REPORT OF THE
DEPARTMENT OF PROFESSIONAL AND
OCCUPATIONAL REGULATION

REPORT ON THE NEED FOR LICENSURE OR CERTIFICATION OF FIRE SPRINKLER SYSTEM DESIGNERS AND INSTALLERS

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

HOUSE DOCUMENT NO. 29

COMMONWEALTH OF VIRGINIA
RICHMOND
2000

COMMONWEALTH OF VIRGINIA

DEPARTMENT OF PROFESSIONAL AND OCCUPATIONAL REGULATION
3600 West Broad Street, Richmond, Virginia 23230-4917
Telephone: (804) 367-8500 TDD: (804) 367-9753
http://www.state.va.us/dpor

JACK E. KOTVAS
DIRECTOR

DEPUTY DIRECTORS:
JAMES L. GUFFEY
Enforcement
STEVEN L. ARTHUR
Administration & Finance

November 22, 1999

To the Governor and Members of the General Assembly of Virginia:

House Joint Resolution 748 adopted at the 1999 session requested the "Board for Contractors" to study the need for and, if required, issue regulations establishing a licensure or certification program for fire sprinkler system designers and installers, and further requested the Board for Contractors to include in its regulations for tradesmen provisions for testing or guidance in the principles and installation of fire stopping, fire protection assemblies, and other related fire safety aspects of multifamily residential construction."

I am pleased to transmit to you the result of the study you requested. The board agreed to amend its regulations to require minimum competency for all licensed contractors who desire the specialty classification of "fire sprinkler contracting." As the board conducts regulatory review, this issue will be addressed.

This report, approved October 13, 1999, outlines the findings, conclusions and recommendations. Members of the Board for Contractors would be pleased to answer any questions.

Respectfully submitted,

James E. Morris, II
Chairman, Board for Contractors

JEM/dlv

BOARD FOR CONTRACTORS

Report on the Need for Licensure or Certification of Fire Sprinkler System Designers And Installers

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Robert M. McDowell

Edward L. Ostrander

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Frederick W. Siewers, Jr.

David A. Ward

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I. Executive Summary

House Joint Resolution 748 requested the Board for Contractors (the Board) to study the need for a licensure or certification program for fire sprinkler system designers and installers. This study was recommended by the Virginia Housing Study Commission and the Department of Housing and Community Development as a result of their review of fire sprinkler requirements relating to apartment buildings and other residential structures. This report will explain the methodology used in studying this issue and the information gleaned in the study process. It will summarize the public comment provided to the Board, and conclude with recommendations to the Governor and the General Assembly.

Current regulations for the Board for Contractors include licensing of specