior to renewal of a license.

Persons are prohibited from engaging in the trade of master electrician, journeyman, or residential wireman without first obtaining a license from the Board. The Board has the authority to seek an injunction against individuals violating this provision.



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No person, firm, partnership, or corporation may engage in the business of electrical contracting without being registered with the Board. All registered electrical contractors must employ at least one master level electrician to supervise electrical work who must be registered on the electrical contractor registration. No master electrician may be registered on more than one contractor registration. The Board is required to promulgate regulations for the issuance of temporary permits for electrical contractors who lose the service of their designated master electrician. The Act requires regulations for master, journeyman, and residential wireman temporary permits for applicants who meet all the requirements for licensure but have not yet satisfactorily completed the examination.

### Exemptions

The statute contains several exemptions from electrician licensing requirements. Employees of electrical, telephone, cable television, telegraph, and railroad entities are exempt from licensure requirements while in the performance of electrical work related to the exempt business. Owners of non-public buildings may perform electrical work on their own property or residence provided the work is permitted and inspected. This exemption does not apply to rental, lodging, or property intended for resale.

Employees of any firm or corporation may perform electrical work on property owned, leased, or rented by the firm or corporation provided the work is permitted and inspected according to the provisions of the statute. The exemption does not apply if the property is rental property, is used for long or short-term lodging, or is open to the public. Routine maintenance, repair, or alteration of existing facilities is exempt from the licensing, permitting and inspection provisions of the statute.

The statute contains numerous specific exemptions from licensing, permitting and inspections:

- Electrical work performed in, around or in conjunction with a mine covered by the Federal Mine Safety and Health Amendments Act of 1977;
- Electrical systems in manufactured homes certified by the Division of Housing pursuant to §24-34-715, C.R.S.;

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- Electrical installations under the exclusive control of an electric utility;
  - Low voltage installations, such as sprinkler systems, security systems, environmental controls and sound systems;
  - The installation, maintenance, repair and alteration of communication systems; and,
  - Electrical work performed on federal property by federal employees.

### *Permits and Inspections*

Licensed electricians must perform all electrical inspections. Local governments may perform electrical inspections within their jurisdictions provided the inspectors possess the same qualifications as inspectors employed by the state.

Prior to commencing any regulated electrical work, the responsible party must obtain a permit from the Board or appropriate local agency. Licensed electricians must request appropriate inspections periodically while the work is in progress. If an inspection finds the work to be unsatisfactory, a notice of disapproval is issued. All deficiencies in the notice must be corrected and an additional inspection completed before the next phase of the project can begin.

State inspectors must make inspections within three days of a written application for inspection. If an inspection is not made within five working days from the date of the request, work may continue on the project without penalty from the Board. The interior electrical system of a manufactured home is not subject to state electrical regulation. However, the connection between the manufactured home and the electrical utility must be performed by a licensed electrician and is subject to inspection.

Inspections are conducted in accordance with the National Electric Code (NEC) as adopted by the Board. All applications for permits, certificates of approval and notices of disapproval must include the name of the property owner, the address, the name of the contractor or electrician and the license number of the electrician.

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Local jurisdictions may establish their own permit and inspection programs. However, public school buildings located within local jurisdictions are permitted and inspected by the Board. The statute establishes various categories of permits for residential permit fees based on the size of the project in total square footage. Commercial and other electrical permits are based on the dollar valuation of the work being performed by the electrician. Local governments may not charge fees in excess of 15 percent above those established by the state.

### *Enforcement*

The Board may deny, suspend, revoke, or refuse to renew any license or registration issued. The Board is also authorized to issue monetary fines through a citation process to licensees or registrants for specific violations identified in statute. The Board is required to promulgate a schedule of fines for the identified offenses. All disciplinary actions of the Board must be administered in accordance with the provisions of the state "Administrative Procedure Act" (APA) contained in §24-4-105, C.R.S. Any licensee who has their license revoked by the Board is prohibited from reapplying for licensure for two years.

The statute defines unlawful acts including fraudulently obtaining a license; practicing as a licensee while a license is suspended; violating any regulation of the Board or of a local jurisdiction; and violating safety, labor, or workers' compensation laws.

Board members, witnesses, consultants hired by the Board, and complainants are immune from civil actions or suits when acting in good faith in an investigation or administrative proceeding. All disciplinary actions of the Board are subject to judicial review in the court of appeals.

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## ***Regulation in Other States***

The level of regulation of electrical contractors and electricians varies greatly among the states. Six states license contractors, but do not license individual electricians. California currently licenses contractors only, but will begin licensing electricians in 2001. Ohio has a voluntary contractor certification but does not regulate electricians. Kentucky certifies that electricians have passed a state-required examination and local governments may license electricians at their discretion. Maryland only licenses electricians in areas of the state where local governments do not have a licensing program. Finally, ten states have no statewide licensing program for either contractors or electricians. These states are:

- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Missouri
- New York
- Ohio
- Pennsylvania
- Texas

Among the states that regulate electricians, not all regulate both electricians and contractors. Not all states that regulate electricians have multiple levels of licensure, such as the master, journeyman, residential wireman, and apprentice levels that exist in Colorado. Education, experience, and examination all vary greatly in the regulatory schemes of states. Table 1 on the following page gives an overview of licensing in other states.

TABLE 1  
STATE LICENSING OVERVIEW

State	Contractor License	Master License	Journeyman License	Residential License	Apprentice Regulation
AL	Yes	No	Yes	No	No
AK	Yes	Yes	Yes	No	Yes
AZ	Yes	No	No	No	No
AR	Yes	Yes	Yes	No	Yes
CA	Yes	No	No*	No	No
CO	Yes	Yes	Yes	Yes	Yes
CN	Yes	No	Yes	No	Yes
DL	No	Yes	No	No	NA
DC	No	Yes	Yes	No	NA
FL	Yes	No	No	No	No
GA	Yes	No	No	No	No
HI	Yes	No	Yes	No	No
ID	Yes	Yes	Yes	Yes	Yes
IL	No	No	No	No	No
IN	No	No	No	No	No
IA	No	No	No	No	No
KS	No	No	No	No	No
KY	No	No	No	No	No
LA	Yes	No	No	No	No
ME	No	Yes	Yes	Yes	Yes
MD	No	Yes	No	No	No
MA	No	Yes	Yes	No	No
MI	Yes	Yes	Yes	No	Yes
MN	Yes	Yes	Yes	No	No
MS	No	Yes	No	No	No
MO	No	No	No	No	No
MT	Yes	Yes	Yes	Yes	Yes
NE	No	Yes	Yes	No	Yes
NV	Yes	No	No	No	No
NH	No	Yes	Yes	No	No
NJ	Yes	No	No	No	No
NM	Yes	Yes	Yes	No	No
NY	No	No	No	No	No
NC	Yes	No	No	No	No
ND	No	Yes	Yes	No	Yes
OH	No	No	No	No	No
OK	Yes	No	Yes	No	Yes
OR	Yes	Yes	Yes	No	Yes
PA	No	No	No	No	No
RI	No	Yes	Yes	Yes	Yes
SC	Yes	Yes	Local	Local	Local
SD	Yes	Yes	Yes	Yes	Yes
TN	Yes	No	No	No	No
TX	No	No	No	No	No
UT	Yes	Yes	Yes	Yes	Yes
VT	No	Yes	Yes	Yes	Yes
VA	Yes	Yes	Yes	No	No
WA	No	Yes	Yes	Yes	Yes
WV	No	Yes	Yes	No	Yes
WI	No	Yes	Yes	No	Yes
WY	Yes	Yes	Yes	No	Yes

\*California will begin regulating electricians in 2001.

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## **Program Description and Administration**

The Division of Registrations (Division) in DORA administers the State Electrical Board (Board). Program administration is functionally co-located and administered with the Examining Board of Plumbers. A Program Administrator II is appointed by the Director of the Division to oversee both the plumbing and electrical programs. The electrical program employs an additional 41 full-time equivalent employees (FTE). The majority of these FTE are inspectors located in satellite offices throughout the state. The program employs part-time and seasonal inspectors as necessary depending on the workload.

The program is funded by licensing, permit and inspection fees. The budget has averaged \$3,000,000 for the past three years. Fees are adjusted annually to meet the estimated expenses for the following year. Residential wiremen, journeymen, and master electricians pay a flat, annual fee for licensure. Electrical contractors and apprentices pay an annual registration fee. A schedule of licensing and registration fees is included as Table 2 below:

TABLE 2

### LICENSE AND REGISTRATION FEES

	FY 1996-97	FY 1997-98	FY 1998-99	FY 1999-2000
Contractor	\$100	\$100	\$100	\$100
Apprentice	5	5	5	5
Wireman	74	74	72	72
Journeyman	74	74	72	72
Master	74	74	72	72

Residential electrical permits are based on the square footage of the structure. Permit fees for industrial and commercial electrical installations are based on the valuation of the work performed. A copy of the current permit application and fee schedule is included as Appendix C to this report.

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## Licensing

The Act defines an electrical contractor as "any person, firm, copartnership, corporation, association, or combination thereof who undertakes or offers to undertake for another the planning, laying out, supervising, and installing or the making of additions, alterations, and repairs in the installation of wiring apparatus and equipment for electric light, heat, and power." A registered professional engineer who plans or designs electrical installation is exempt from the definition provided the engineer does not actually perform or supervise the electrical work.

Contractors are required to register with the Board. To register as a contractor, the contractor must be, or employ, a master electrician. A master electrician may not be registered as the master of record for more than one contractor. If the master of record terminates employment with a contractor, the contractor must notify the Board and a new master must be designated. The Act and regulations provide for a temporary master provision for contractors to finish work contracted for without a master being registered, however, the contractor's ability to solicit additional work is restricted.

While the Act specifies that contractors are registered, it also places restrictions on qualifications for registration and provides for disciplinary actions against a registered contractor. Contractors are responsible for registering and supervising apprentices. The most common disciplinary action taken by the Board against a registered contractor is related to apprenticeship issues. This will be discussed in more detail in the Complaints and Disciplinary Action section of the report.

An apprentice electrician must be employed by an electrical contractor and be directly supervised by a licensed residential wireman, journeyman, or master electrician. The maximum number of apprentices a licensee may supervise at any one time is three. Apprentices must be at least 18 to be registered with the Board. Apprentices are not required to undergo any formalized education to supplement the on-the-job training they receive.

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Apprenticeships generally last from two to four years depending on prior education and experience. An apprentice with two years of experience is eligible to test for a residential wireman license. This license limits the type of work the licensee may perform to residential electrical work, either remodel, or new construction. An apprentice with four years of experience is eligible to test for a journeyman license. A journeyman licensee is qualified to perform a broad range of residential, commercial, and industrial electrical installations.

The Act and regulations allow the Board to waive up to two years of apprenticeship for qualified education and experience. A degree in electrical engineering may qualify an apprentice for two years of credit. Other types of experience and education typically receiving Board credit are electrical maintenance work, electrical utility work, electrical work performed while in the military, and some vocational and community college programs.

Because of the limitations on work performed, a residential wireman is not a popular license. However, it does provide an option for an electrician who is not interested in performing commercial or industrial installations. For contractors who specialize in residential work, the wireman license provides flexibility for supervising apprentices. Licensed residential wiremen are likely to receive a lower hourly wage than journeymen or master electricians. However, licensed wiremen are qualified to work independently on residential projects.

An apprentice with four years of experience credit may apply to take the journeyman license examination. The apprentice must be able to document to the Board that the apprenticeship included practical experience in commercial and industrial, as well as residential electrical installations. Journeymen are qualified for a wide variety of commercial, industrial and residential electrical installations. Journeymen provide a bulk of the skilled labor in the electrical construction field. Once a passing score is achieved on the journeyman examination, a license is issued.



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A master license is the highest level electrical license issued by the Board. To qualify for a master license, a journeyman must have an additional one year of experience in planning, laying out and supervising electrical installations. While both journeymen and master electricians are responsible for compliance with the electrical code during installation, a master's license signifies qualifications in planning and designing electrical installations to meet code requirements.

The change in the apprentice supervisory ratio from one apprentice for each licensee to three apprentices per licensee has increased the number of registered apprentices. Table 3 below details the number of licensees in each category. However, it is too early to determine if the increase in registered apprentices will result in an increase in the number of licensees. Since four years is the standard apprenticeship period, it will take a minimum of five years to determine the effect of the increased ratio on licensees and six to eight years to fully evaluate the impact.

TABLE 3

ELECTRICAL REGISTRATION AND LICENSING ACTIVITY  
Initial licenses and registrations

	FY 1996-97	FY 1997-98	FY 1998-99	FY 1999-00
Apprentice	1,850	2,453	4,035	4,946
Wireman	132	93	164	223
Journeyman	394	401	609	651
Master	247	162	232	253
Contractor	200	223	239	285

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## Examination

Both journeyman and master licenses require a passing score on a Board approved examination. Before being admitted to an examination, an applicant for licensure must provide the Board with all appropriate documentation to support licensure qualifications. The Board has authorized a licensing subcommittee to approve all routine applications. Any applications that do not meet standard Board criteria are denied admittance to the examination. An applicant that is denied admittance may appeal to the full Board for reconsideration. The Board routinely denies initial applications from persons seeking large amounts of credit for military, maintenance, and education credit. Because of concerns regarding the compatibility of electrical codes, the Board also initially denies credit for work experience obtained in a foreign country.

Applicants who appeal a denial to the Board are asked to appear in person at a regular Board meeting to provide additional information. If the applicant is able to provide additional documentation of qualified experience, or explain to the Board's satisfaction that questionable experience meets the Board's standards, the applicant is granted permission to take the licensing examination.

The Board currently contracts with a private vendor to administer the Board approved examination at various locations around the state. The vendor schedules examination times six days per week if necessary to meet requests. The examination vendor proctors the computerized test, scores it immediately then issues licenses to successful applicants. The testing center then forwards the results to the program administrator for entry into applicant licensing history files.

## Permits and Inspections

The Act requires that electrical installations, other than those exempted, be permitted by the Board and inspected by qualified inspectors. The permitting and inspection responsibility for the electrician regulatory program is shared between state and local governments. Any local government may implement a permitting and inspection program, provided it is at least as stringent as the requirements of the Board.

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Most major metropolitan areas have implemented local permitting and inspection programs. Fees for local programs are restricted by the Act to no more than 15 percent above the fee set by the Board. The result is that the Board has jurisdiction in less populated areas of the state where local governments have deemed local programs to be cost prohibitive. The Board has permitting and inspection jurisdiction over public school buildings regardless of the local government program.

As previously mentioned, permits for residential projects are based on the square footage of the residence. For other projects, the permit fee is based on the estimated cost of the electrical portion of the construction project. Fees are adjusted annually by the Board to recover estimated expenses associated with the overall program.

Once an electrical project is permitted, construction may proceed. At periodic points during the construction process, inspections are required to ensure that the installation is in compliance with the electrical code adopted by the Board.

The contractor or permit holder must contact the appropriate regulatory authority to request an inspection. The Act requires that an inspection be scheduled within three days of a request. If an inspection is not conducted within the statutory requirements, the permit holder may proceed with the installation as without approval.

Most installations require at least two inspections, a rough and final. More complex installations may require several inspections. When an inspector arrives at the job site for the first time, it is standard practice to perform a routine license check to verify that all personnel involved in the electrical installation are licensed or registered with the Board. Table 4 details the number of permits issued and inspections completed since 1996.

TABLE 4

PERMIT AND INSPECTION INFORMATION

Fiscal Year	Permits	Inspections
1996/97	26,219	46,132
1997/98	26,450	49,056
1998/99	27,285	49,574
1999/00*	24,648	48,000

\*Estimated data from the 1999/00 budget document.

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## *Complaints and Discipline*

The Board is authorized to investigate possible violations of the statute or regulations either submitted by an interested party or on its own initiative. The Board has authorized the program administrator to initially review potential violations to determine if the allegation, if proven, would constitute a violation. Many consumer complaints are related to fee or contract disputes which are not within Board jurisdiction.

When a complaint is determined to be a potential violation of the Act or regulations, the program administrator requests a response from the licensee. The licensee's response, along with the original complaint are presented at the next regular Board meeting for further action. The Board has the option at that time of referring the complaint to the Office of the Attorney General for disciplinary action, dismissing the complaint based on the response of the licensee, or referring the complaint to Complaints and Investigations in the Division of Registrations for a formal investigation.

The Board may deny, suspend, revoke, or fine a licensee based on the facts presented during a formal disciplinary hearing conducted according to the provisions of the state Administrative Procedure Act. The Board may conduct the hearing, or delegate the hearing process to an Administrative Law Judge (ALJ). Rulings of an ALJ are advisory to the Board only. As a Type I agency, the Board must make the final agency action in a disciplinary matter.

The Act authorizes the Board to establish a fine schedule for certain violations. The Board has established a unique citation program designed to streamline minor regulatory infractions. Electrical inspectors are authorized by the Board to issue citations to licensees for these scheduled violations. These citations are similar to traffic tickets. The licensee may plead guilty and pay the predetermined fine, or exercise their rights under the Colorado Administrative Procedure Act.

The Board has delegated authority to the program administrator to negotiate fines within specific guidelines. If the licensee does not wish to plead guilty, the licensee may request a conference with the program administrator and present any mitigating factors to negotiate a lower fine or dismissal. If the licensee is not satisfied with the program administrator's determination, an appeal can be made to the Board.

The Board also has jurisdiction to review complaints against electrical inspectors. Disciplinary actions against electrical inspectors are limited to situations involving failing to inspect or disapproving an electrical installation without giving sufficient justification. The Board has not heard a complaint against an electrical inspector since the last review in 1997. Table 5 provides information regarding complaints and disciplinary actions since fiscal year 1996/97.

TABLE 5

COMPLAINTS AND DISCIPLINARY ACTIONS

Fiscal Year	Complaints	Suspensions	Revocations	Fines Issued	Fines Collected	Other Discipline	Total Disciplinary Actions
96/97	152	1	3	114	106	13	131
97/98	200	1	4	156	147	21	182
98/99	243	1	1	99	80	30	131
99/00	167	0	2	116	95	18	136

Unlike most professional licensing programs, the Board does not have the statutory authority to issue letters of admonitions (LOA). However, like most other programs the Board may enter into stipulated agreements. The column labeled "Other Discipline" in Table 5 is generally disciplinary actions that were resolved using stipulated agreements. Stipulated agreements save both the licensee and the program valuable resources and are an effective disciplinary tool.

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## ***Analysis and Recommendations***

The 1997 sunset review of this program discussed in detail several issues and concerns and made six recommendations. Due to the intense controversy surrounding the statutory apprenticeship ratio, the program was continued with no changes for three years. The ratio of apprentices was subsequently changed from one apprentice for each licensee to three apprentices for each licensee.

The 1997 sunset review found that there is a shortage of skilled electricians nationally and in Colorado. This shortage is still a concern in Colorado. The shortage has affected the ability of Colorado electrical contractors to attract and retain licensed electricians as well as government entities to employ qualified inspectors.

The change in the apprenticeship ratio may positively impact the shortage in time. Colorado's building boom has placed a strain on most areas of skilled labor. Electrical contractors in the state are offering signing bonuses for all levels of employees from apprentices through master level electricians. The increase in the apprenticeship ratio may provide relief in the future. However, it is expected that the shortage will continue for the next three to five years if building stays on pace with the current trend.

There are several alternatives that may relieve the effects of the shortage. This report makes recommendations to remove regulatory barriers for qualified out of state electricians to relocate to Colorado. The report makes a statutory recommendation to allow more credit for work performed without the supervision of a licensed electrician. This will allow more applicants to qualify for licensure in the state.

The purpose of regulating electricians and electrical installations is to protect the public. To accomplish this goal, the General Assembly requires the Board to adopt and enforce the most current edition of the National Electric Code (NEC). The Board may modify any standard contained in the NEC following a public rule making hearing in accordance with the Administrative Procedure Act.

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The NEC is the minimum standard for electrical installations statewide. However, local jurisdictions that have approved permit and inspection programs may adopt standards more stringent than those contained in the NEC. This has resulted in some controversy. Building officials in some jurisdictions have recently begun promoting the International Code Council Electric Code (ICC) for adoption by their local agencies.

Determining which code is more stringent is very complex. Board members, staff, and industry representatives contacted for this review support the continuation of the NEC as the only code to be used in the state. They point out the expense to licensees of obtaining two separate code books and the difficulty of complying with different regulations in different jurisdictions.

Both codes are designed to protect the public by establishing standards for electrical installations. Even opponents of the ICC admit that the ICC, when implemented and enforced properly, should result in safe installations. However, opponents of the ICC point out the long history of the NEC and the familiarity that inspectors and electricians have with it.

The ICC, according to its advocates, is less complex, easier to implement and less restrictive to use. It is also argued that it may reduce construction costs.

*Recommendation 1 - Continue the Regulation of Electricians and Electrical Contractors by the State Electrical Board Until June 30, 2010.*

Virtually every home and business in the state is wired for electricity. New construction in both the commercial and housing industries is increasing by all measures used to evaluate this activity. Improperly installed electrical systems can malfunction. Minor malfunctions cause power outages and minor inconveniences. Major malfunctions can result in electrical shocks, electrocutions, and fires. Regulation of electrical installations is necessary to protect the public health, safety, and welfare.

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There are several models of regulation nationally. Some states regulate with a state electrical board similar to the one in Colorado. Some states, such as New Mexico, regulate electricians under a multidisciplinary board that regulates several construction related professions. There are other states with an advisory type board and an administratively operated board. Moreover, there are ten states that do not have a statewide program at all and allow all regulation to be enforced by local governments.

Each of these models can be effective and each has advocates. Until 1959, Colorado did not have a statewide program and local jurisdictions were responsible for enforcement. The General Assembly could elect to return to that program at this time. There are advantages for local governments including, greater flexibility, control, and revenue generation. However, there are complications, for not all local governments have the expertise or resources to implement a program. In many parts of the state, there is not enough construction activity to justify employing a qualified inspector, even if one could be recruited. In addition, starting a new regulatory program at the local level could be cost prohibitive for some jurisdictions.

The General Assembly could consider an administrative model for Colorado. There are several states that operate either without a board or with an advisory board instead of a Type I policy autonomous board. If the present Board were changed to a Type II board, the Director of the Division of Registrations (Director) would be given responsibility for all agency actions rather than a policy autonomous board. The Director could then delegate responsibilities to the Board and utilize it in an advisory capacity. If it could be demonstrated that the Board was consistently failing in its responsibility to regulate in the public interest, it would be incumbent on the sunset review to recommend major changes to the regulatory structure.



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The sunset criteria ask for an evaluation of the performance of the Board and DORA in fulfilling the statutory requirements of the program. Overall, the Board and program is operating effectively. There would not be a significant reduction in the cost of the program by changing the Board to a Type II agency, nor would there be a significant cost benefit by eliminating the Board entirely. Regulated professionals and the construction industry would oppose efforts to eliminate the Board or to reduce its level of independence unless there is convincing evidence that this is necessary to protect the public.

*Recommendation 2 - Change the Composition of the Board by Replacing One Contractor with a Representative from the National Fire Protection Association Experienced in Fire Prevention and Inspections.*

Historically, the Board has functioned effectively and in the public interest. However, the composition of the Board could be modified to enhance its ability to serve the public. The Act requires the Board to modify and enforce the National Electric Code (NEC) as the electrical code used throughout the state. The NEC has been under the sponsorship of the National Fire Protection Association (NFPA) since 1897. Membership in the NFPA is diverse, but is primarily made up of representatives of engineering, architectural, electrical, insurance, construction, building officials, and firefighting professionals.

Composition of the Board is somewhat diverse, but heavily weighted toward the electrical industry. Only one public member sits on the Board. In the past, this position has been filled by a representative of the Colorado Association of Fire Chiefs in order to give the Board the perspective of this important interested party. The public would be well served by a permanent member of the Board to represent the fire prevention field. A representative from the firefighting profession with experience in fire prevention inspections would be valuable in evaluating modifications to the code and for assistance in evaluating the variance process.

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At the same time, public membership is valuable to all regulatory Boards. It would not be in the public interest to eliminate the public member position on the Board. Licensed electricians currently represent four of the nine Board positions, or 44 percent of the positions. Replacing one contractor with a fire protection member would maintain electrician members at 33 percent of the Board, a fair representation.

*Recommendation 3 - Repeal §12-23-116 (7), C.R.S., Which Places Public Schools in Jurisdictions With a Local Permitting and Inspection Program Under the Jurisdiction of the Board.*

The Board is responsible for permitting and inspecting in all areas of the state that do not have a local permitting and inspection program. The Act also requires the Board to permit and inspect public schools in all areas of the state regardless of the presence of a local program. This is an inefficient use of Board resources.

The qualifications for inspectors at the state and local level are identical. In some jurisdictions, the public school will be the only building for miles around requiring a state inspection. Local inspectors could be inspecting other projects in the vicinity and be required to bypass the school while a state inspector is required to drive miles out of the inspector's normal inspection area for a single project.

If evidence was presented that local inspectors do not conduct adequate inspections, the statutory authorization for local programs should be repealed. However, all evidence suggests that local inspections provide a level of protection consistent with the public interest.

According to permit records, there were 593 permits issued for schools during fiscal year 1999/00. Of these permits, 345, or 58 percent, were in jurisdictions that have their own inspection program. Forty-eight percent of the inspections on public schools occur in jurisdictions with a permitting and inspection program. The majority of these inspections take place during the summer months when schools are usually not in session. This has, on occasion, required shifting of resources on a temporary basis to meet the statutory timeframes for inspections. Local governments generally have resources available at the local level to accommodate the anticipated workflow in a more efficient manner.

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Some school districts may oppose this change based on two concerns. The first, and most obvious, is potential costs. Local programs are permitted by statute to charge fees up to 15 percent more than those charged by the state. This potentially could increase costs for local school districts. Also, local programs are permitted to modify the state electrical code to be more stringent in the local jurisdiction. A more stringent code could also increase costs for the school district. The second concern of school districts could be the lack of statutory inspection timeframes for local programs. State inspectors are required to inspect within three days of a request. Local programs do not have to adhere to this standard.

The current process for fees involves the Board anticipating total expenses and developing a fee schedule to generate sufficient revenue to meet those expenses. Inefficiencies in the current process are accounted for and built into the annual expense estimate. Subsequently, all permit holders at the state level subsidize the inefficiencies of the school inspections through higher permit and inspection fees. While this subsidization amounts to pennies per permit, it is nonetheless, an inefficient process that should be addressed.

The statutory timeframe for inspections is a separate issue. Local governments have the option of adopting mandatory deadlines similar to the states', however there is no information available as to how many have. This is a local government issue that can be resolved between individual school districts and their locally elected officials.

***Recommendation 4 - Allow Local Jurisdictions That Have Permitting and Inspections Programs to Adopt Any Nationally Recognized Electrical Code for Use in the Local Jurisdiction.***

The purpose of regulating electricians and electrical installations is to protect the public. To accomplish this goal, the General Assembly requires the Board to adopt and enforce the most current edition of the National Electric Code (NEC). The Board may modify any standard contained in the NEC following a public rulemaking hearing in accordance with the Administrative Procedure Act.

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The NEC is the minimum standard for electrical installations statewide. However, local jurisdictions that have approved permit and inspection programs may adopt standards that are more stringent than those contained in the NEC. This has resulted in some controversy. Building officials in some jurisdictions have recently begun promoting the International Code Council Electric Code (ICC) for adoption by their local agencies.

Determining which code is more stringent is very complex. Board members, staff and industry representatives contacted for this review support the continuation of the NEC as the only code to be used in the state. They point out the expense to licensees of obtaining two separate code books and the difficulty of complying with different regulations in different jurisdictions. Both codes are designed to protect the public by establishing standards for electrical installations. Even opponents of the ICC acknowledge that when enforced effectively the ICC will result in safe electrical installations.

However, opponents of the ICC point out the long history of the NEC and the familiarity that inspectors and electricians have with it. Opponents also contend that the NEC code development process is open to a variety of interest groups while the ICC code development is open only to members of the code development group, the International Conference of Building Officials (ICBO).

According to its advocates, the ICC is less complex, easier to implement and is less restrictive to use. It is also argued that it may reduce construction costs. The ICC is currently being used in some local jurisdictions nationally and there is no evidence presented by NEC that the use of the ICC has resulted in harm to the public.

Under current law, local jurisdictions can and do modify the NEC. Electricians are required to adopt their installation practices to meet local requirements under the current code procedures. Therefore, the argument that different requirements in local jurisdictions will create a new regulatory burden is without merit.

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Locally elected officials are in the best position to determine the best electrical code to meet the needs of their constituents. If this were not true, the General Assembly should not allow local governments to modify the NEC as clearly permitted under the current statute. In addition to modifying the NEC, local jurisdictions should be authorized to adopt and modify any nationally recognized code they believe is appropriate for their constituents.

*Recommendation 5 - Amend §12-23-104 (2)(a), C.R.S., to Allow the Board to Adopt and Modify any Nationally Recognized Electrical Code for Use as the Standard in Colorado.*

The Act requires the Board to adopt, modify and enforce the most recent edition of the National Electric Code (NEC). The National Fire Protection Association updates the NEC every three years. As discussed in recommendation 4, and throughout this report, the NEC has a history of providing protection to the public.

However, there are other nationally recognized codes that also provide protection to the public. Sunset criterion II requires an evaluation of "...whether the existing statute establishes the least restrictive form of regulation consistent with the public interest, considering other available regulatory mechanisms...". Requiring the Board to adopt a specific code by statute prevents the Board from evaluating other regulatory mechanisms for appropriateness in Colorado.

It may well be that upon consideration the Board will select the NEC for the state electrical code. However, the provisions of §12-23-104 (2)(a), C.R.S., prevent the Board from even considering options that may provide greater protection.

One purpose in establishing a regulatory board is to benefit from the technical expertise available in the state. Based on their technical knowledge, the Board should be authorized to determine the most appropriate code to be used for those areas of the state under the jurisdiction of the Board.

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*Recommendation 6 - Amend §12-23-106.5, C.R.S., to Allow the Board to Grant up to the Full Experience Credit for Substantially Equivalent Electrical Experience Not Subject to the Supervision of a Licensed Electrician and Delete the Provision Requiring the Board to Develop Regulations for Military Experience.*

The Board is currently limited in the amount of equivalent experience it can grant to applicants who have significant work experience that is exempt from the licensing requirements of the statute. The clearest example of this is the application of military experience credit under §12-23-106(2) (b) (II), C.R.S. This provision requires the Board to adopt by rule a uniform ratio of experience credit for a journeyman license. To implement this section, the Board has adopted Rule 5.2 (d), which provides for a maximum of one year of experience credit. Under this regulation, a 20 year military veteran of the Seabees (a construction branch of the U.S. Navy) would receive one year of apprenticeship credit.

The Act contains other exemptions that cause applicants difficulty in obtaining experience credit. For example, the Act does not apply to property covered under the "Federal Mine Safety and Health Amendments Act of 1997" (MSHAA). Electrical installations at these facilities are inspected by mine safety representatives instead of licensed electrical inspectors. Installations at these facilities are required to comply with the MSHAA electrical code, not the National Electrical Code (NEC). Therefore, the Board has refused to grant experience obtained exclusively in an MSHAA facility unless the applicant provides evidence of experience using the NEC.

The Act also exempts employees of electric utilities. Again, the Board is reluctant to grant experience credit for these applicants. The key to all of these exemptions is that the applicant's work is not reviewed by an inspector for adherence to the NEC.

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The Act requires the Board to grant up to one-half of the experience required for an individual license for electrical work not subject to supervision of a licensed electrician (§12-23-106.5, C.R.S.) The applicant must demonstrate to the Board that the work performed is equivalent to work performed by a registered apprentice. This provision has been used by applicants from the military and mining industry to obtain an additional year of credit.

The policy of the Board for these applicants is to request detailed information about the work performed, and in many cases require a personal interview with the applicant. If the Board is satisfied the work is substantially equivalent to work performed by an apprentice or journeyman, the Board is limited to crediting one-half of the applicable experience credit.

There is no public protection justification for this limitation. If the experience is substantially equivalent to work performed by an apprentice or journeymen under the licensing provision of the statute excluding it from credit is an unnecessary barrier to entry to the profession. One purpose of the sunset process is to identify and eliminate unnecessary barriers. Failure to grant experience credit, forces qualified persons to serve an unnecessary amount of time at a lower level position than is necessary to protect the public. If there is any question about the applicant's knowledge, the examination process should screen those candidates.

*Recommendation 7 - Eliminate Outdated and Unnecessary Provisions from the Statute.*

The Act requires the Board to meet annually to elect officers, including a secretary-treasurer (§12-23-104 (1)(a), C.R.S.). This is a carry-over from the time when the Board was a stand-alone agency. All Board funds are forwarded to the State Treasurer and credited to the Division of Registrations cash fund. Program staff currently performs secretarial duties for the Board. The only function of this officer is to maintain custody of the Seal of the Board that the Board may adopt under §12-23-104(2)(b), C.R.S. The seal is not mentioned again in statute and also serves no public protection purpose.

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Some boards and commissions elect officers to determine a chain of command to preside over meetings. In the event an elected officer is not present, it is common for the next most senior member of the body to preside. The election of a Secretary-Treasurer with no duties is not necessary. The seal identified in statute also does not serve a necessary function and both of these references should be repealed.

The State Electrical Board is one of the few regulatory boards left in DORA that requires Senate confirmation of the Governor's appointments (§12-23-102, C.R.S.). This provision should also be repealed. Senate confirmations are another holdover from the time when the Board was a stand-alone agency. The Senate has never failed to confirm an appointee. The time and expense of the hearings is unnecessary and should be eliminated.

***Recommendation 8 - Repeal the Temporary Permit Provision.***

Temporary permits are provided for in §12-23-110, C.R.S. These permits were intended as a means to allow qualified applicants to perform work at a higher level while they were waiting to take the licensing examination. Prior to the Board contracting with a vendor for examination, the Board scheduled examinations on a monthly basis. The examination was then hand scored and results could take an additional two to three weeks. Temporary licenses were necessary to remove an unnecessary barrier to entry for licensees. This is not true with the computerized examination process.

The current licensing examination is available six days per week. A qualified applicant may schedule the examination at the applicant's convenience, once the application has been approved. The examination process no longer presents an unnecessary barrier to entry for applicants so the need for temporary permits no longer exists. Therefore, §12-23-110, C.R.S., should be repealed.



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*Recommendation 9 - Require the Board to Issue Licenses by Endorsement.*

It is a common practice for licensing jurisdictions to recognize license applicants who have experience in another jurisdiction. There are two distinctly different processes, reciprocity and endorsement, to recognize the qualifications of an applicant from another jurisdiction.

The Board is authorized to issue a license by endorsement to any person licensed in another state with substantially equivalent licensing requirements. This is a permissive authorization, meaning only that the Board "may" issue a license. However, the Board is required to issue a license to any qualified applicant who resides in a jurisdiction with a reciprocal agreement with the Board.

Reciprocity is a two step recognition process. The first step is to determine if a jurisdiction has equivalent licensing requirements as Colorado. As previously discussed, various states have different requirements for licensing and some states do not have licensing programs at all. Once it is determined that a state has licensing standards that are substantially equivalent to the requirements in Colorado, a reciprocal agreement must be formally adopted.

A reciprocal agreement, simply stated, is an agreement between the two licensing entities to accept the other state's licensing criteria for licensing in each state. Therefore, if an individual is licensed in Wyoming, for example, that individual may apply for a Colorado license. Colorado program staff verifies that the applicant's Wyoming license is in good standing and then issues a Colorado license only if Wyoming has entered into a formal agreement with the Board. Since 1998, the Board has negotiated and signed reciprocal agreements for journeyman licenses with 11 states: Alaska, Idaho, Minnesota, Montana, Nebraska, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

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The other commonly used process is licensure by endorsement. Endorsement is similar to reciprocity in that it requires a determination that the licensing standards in another jurisdiction are substantially equivalent. The current Act, in §12-23-109, C.R.S., states that the Board "may" issue a license by endorsement if an applicant submits proof of a valid license, in good standing, from a jurisdiction with substantially equivalent licensing requirements. This section goes on to require the Board to issue a license by reciprocity where an agreement exists. The word "may" in this section should be changed to "shall" to require the Board to issue licenses to qualified applicants.

The purpose of a regulatory program is to establish minimum qualifications for individuals. Individuals who meet the minimum qualifications should be granted authority to practice the profession. Unnecessary restrictions should be eliminated to allow free access to the profession and allow the market forces to determine the success of qualified individuals. If an applicant is qualified and has a license in good standing in another state with substantially equivalent licensing requirements, the Board should be required to issue a Colorado license regardless of the reciprocal status of the jurisdiction in which the applicant obtained a license.

***Recommendation 10 - The General Assembly Should Amend §12-23-118 (1), C.R.S., to Authorize the Board to Discipline Licensees Who Provide False or Misleading Information to the Board During an Investigation.***

The Board is authorized to discipline a licensee for providing false information on an application by §12-23-118 (1) (l), C.R.S. The Board may compel a licensee to appear before the Board at a hearing but may not discipline the licensee if the licensee does not provide accurate testimony.

Other regulatory programs, such as the Dental, Optometric, and Chiropractor Boards are authorized to discipline a licensee who provides false or misleading information during an investigation. Adding a subparagraph (m) to paragraph 118 (1) to prohibit misleading information will enhance the ability of the Board to protect the public.

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### Administrative Recommendation

Administrative recommendations do not require legislative action and are included for the information of the General Assembly and the Board.

### Administrative Recommendation 1 - Increase Board Education in the Areas of Responsibilities, Ethics, and Public Service.

The sunset criteria require an evaluation of whether the Board and agency act in the public interest or are self-serving to the profession.

Previous sunset reviews have found that, with few exceptions, the Board has carried out its responsibility. This review found reason to be concerned about the performance of this particular Board. In disciplinary actions, Board members function in a quasi-judicial position. In formal legal proceedings, it is incumbent on the presiding judge to remove him/herself from the case if the judge has personal knowledge of one of the parties involved.

In Board meetings attended as part of this review it was observed that Board members with personal knowledge of licensees with complaints before the Board not only failed to recuse themselves, they openly appealed to the Board for leniency for licensees with whom they were personally familiar. In at least one case, the complaint was dismissed without a complete investigation and hearing. In another situation, a Board member admitted that an individual with a complaint pending had contacted him to discuss the case. This Board member should have refused to discuss a pending case with the respondent. Instead, the Board member disclosed the communication and then pleaded the licensee's case at the meeting to consider if an investigation was necessary.

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The Board is required to annually establish fees for the next fiscal year based on anticipated expenses. The standard procedure is for the program administrator to work with the DORA budget and accounting staff to estimate expenses and develop a fee proposal. Historically, fee increases or decreases are allocated among licensees based on an assumed ability to absorb the expense. In other words, licensees that presumably command a higher wage are generally increased by a larger amount than those licensees that earn lower wages. In 2000, Board members who are licensees voted to change the formula. The stated reason for this change was appeals by fellow licensees that they did not want their license fee to increase. This kind of action is clearly self-serving.

Board members who are also licensees must be extremely vigilant not to appear self-serving particularly during fee setting meetings. The Division of Registrations conducts an annual training session for new Board members to orient them to the obligations of serving on a regulatory board. Periodic refresher classes should be conducted throughout the year to remind Board members about the finer points of ethics and the disciplinary process. Particular emphasis should be placed on when to recuse, when communication with complainants and respondents is appropriate, and the importance of disclosure of potential conflicts.

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## **Appendix A - Sunset Statutory Evaluation Criteria**

- (I) 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;
- (II) 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;
- (III) 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;
- (IV) Whether an analysis of agency operations indicates that the agency performs its statutory duties efficiently and effectively;
- (V) 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;
- (VI) The economic impact of regulation and, if national economic information is not available, whether the agency stimulates or restricts competition;
- (VII) 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;
- (VIII) Whether the scope of practice of the regulated occupation contributes to the optimum utilization of personnel and whether entry requirements encourage affirmative action; and
- (IX) Whether administrative and statutory changes are necessary to improve agency operations to enhance the public interest.

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## Appendix B - Statute

### ARTICLE 23

#### Electricians

- 12-23-100.2. Legislative declaration.
- 12-23-101. Definitions.
- 12-23-102. State electrical board.
- 12-23-102.5. Repeal of article.
- 12-23-103. Board under department of regulatory agencies.
- 12-23-104. Oath - meetings - powers.
- 12-23-104.5. Program administrator.
- 12-23-105. Electrician must have license - control and supervision.
- 12-23-106. License requirements.
- 12-23-106.5. Credit for experience not subject to supervision of a licensed electrician.
- 12-23-107. Unauthorized use of title.
- 12-23-108. License without written examination. (Repealed)
- 12-23-109. License by endorsement.
- 12-23-110. Temporary permits.
- 12-23-110.5. Apprentices - supervision - registration - discipline.
- 12-23-111. Exemptions.
- 12-23-112. Fees.
- 12-23-113. Disposition of fees and expenses of board.
- 12-23-114. Publications.
- 12-23-115. Inspectors - qualifications.
- 12-23-116. Inspection - application - standards.
- 12-23-117. Inspection fees.
- 12-23-118. Violations - citations - settlement agreements - hearings - fines.
- 12-23-118.1. Reapplication after revocation of licensure.
- 12-23-118.2. Reconsideration and review of board action. (Repealed)
- 12-23-118.3. Immunity.
- 12-23-119. Unlawful acts.
- 12-23-120. Judicial review.

**12-23-100.2. Legislative declaration.** The general assembly hereby declares that the state electrical board shall be specifically involved in the testing and licensing of electricians and shall provide for inspections of electrical installations where local inspection authorities are not providing such service.

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**12-23-101. Definitions.** As used in this article, unless the context otherwise requires:

(1) "Apprentice" means a person who is required to be registered as such under section 12-23-110.5 (3) (a), who is in compliance with the provisions of this article, and who is working at the trade in the employment of a registered electrical contractor and is under the direct supervision of a licensed master electrician, journeyman electrician, or residential wireman.

(1.2) "Board" means the state electrical board.

(1.5) "Electrical contractor" means any person, firm, copartnership, corporation, association, or combination thereof who undertakes or offers to undertake for another the planning, laying out, supervising, and installing or the making of additions, alterations, and repairs in the installation of wiring apparatus and equipment for electric light, heat, and power. A registered professional engineer who plans or designs electrical installation shall not be classed as an electrical contractor.

(1.7) "Electrical work" means wiring for, installing, and repairing electrical apparatus and equipment for light, heat, and power.

(2) "Journeyman electrician" means a person having the necessary qualifications, training, experience, and technical knowledge to wire for, install, and repair electrical apparatus and equipment for light, heat, power, and other purposes, in accordance with standard rules and regulations governing such work.

(3) "Master electrician" means a person having the necessary qualifications, training, experience, and technical knowledge to properly plan, lay out, and supervise the installation and repair of wiring apparatus and equipment for electric light, heat, power, and other purposes in accordance with standard rules and regulations governing such work, such as the national electrical code.

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(3.5) "Permanent state highway tunnel facilities" means all permanent state highway tunnels, shafts, ventilation systems, and structures and includes all structures, materials, and equipment appurtenant to such facilities. Said term includes all electrical equipment, materials, and systems to be constructed, furnished, and installed as part of the final construction features specified by the applicable contract plans and specifications or by the national electrical code. For the purposes of this article and article 20 of title 34, C.R.S., such state highway tunnel facilities shall be deemed to be mines during the construction of such facilities.

(4) "Residential wireman" means a person having the necessary qualifications, training, experience, and technical knowledge to wire for, and install, electrical apparatus and equipment for wiring one-, two-, three-, and four-family dwellings.

(5) Repealed.

**12-23-102. State electrical board.** There is hereby established a state electrical board, which shall consist of nine members appointed by the governor, with the consent of the senate, who shall be residents of the state of Colorado. Two of said members shall be electrical contractors who have masters' licenses, two shall be master or journeymen electricians who are not electrical contractors, two shall be representatives of private, municipal, or cooperative electric utilities rendering electric service to the ultimate public, one shall be a building official from a political subdivision of the state performing electrical inspections, one shall be a general contractor actively engaged in the building industry, and one shall be appointed from the public at large. Effective July 1, 1975, all members shall serve for three-year terms, but, of the appointments to be made effective July 1, 1975, one master or journeyman electrician shall be appointed for a three-year term, one electric utility member shall be appointed for a three-year term and one for a two-year term, and one new at-large member shall be appointed for a three-year term. All other present members shall serve the terms for which originally appointed, but their successors shall be appointed for three-year terms. All appointees shall be limited to two full terms each. Any vacancy occurring in the membership of the board shall be filled by the governor by appointment for the unexpired term of such member. The governor may remove any member of the board for misconduct, incompetence, or neglect of duty.



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**12-23-102.5. Repeal of article.** This article is repealed, effective July 1, 2001. Prior to such repeal, the state electrical board shall be reviewed as provided for in section 24-34-104, C.R.S.

**12-23-103. Board under department of regulatory agencies.** The state electrical board and its powers, duties, and functions are transferred, effective July 1, 1978, by a type 1 transfer, as such transfer is defined in the "Administrative Organization Act of 1968", article 1 of title 24, C.R.S., to the department of regulatory agencies and allocated to the division of registrations.

**12-23-104. Oath - meetings - powers.** (1) (a) The board, annually in the month of July, shall elect from the membership thereof a president, vice-president, and secretary-treasurer. The board shall meet at least once a month and at such other times as it deems necessary.

(b) A majority of the board shall constitute a quorum for the transaction of all business.

(2) In addition to all other powers and duties conferred or imposed upon the board by this article, the board is authorized to:

(a) Adopt, and from time to time revise, such rules and regulations not inconsistent with the law as may be necessary to enable it to carry into effect the provisions of this article. In adopting such rules and regulations, the board shall be governed when appropriate by the standards in the most current edition of the national electrical code or by any modifications to such standards made by the board after a hearing is held pursuant to the provisions of article 4 of title 24, C.R.S. These standards are adopted as the minimum standards governing the planning, laying out, and installing or the making of additions, alterations, and repairs in the installation of wiring apparatus and equipment for electric light, heat, and power in this state. A copy of such code shall be kept in the office of the board and open to public inspection. Nothing contained in this section shall prohibit any city, town, county, or city and county from making and enforcing any such standards that are more stringent than the minimum standards adopted by the board, and any city, town, county, or

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city and county which adopts such more stringent standards shall furnish a copy thereof to the board. The standards adopted by the board shall be prima facie evidence of minimum approved methods of construction for safety to life and property. The affirmative vote of two-thirds of all appointed members of the board shall be required to set any standards that are different from those set forth in the national electrical code. If requested in writing, the board shall send a copy of newly adopted standards and rules and regulations to any interested party at least thirty days before the implementation and enforcement of such standards or rules and regulations. Such copies may be furnished for a fee established pursuant to section 24-34-105, C.R.S.

(b) Adopt a seal, and the secretary shall have the care and custody thereof;

(c) Register and renew the registration of apprentices and qualified electrical contractors and examine, license, and renew licenses of journeymen electricians, master electricians, and residential wiremen as provided in this article;

(d) Subpoena records and documents and compel the attendance and testimony of witnesses pursuant to an investigation or a hearing of the board;

(e) Cause the prosecution and enjoinder, in any court of competent jurisdiction, of all persons violating this article and incur necessary expenses therefor. When seeking an injunction, the board shall not be required to prove that an adequate remedy at law does not exist or that substantial or irreparable damages would result if an injunction is not granted.

(f) Inspect and approve or disapprove the installation within this state of electrical wiring, apparatus, or equipment for electrical light, heat, or power according to the minimum standards in the national electrical code or prescribed in this article;

(g) Review and approve or disapprove requests for exceptions to the national electrical code in unique construction situations where a strict interpretation of the code would result in unreasonable operational conditions or unreasonable economic burdens, as long as public safety is not compromised;

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(h) Conduct hearings in accordance with the provisions of section 24-4-105, C.R.S.; except that the board may appoint an administrative law judge pursuant to part 10 of article 30 of title 24, C.R.S., to conduct such hearings;

(i) Examine persons regulated by the board pursuant to this article for the renewal of a license or registration. Examination shall be by a brief multiple choice exam to be included in the renewal notice process and shall be an open book exam;

(j) Enter into reciprocal licensing agreements with the electrical board, or its equivalent, of another state or states where the qualifications for electrical licensing are substantially equivalent to licensure requirements in Colorado.

**12-23-104.5. Program administrator.** The director of the division of registrations may appoint a program administrator pursuant to section 13 of article XII of the state constitution to work with the board in carrying out its duties under this article.

**12-23-105. Electrician must have license - control and supervision.** (1) No person shall engage in or work at the business, trade, or calling of a journeyman electrician, master electrician, or residential wireman in this state until he has received a license from the division of registrations upon written notice from the board or the program administrator, acting as the agent thereof, or a temporary permit from the board, the program administrator, or his agent.

(2) A residential wireman shall not perform electrical work of a type which is beyond the authorization of the license held.

**12-23-106. License requirements.** (1) An applicant for a master electrician's license shall furnish written evidence that he is a graduate electrical engineer of an accredited college or university and has one year of practical electrical experience in the construction industry, or that he is a graduate of an electrical trade school or community college and has at least four years of practical experience in electrical work, or that he has had at least one year of practical experience in planning, laying out, supervising, and installing wiring, apparatus, or equipment for

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electrical light, heat, and power beyond the practical experience requirements for the journeyman's license. Each applicant for a license as a master electrician shall file an application on forms prepared and furnished by the board, together with the examination fee provided in section 12-23-112 (1). The board, not less than thirty days prior to a scheduled written examination, shall notify each applicant that the evidence submitted with his application is sufficient to qualify him to take such written examination or that such evidence is insufficient and the application is rejected. In the event that the application is rejected, the board shall set forth the reasons therefor in the notice to the applicant and shall forthwith return such applicant's examination fee. The place of examination shall be designated in advance by the board, and examinations shall be held not less often than twice a year and at such other times as, in the opinion of the board, the number of applicants warrants.

(2) (a) An applicant for a journeyman electrician's license shall furnish written evidence that he has had at least four years' apprenticeship in the electrical trade or four years' practical experience in wiring for, installing, and repairing electrical apparatus and equipment for light, heat, and power and shall further establish that at least two of such years' experience has been in commercial or industrial work.

(b) Any applicant for such license shall be permitted to substitute for required practical experience evidence of academic training in the electrical field which shall be credited as follows:

(I) If he is a graduate electrical engineer of an accredited college or university or the graduate of a community college or trade school program approved by the board, he shall receive one year of work experience credit.

(II) If he has academic training, including military training, which is not sufficient to qualify under subparagraph (I) of this paragraph (b), the board shall provide work experience credit for such training according to a uniform ratio established by rule and regulation.

(c) Any application for a license and notice to the applicant shall be made and given as provided for in the case of a master electrician's license.

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(3) (a) An applicant for a residential wireman's license shall furnish written evidence that he has at least two years of accredited training or two years of practical experience in wiring one-, two-, three-, and four-family dwellings.

(b) Any applicant for such license shall be permitted to substitute for required practical experience evidence of academic training in the electrical field which shall be credited as follows:

(I) If he is a graduate electrical engineer of an accredited college or university or the graduate of a community college or trade school program approved by the board, he shall receive one year of work experience credit.

(II) If he has academic training, including military training, which is not sufficient to qualify under subparagraph (I) of this paragraph (b), the board shall provide work experience credit for such training according to a uniform ratio established by rule and regulation.

(c) Any residential wireman's license issued under this section shall be clearly marked as such across its face.

(4) (a) Any examination which is given for master electricians, journeymen electricians, and residential wiremen shall be subject to board approval. The board, or its designee, shall conduct and grade the examination and shall set the passing score to reflect a minimum level of competency. If it is determined that the applicant has passed the examination, the division of registrations, upon written notice from the board or the program administrator, acting as an agent thereof, and upon payment by the applicant of the fee provided in section 12-23-112, shall issue to the applicant a license which shall authorize him to engage in the business, trade, or calling of a master electrician, journeyman electrician, or residential wireman.

(b) All license and registration expiration and renewal schedules shall be in accord with the provisions of section 24-34-102, C.R.S. Successful completion of an examination as authorized in section 12-23-104 (2) (i) is required as a prerequisite for renewal of a license or registration. Fees in regard to such renewals shall be those set forth in section 12-23-112.

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(c) Any license that has lapsed shall be deemed to have expired. In such instances, the board is authorized to require the licensee to demonstrate competency after two years if the board determines that such a showing is necessary and to require the payment of the appropriate fee.

(5) (a) No person, firm, copartnership, association, or combination thereof shall engage in the business of an electrical contractor without having first registered with the board. The board shall register such contractor upon payment of the fee as provided in section 12-23-112, presentation of evidence that the applicant has complied with the applicable workers' compensation and unemployment compensation laws of this state, and satisfaction of the requirements of paragraph (b) or (c) of this subsection (5).

(b) If either the owner or the part owner of any firm, copartnership, corporation, association, or combination thereof has been issued a master electrician's license by the division of registrations and is in charge of the supervision of all electrical work performed by such contractor, upon written notice from the board or the program administrator, acting as the agent thereof, the division shall promptly, upon payment of the fee as provided in section 12-23-112, register such licensee as an electrical contractor.

(c) If any person, firm, copartnership, corporation, association, or combination thereof engages in the business of an electrical contractor and does not comply with paragraph (b) of this subsection (5), it shall employ at least one licensed master electrician, who shall be in charge of the supervision of all electrical work performed by such contractor.

(d) No holder of a master's license shall be named as the master electrician, under the provisions of paragraphs (b) and (c) of this subsection (5), for more than one contractor, and a master name shall be actively engaged in a full-time capacity with that contracting company. The qualifying master license holder shall be required to notify the state electrical board within fifteen days after his termination as a qualifying master holder. The master license holder is responsible for all electrical work performed by the electrical contracting company. Failure to comply with a notification may lead to suspension or revocation of the master license as provided in section 12-23-118.

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**12-23-106.5. Credit for experience not subject to supervision of a licensed electrician.** For all applicants seeking work experience credit toward licensure, the board shall give credit for electrical work that is not required to be performed by or under the supervision of a licensed electrician if the applicant can show that the particular experience received or the supervision under which the work has been performed is adequate. Work experience credit awarded under this section shall not exceed one-half of the applicable experience requirement for any license issued under this article.

**12-23-107. Unauthorized use of title.** No person, firm, partnership, corporation, or association shall advertise in any manner or use the title or designation of licensed master electrician, licensed journeyman electrician, or licensed residential wireman unless qualified and licensed under this article.

**12-23-108. License without written examination.** (Repealed)

**12-23-109. License by endorsement or reciprocity.** The board may issue an electrical license by endorsement in this state to any person who is licensed to practice in another jurisdiction if such person presents proof satisfactory to the board that, at the time of application for a Colorado license by endorsement, the person possesses credentials and qualifications that are substantially equivalent to requirements in Colorado for licensure. The board shall issue an electrical license by reciprocity where a reciprocal agreement for an equivalent license exists, pursuant to section 12-23-104 (2) (a), between the board and the electrical board, or its equivalent, of the state or states where the applicant is licensed. The board may specify by rule and regulation what shall constitute substantially equivalent credentials and qualifications.

**12-23-110. Temporary permits.** The board or the program administrator or his agent, as provided in the rules and regulations promulgated by the board, shall issue temporary permits to engage in the work of a master electrician in cases where an electrical contractor no longer has the services of any master electrician as required under this article and shall issue temporary permits to engage in the work of a journeyman electrician or residential wireman to any applicant who furnishes

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evidence satisfactory to the board that he has the required experience to qualify for the examination provided in this article and who pays the fee provided in section 12-23-112 for such permits. In addition, and in a similar manner, the board or the program administrator or his agent shall issue temporary permits to any applicant who furnishes evidence satisfactory to the board that he qualifies for a master electrician's license and who pays the required fee. Temporary permits shall continue in effect only until the next examination is given and may be revoked by the board at any time. If the applicant is granted a license, any fee paid for the temporary permit shall be applied to the fee required for a license.

**12-23-110.5. Apprentices - supervision - registration - discipline.** (1) Any person may work as an apprentice but shall not do any electrical wiring for the installation of electrical apparatus or equipment for light, heat, or power except under the supervision of a licensed electrician. The degree of supervision required shall be no more than one licensed electrician to supervise no more than one apprentice at the jobsite.

(1) Any person may work as an apprentice but shall not do any electrical wiring for the installation of electrical apparatus or equipment for light, heat, or power except under the supervision of a licensed electrician. The degree of supervision required shall be no more than one licensed electrician to supervise no more than three apprentices at the jobsite.

(2) Any electrical contractor, journeyman electrician, master electrician, or residential wireman who is the employer or supervisor of any electrical apprentice working at the trade shall be responsible for the work performed by such apprentice. The board may take disciplinary action against any such contractor or any such electrician or residential wireman under the provisions of section 12-23-118 for any improper work performed by an electrical apprentice working at the trade during the time of his employment while under the supervision of such person. The registration of such apprentice may also be subject to disciplinary action under the provisions of section 12-23-118.

(3) (a) Upon employing an electrical apprentice to work at the trade, the electrical contractor, within thirty days after such initial employment, shall register such apprentice with the board. The employer shall also notify the board within thirty days after the termination of such employment.



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(b) Such apprentice shall be under the supervision of either a licensed electrician or a residential wireman as set forth in subsection (1) of this section.

**12-23-111. Exemptions.** (1) Employees of public service corporations, rural electrification associations, or municipal utilities generating, distributing, or selling electrical energy for light, heat, or power or for operating street railway systems, or telephone or telegraph systems, or their corporate affiliates and their employees or employees of railroad corporations, or lawfully permitted or franchised cable television companies and their employees shall not be required to hold licenses while doing electrical work for such purposes.

(2) Nothing in this article shall be construed to require any individual to hold a license before doing electrical work on his own property or residence if all such electrical work, except for maintenance, repair, or alteration of existing facilities, is inspected as provided in this article; if, however, such property or residence is intended for sale or resale by a person engaged in the business of constructing or remodeling such facilities or structures or is rental property which is occupied or is to be occupied by tenants for lodging, either transient or permanent, or is generally open to the public, the owner shall be responsible for, and the property shall be subject to, all of the provisions of this article pertaining to inspection and licensing, unless specifically exempted therein.

(3) Nothing in this article shall be construed to require any regular employee of any firm or corporation to hold a license before doing any electrical work on the property of such firm or corporation, whether or not such property is owned, leased, or rented: If the firm or corporation employing any employee performing such work has all such electrical work installed in conformity with the minimum standards as set forth in this article and all such work is subject to inspection by the board or its inspectors by request in writing in accordance with subsection (14) of this section; and if the property of any such firm or corporation is not generally open to the public. No license for such firm or corporation, nor inspection by the board or its inspectors, nor the payment of any fees thereon shall be required, with the exception of inspection by the board or its inspectors when performed by written request. Nothing

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contained in this article shall be construed to require any license, any inspection by the board or its inspectors, or the payment of any fees for any electrical work performed for maintenance, repair, or alteration of existing facilities which shall be exempt as provided in this section.

(4) If the property of any person, firm, or corporation is rental property or is developed for sale, lease, or rental, or is occupied or is to be occupied by tenants for lodging, either transient or permanent, or is generally open to the public, then such property of any such person, firm, or corporation shall be subject to all the provisions of this article pertaining to inspection and licensing, except for the maintenance, repair, or alteration of existing facilities which shall be exempt as provided in this section.

(5) Nothing in this article shall be construed to cover the installation, maintenance, repair, or alteration of vertical transportation or passenger conveyors, elevators, escalators, moving walks, dumbwaiters, stagelifts, man lifts, or appurtenances thereto beyond the terminals of the controllers. Furthermore, elevator contractors or constructors performing any installation, maintenance, repair, or alteration under this exemption, or their employees, shall not be covered by the licensing requirements of this article.

(6) Nothing in this article shall be construed to require any individual to hold a license before doing any maintenance, repair, or alteration of existing facilities on his own property or residence, nor to require inspection by the board or its inspectors, nor to pay any fees connected therewith. Likewise, nothing in this article shall be construed to require any firm or corporation or its regular employees to be required to hold a license before doing maintenance, repair, or alteration of existing facilities on the property of any such firm or corporation whether or not any such property is generally open to the public; nor shall inspection by the board or its inspectors nor the payment of any fees connected therewith be required.

(7) to (9) Repealed.

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(10) An individual, firm, copartnership, or corporation may engage in business as an electrical contractor without an electrician's license if all electrical work performed by such individual, firm, copartnership, or corporation is under the direction and control of a licensed master electrician.

(11) Any person who plugs in any electrical appliance where approved electrical outlet is already installed shall not be considered an installer.

(12) No provision of this article shall in any manner interfere with, hamper, preclude, or prohibit any vendor of any electrical appliance from selling, delivering, and connecting any electrical appliance, if the connection of said appliance does not necessitate the installation of electrical wiring of the structure where said appliance is connected.

(13) The provisions of this article shall not be applicable to the installation or laying of metal or plastic electrical conduits in bridge or highway projects where such conduits must be laid according to specifications complying with applicable electrical codes.

(13.5) Repealed.

(14) Nothing in this article shall be construed to exempt any electrical work from inspection under the provisions of this article except that which is specifically exempted in this article, and nothing in this article shall be construed to exempt any electrical work from inspection by the board or its inspectors upon order of the board or from any required corrections connected therewith. However, no fees or charges may be charged for any such inspection except as set forth in this article, unless request for inspection has been made to the board or its inspectors in writing, in which case, unless otherwise covered in this article, the actual expenses of the board and its inspectors of the inspection involved shall be charged by and be paid to the board. The board is directed to make available and mail minimum standards pertaining to specific electrical installations on request and to charge a fee for the same, such fee not to exceed the actual cost involved, and in no case more than one dollar. Requests for copies of the national electrical code shall be filled when available, costs thereof not to exceed the actual cost to the board.

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(15) Inasmuch as electrical licensing and the examination of persons performing electrical work is a matter of statewide concern, no examination, certification, licensing, or registration of electrical contractors, master electricians, journeymen electricians, residential wiremen, or apprentices who are licensed, registered, or certified under this article shall be required by any city, town, county, or city and county; however, any such local governmental authority may impose reasonable registration requirements on any electrical contractor as a condition of performing services within the jurisdiction of such authority. No fee shall be charged for such registration.

(16) The provisions of this article shall not be applicable to any surface or subsurface operation or property used in, around, or in conjunction with any mine which is inspected pursuant to the "Federal Mine Safety and Health Amendments Act of 1977", P.L. 95-164, except permanent state highway tunnel facilities, which shall conform to standards based on the national electrical code. Nothing contained in this subsection (16) shall prohibit the department of transportation from adopting more stringent standards or requirements than those provided by the minimum standards specified in the national electrical code, and the department of transportation shall furnish a copy of such more stringent standards to the board.

(17) (a) The permit and inspection provisions of this article shall not apply to:

(I) Installations under the exclusive control of electric utilities for the purpose of communication or metering or for the generation, control, transformation, transmission, or distribution of electric energy, whether such installations are located in buildings used exclusively for utilities for such purposes or located outdoors on property owned or leased by the utility or on public highways, streets, or roads or outdoors by virtue of established rights on private property; or

(II) Load control devices for electrical hot water heaters that are owned, leased, or otherwise under the control of, and are operated by, an electric utility, and are on the load side of the single-family residential meter, if such equipment was installed by a registered electrical contractor. The contractor will

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notify appropriate local authorities that the work has been completed in order that an inspection may be made at the expense of the utility company. The applicable permit fee imposed by the local authorities shall not exceed ten dollars.

(b) This subsection (17) does not exempt any premises wiring on buildings, structures, or other premises not owned by or under the exclusive control of the utility nor wiring in buildings used by the utility for purposes other than those listed in this subsection (17), such as office buildings, garages, warehouses, machine shops, and recreation buildings. This subsection (17) exempts all of the facilities, buildings, and the like inside the security fence of a generating station, substation, control center, or communication facility.

(18) Nothing in this article shall be construed to cover the installation, maintenance, repair, or alteration of security systems, lawn sprinkler systems, environmental controls, or remote radio-controlled systems beyond the terminals of the controllers. Furthermore, the contractors performing any installation, maintenance, repair, or alteration under this exemption, or their employees, shall not be covered by the licensing requirements of this article.

(19) Nothing in this article shall be construed to cover the installation, maintenance, repair, or alteration of electronic computer data processing equipment and systems beyond the terminals of the controllers. Furthermore, the contractors performing any installation, maintenance, repair, or alteration under this exemption, or their employees, shall not be covered by the licensing requirements of this article.

(20) Nothing in this article shall be construed to cover the installation, maintenance, repair, or alteration of communications systems, including telephone and telegraph systems not exempted as utilities in subsection (1) of this section, radio and television receiving and transmitting equipment and stations, and antenna systems other than community antenna television systems beyond the terminals of the controllers. Furthermore, the contractors performing any installation, maintenance, repair, or alteration under this exemption, or their employees, shall not be covered by the licensing requirements of this article.

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(21) Nothing in this article shall be construed to cover the installation, maintenance, repair, or alteration of electric signs, cranes, hoists, electroplating, industrial machinery, and irrigation machinery beyond the terminals of the controllers. Furthermore, the contractors performing any installation, maintenance, repair, or alteration under this exemption, or their employees, shall not be covered by the licensing requirements of this article.

(22) Nothing in this article shall be construed to cover the installation, maintenance, repair, or alteration of equipment and wiring for sound recording and reproduction systems, centralized distribution of sound systems, public address and speech-input systems, or electronic organs beyond the terminals of the controllers. Furthermore, the contractors performing any installation, maintenance, repair, or alteration under this exemption, or their employees, shall not be covered by the licensing requirements of this article.

(23) Nothing in this article shall be construed to require either that employees of the federal government who perform electrical work on federal property shall be required to be licensed before doing electrical work on such property or that the electrical work performed on such property shall be regulated pursuant to this article.

(24) Nothing in this article shall be construed to require licensing that covers the installation, maintenance, repair, or alteration of fire alarm systems operating at fifty volts or less. Furthermore, the contractors performing any installation, maintenance, repair, or alteration under this exemption, or their employees, shall not be covered by the licensing requirements of this article but shall be subject to all provisions of this article pertaining to inspections and permitting.

**12-23-112. Fees.** (1) As established pursuant to section 24-34-105, C.R.S., fees shall be charged by the state electrical board for the following:

- (a) Master electrician's license or permit;
- (b) Annual renewal of master electrician's license;
- (c) Journeyman electrician's license or permit;
- (d) Annual renewal of journeyman electrician's license;

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- (e) Examination for master electrician;
  - (f) Examination for journeyman electrician;
  - (g) Electrical contractor registration;
  - (h) Annual renewal of electrical contractor registration;
  - (i) Residential wireman's license or permit;
  - (j) Annual renewal of residential wireman's license;
  - (k) Examination for residential wireman;
  - (l) Apprentice registration;
  - (m) Annual renewal of apprentice registration.

**12-23-113. Disposition of fees and expenses of board.** All moneys collected under this article, except for fines collected pursuant to section 12-23-118 (7) (a), shall be transmitted to the state treasurer, who shall credit the same pursuant to section 24-34-105, C.R.S., and the general assembly shall make annual appropriations pursuant to said section for expenditures of the board incurred in the performance of its duties under this article, which expenditures shall be made from such appropriations upon vouchers and warrants drawn pursuant to law.

**12-23-114. Publications.**

(1) Repealed.

(2) Publications of the board circulated in quantity outside the executive branch shall be issued in accordance with the provisions of section 24-1-136, C.R.S.

**12-23-115. Inspectors - qualifications.** (1) (a) (l) The director of the division of registrations is hereby authorized to appoint or employ, with the power of removal, competent persons licensed under this article as journeymen or master electricians as state electrical inspectors. The division director is also authorized to appoint or employ, with the power of removal, for the purpose of inspecting one-, two-, three-, or four-family dwellings, competent persons with the following qualifications:

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(A) Persons who have passed the written residential wireman's examination described in section 12-23-106; or

(B) Persons who have been certified as residential electrical inspectors by a national certification authority approved by the board and who have furnished satisfactory evidence of at least two years' practical experience in the inspection of residential dwellings.

(II) Such inspectors may be employed either on a full-time or on a part-time basis as the circumstances in each case shall warrant; except that the division director may contract with any electrical inspector regularly engaged as such and certify him to make inspections in a designated area at such compensation as shall be fixed by the division director. State electrical inspectors have the right of ingress and egress to and from all public and private premises during reasonable working hours where this law applies for the purpose of making electrical inspections or otherwise determining compliance with the provisions of this article. In order to avoid conflicts of interest, a state electrical inspector hired under this section shall not inspect any electrical work in which such inspector has any financial or other personal interest and shall not be engaged in the electrical business by contracting, supplying material, or performing electrical work as defined in this article.

(b) Any employee of a private, municipal, or cooperative electric utility rendering service to the ultimate public shall be prohibited from employment as an electrical inspector only when in the performance of any electrical work as defined in this article. Electrical inspectors performing electrical inspections who are employed by any city, town, county, or city and county shall possess the same qualifications required of state electrical inspectors under this section, shall be registered with the board prior to the assumption of their duties, shall not inspect any electrical work in which such inspector has any financial or other personal interest, and shall not be engaged, within the jurisdiction employing such inspector, in the electrical business by contracting, supplying material, or performing electrical work as defined in this article.

(c) Nothing in this article shall be construed to limit any inspector from qualifying as an inspector in other construction specialties.



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(2) Repealed.

(3) State electrical inspectors appointed or employed pursuant to subsection (1) of this section may:

(a) Conduct inspections and investigations pursuant to section 12-23-118 (4) on behalf of the program administrator;

(b) Provide service of process for a citation served pursuant to section 12-23-118 (6) (b) in compliance with rule 4 of the Colorado rules of civil procedure.

**12-23-116. Inspection - application - standards.** (1) Any individual required to have electrical inspection under this article may apply through any private, municipal, or cooperative electric utility rendering service to the ultimate public for an application for inspection, except where any incorporated town or city, any county, or any city and county of this state has an established building department where applications for building permits and inspections are processed, in which case such individual shall apply to such building department. Such utility shall provide forms furnished by the board to the applicant, who shall remit the application for inspection to such board on such forms. Upon payment by the applicant of the applicable fee to the board, the board shall issue a temporary permit to the applicant and shall remit a copy of such permit to the utility and the state inspector responsible for such inspection and retain one copy in its office. Upon final inspection and approval by the state electrical inspector, written notice shall be issued by the board to the applicant, the utility, and the state inspector responsible for such inspection, and one copy shall be retained in the office of the board. No utility shall provide service to any person required to have electrical inspection under this article without proof of final approval as provided in this subsection (1); except that such service shall be provided in those situations determined by the local electrical inspection authority, or by the board, whichever shall have jurisdiction, to be emergency situations for a maximum period of seven days or until such inspection has been made.

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(2) Any electrical installation in any new construction or remodeling or repair, other than manufactured units certified by the division of housing pursuant to section 24-32-715, C.R.S., except in any incorporated town or city, any county, or any city and county having its own electrical code and inspection equal to the minimum standards as are provided in this article, shall be inspected by a state electrical inspector. A state electrical inspector shall inspect any new construction, remodeling, or repair subject to the provisions of this subsection (2) within three working days after the receipt of the application for inspection. If the inspection is not performed within five working days, work may resume on any such construction, repair, or remodeling. Prior to the commencement of any such electrical installation, the person making such installation shall make application for inspection and pay the required fee therefor. Every mobile home or movable structure owner shall have the electric utility hookup for such mobile home or movable structure inspected prior to obtaining new or different utility service; except that nothing in this subsection (2) shall require a reinspection of electrical hookup facilities of any mobile home park or any mobile home or other movable structure by reason of the relocation of a mobile home or other movable structure within the park where a previous inspection has been performed, unless construction or remodeling or repair of such mobile home park hookup facilities or of the mobile home or other movable structure involving the electrical system has been performed, and except that, if the wiring thereof has not been altered and either such mobile home or movable structure has a valid state electrical board approval sticker in the panel of the mobile home or movable structure with the number of the unit listed, the date inspected, and the inspector's signature or if such mobile home or movable structure has been certified by the division of housing in the department of local affairs after June 30, 1988, the occupant of the mobile home or movable structure may call the board with this information, and the board will authorize the reinstallation of the meter by the utility company.

(3) A state electrical inspector shall inspect the work performed, and, if such work meets the minimum standards set forth in the national electrical code referred to in section 12-23-104 (2) (a), a certificate of approval shall be issued by the inspector. If such installation is disapproved, written notice thereof together with the reasons for such disapproval shall be

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given by the inspector to the applicant. If such installation is hazardous to life or property, the inspector disapproving it may order the electrical service thereto discontinued until such installation is rendered safe and shall send a copy of the notice of disapproval and order for discontinuance of service to the supplier of electricity. The applicant may appeal such disapproval to the board and shall be granted a hearing by the board within seven days after notice of appeal is filed with the board. After removal of the cause of such disapproval, the applicant shall make application for reinspection in the same manner as for the original inspection and pay the required reinspection fee.

(4) Each application, certificate of approval, and notice of disapproval shall contain the name of the property owner, if known, the location and a brief description of the installation, the name of the general contractor if any, the name of the electrical contractor or licensed electrician and state license number, the state electrical inspector, and the inspection fee charged for the inspection. The original of a notice of disapproval and written reasons for disapproval and corrective actions to be taken shall be mailed to the board, and a copy of such notice shall be mailed to the electrical contractor, within two working days after the date of inspection, and a copy of the notice shall be posted at the installation site. Such forms shall be furnished by the board, and a copy of each application, certificate, and notice made or issued shall be filed with the board.

(5) Nothing in this section shall be construed to require any utility as defined in this article to collect or enforce collection or in any way handle the payment of any fee connected with such application.

(6) (a) All inspection permits issued by the board shall be valid for a period of twelve months, and the board shall cancel the permit and remove it from its files at the end of the twelve-month period, except in the following circumstances:

(l) If an applicant makes a showing at the time of application for a permit that the electrical work is substantial and is likely to take longer than twelve months, the board may issue a permit to be valid for a period longer than twelve months, but not exceeding three years.

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(II) If the applicant notifies the board prior to the expiration of the twelve-month period of extenuating circumstances, as determined by the board, during the twelve-month period, the board may extend the validity of the permit for a period not to exceed six months.

(b) If an inspection is requested by an applicant after a permit has expired or has been cancelled, a new permit must be applied for and granted before an inspection is performed.

(7) Notwithstanding the fact that any incorporated town or city, any county, or any city and county in which a public school is located or is to be located has its own electrical code and inspection authority, any electrical installation in any new construction or remodeling or repair of a public school shall be inspected by a state electrical inspector.

(8) In the event that any incorporated town or city, any county, or any city and county intends to commence or cease performing electrical inspections in its respective jurisdiction, it shall commence or cease the same only as of July 1 of any year, and written notice of such intent shall be given to the board on or before October 1 of the preceding calendar year. If such notice is not given and the use of state electrical inspectors is required within such notice requirement, the respective local government of the jurisdiction requiring such inspections shall reimburse the state electrical board for any expenses incurred in performing such inspections, in addition to transmitting the required permit fees.

(9) (a) Any person claiming to be aggrieved by the failure of a state electrical inspector to inspect his property after proper application or by notice of disapproval without setting forth the reasons for denying the inspection permit may request the program administrator to review the actions of the state electrical inspector or the manner of the inspection. Such request may be made by his authorized representative and shall be in writing.

(b) Upon the filing of such a request, the program administrator shall cause a copy thereof to be served upon the state electrical inspector complained of, together with an order requiring such inspector to answer the allegations of said request within a time fixed by the program administrator.

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(c) If the request is not granted within ten days after it is filed, it may be treated as rejected. Any person aggrieved by the action of the program administrator in refusing the review requested or in failing or refusing to grant all or part of the relief requested may file a written complaint and request for a hearing with the board, specifying the grounds relied upon.

(d) Any hearing before the board shall be held pursuant to the provisions of section 24-4-105, C.R.S.

**12-23-117. Inspection fees.** (1) As established pursuant to section 24-34-105, C.R.S., inspection fees shall be charged by the state electrical board for the following categories:

(a) Residential: Construction and extensive remodeling (based on enclosed living area) but not to include extensions to or minor remodeling of existing installations, which shall be governed by paragraph (b) of this subsection (1), and not, in any instance, to include any maintenance, repair, or alteration of existing facilities which are exempt as set forth in this article:

Not more than 1,000 square feet

More than 1,000 square feet but not more than 1,500 square feet

More than 1,500 square feet but not more than 2,000 square feet

Per 100 square feet in excess of 2,000 square feet

Reinspections

(b) All other fees, except for inspections in mobile home and travel trailer parks or any new or different utility service for a mobile home or movable structure, shall be computed on the dollar value of the electrical installation, including electrical materials and items, and the total cost to the consumer. Fee categories shall be as follows:

Valuation of work

Not more than \$300

More than \$300 but not more than \$2,000

More than \$2,000 but not more than \$50,000

More than \$50,000 but not more than \$500,000

More than \$500,000

Mobile home and travel trailer parks, or new or different utility services for mobile homes or movable structures, per space

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(2) Because electrical inspections are matters of statewide concern, the maximum fees, established annually, chargeable for electrical inspections by any city, town, county, or city and county shall not be more than fifteen percent above those provided for in this section, and no such local government shall impose or collect any other fee or charge related to electrical inspections or permits.

(3) If an application is not filed in advance of the commencement of an installation, the inspection fee shall be twice the amount prescribed therefor in this section.

**12-23-118. Violations - citations - settlement agreements - hearings - fines.** (1) The board may deny, suspend, revoke, or refuse to renew any license or registration issued or applied for under the provisions of this article, may place a licensee or registrant on probation, or may issue a citation to a licensee, registrant, or applicant for licensure for any of the following reasons:

(a) Violation of or aiding or abetting in the violation of any of the provisions of this article;

(b) Violation of the rules and regulations or orders promulgated by the board in conformity with the provisions of this article or aiding or abetting in such violation;

(c) Failure or refusal to remove within a reasonable time the cause of the disapproval of any electrical installation as reported on the notice of disapproval, but such reasonable time shall include time for appeal to and a hearing before the board;

(d) Failure or refusal to maintain or adhere to the minimum standards set forth in rules and regulations adopted by the board pursuant to section 12-23-104 (2) (a);

(e) Any cause for which the issuance of the license could have been refused had it then existed and been known to the board;

(f) Commitment of one or more acts or omissions that do not meet generally accepted standards of electrical practice;

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(g) Conviction of or acceptance of a plea of guilty or nolo contendere by a court to a felony. In considering the disciplinary action, the board shall be governed by the provisions of section 24-5-101, C.R.S.

(h) Advertising by any licensee or registrant which is false or misleading;

(i) Deception, misrepresentation, or fraud in obtaining or attempting to obtain a license;

(j) Failure of a master electrician who is charged with supervising all electrical work performed by a contractor pursuant to section 12-23-106 (5) (c) to adequately supervise such work or failure of any licensee to adequately supervise an apprentice who is working at the trade pursuant to section 12-23-110.5;

(k) Employment of any person required by this article to be licensed or registered or to obtain a permit who has not obtained such license, registration, or permit;

(l) Disciplinary action against an electrician's license in another jurisdiction. Evidence of such disciplinary action shall be prima facie evidence for denial of licensure or other disciplinary action if the violation would be grounds for such disciplinary action in this state.

(2) and (3) (Deleted by amendment, L. 94, p. 36, § 3, effective July 1, 1994.)

(4) (a) If pursuant to an inspection or investigation by a state electrical inspector the board concludes that any licensee, registrant, or applicant for licensure has violated any provision of subsection (1) of this section and that disciplinary action is appropriate, the program administrator or the program administrator's designee may issue a citation in accordance with subsection (6) of this section to such licensee, registrant, or applicant.

(b) (l) The licensee, registrant, or applicant to whom a citation has been issued may make a request to negotiate a stipulated settlement agreement with the program administrator or the program administrator's designee, if such request is made in writing within ten working days after issuance of the citation which is the subject of the settlement agreement.

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(II) All stipulated settlement agreements shall be conducted pursuant to rules adopted by the board pursuant to section 12-23-104 (2) (a). The board shall adopt a rule to allow any licensee, registrant, or applicant unable, in good faith, to settle with the program administrator to request an administrative hearing pursuant to paragraph (c) of this subsection (4).

(c) (I) The licensee, registrant, or applicant to whom a citation has been issued may request an administrative hearing to determine the propriety of such citation if such request is made in writing within ten working days after issuance of the citation which is the subject of the hearing or within a reasonable period after negotiations for a stipulated settlement agreement pursuant to paragraph (b) of this subsection (4) have been deemed futile by the program administrator.

(II) For good cause the board may extend the period of time in which a person who has been cited may request a hearing.

(III) All hearings conducted pursuant to subparagraph (I) of this paragraph (c) shall be conducted in compliance with section 24-4-105, C.R.S.

(d) Any action taken by the board pursuant to this section shall be deemed final after the period of time extended to the licensee, registrant, or applicant to contest such action pursuant to this subsection (4) has expired.

(5) (a) The board shall adopt a schedule of fines pursuant to paragraph (b) of this subsection (5) as penalties for violating subsection (1) of this section. Such fines shall be assessed in conjunction with the issuance of a citation, pursuant to a stipulated settlement agreement, or following an administrative hearing. Such schedule shall be adopted by rule in accordance with section 12-23-104 (2) (a).

(b) In developing the schedule of fines, the board shall:

(I) Provide that a first offense may carry a fine of up to one thousand dollars;

(II) Provide that a second offense may carry a fine of up to two thousand dollars;



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(III) Provide that any subsequent offense may carry a fine of up to two thousand dollars for each day that subsection (1) of this section is violated;

(IV) Consider how the violation impacts the public, including any health and safety considerations;

(V) Consider whether to provide for a range of fines for any particular violation or type of violation; and

(VI) Provide uniformity in the fine schedule.

(c) Any person who does not comply with a citation, a stipulated settlement agreement, or an order issued pursuant to an administrative hearing and who has exhausted any remedy available pursuant to this section or section 12-23-120 commits a class 1 misdemeanor and shall pay a fine as provided in section 18-1-106, C.R.S.

(6) (a) (I) Any citation issued pursuant to this section shall be in writing, shall adequately describe the nature of the violation, and shall reference the statutory or regulatory provision or order alleged to have been violated.

(II) Any citation issued pursuant to this section shall clearly state whether a fine is imposed, the amount of such fine, and that payment for such fine must be remitted within the time specified in such citation if such citation is not contested pursuant to subsection (4) of this section.

(III) Any citation issued pursuant to this section shall clearly set forth how such citation may be contested pursuant to subsection (4) of this section, including any time limitations.

(b) A citation or copy of a citation issued pursuant to this section may be served by certified mail or in person by a state electrical inspector or the administrator's designee upon a person or the person's agent in accordance with rule 4 of the Colorado rules of civil procedure.

(c) If the recipient fails to give written notice to the board that the recipient intends to contest such citation or to negotiate a stipulated settlement agreement within ten working days after service of a citation by the board, such citation shall be deemed a final order of the board.

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(d) The board may suspend or revoke a license or registration or may refuse to renew any license or registration issued or may place on probation any licensee or registrant if the licensee or registrant fails to comply with the requirements set forth in a citation deemed final pursuant to paragraph (c) of this subsection (6).

(e) The failure of an applicant for licensure to comply with a citation deemed final pursuant to paragraph (c) of this subsection (6) is grounds for denial of a license.

(f) No citation may be issued under this section unless the citation is issued within the six-month period following the occurrence of the violation.

(7) (a) Any fine collected pursuant to this section shall be transmitted to the state treasurer, who shall credit one-half of the amount of any such fine to the general fund, and one-half of the amount of any such fine shall be shared with the appropriate city, town, county, or city and county, which amounts shall be transmitted to any such entity on an annual basis.

(b) Any fine assessed in a citation or an administrative hearing or any amount due pursuant to a stipulated settlement agreement that is not paid may be collected by the program administrator through a collection agency or in an action in the district court of the county in which the person against whom the fine is imposed resides or in the county in which the office of the program administrator is located.

(c) The attorney general shall provide legal assistance and advice to the program administrator in any action to collect an unpaid fine.

(d) In any action brought to enforce this subsection (7), reasonable attorney fees and costs shall be awarded.

**12-23-118.1. Reapplication after revocation of licensure.** No person whose license has been revoked shall be allowed to reapply for licensure earlier than two years from the effective date of the revocation.

**12-23-118.2. Reconsideration and review of board action.**  
(Repealed)

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**12-23-118.3. Immunity.** Any member of the board shall be immune from suit in any civil action based upon any disciplinary proceedings or other official actions performed in good faith. Any witness, consultant, or complainant participating in good faith in the making of a complaint or report or participating in good faith in any investigative or administrative proceeding pursuant to this article shall also be immune from suit in any civil action.

**12-23-119. Unlawful acts.** (1) It is unlawful for any person:

(a) To violate the provisions of section 12-23-105, except for those practicing pursuant to section 12-23-107 or 12-23-111;

(b) To practice as a residential wireman, journeyman, master, contractor, or apprentice during a period when the licensee's license or the registrant's registration has been suspended or revoked;

(c) To sell or fraudulently obtain or furnish a license to practice as a residential wireman, journeyman, or master or to aid or abet therein;

(d) In conjunction with any construction or building project requiring the services of any person regulated by this article, to willfully disregard or violate:

(I) Any building or construction law of this state or any of its political subdivisions;

(II) Any safety or labor law;

(III) Any health law;

(IV) Any workers' compensation insurance law;

(V) Any state or federal law governing withholdings from employee income including but not limited to income taxes, unemployment taxes, or social security taxes; or

(VI) Any reporting, notification, or filing law of this state or the federal government.

(2) Any person who violates any provision of this section commits a class 1 misdemeanor and shall pay a fine as provided in section 18-1-106, C.R.S.

**12-23-120. Judicial review.** The court of appeals shall have initial jurisdiction to review all final actions and orders of the board that are subject to judicial review. Such proceedings shall be conducted in accordance with section 24-4-106 (11), C.R.S.

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***Appendix C -  
Permit  
Application and  
Fee Schedule***

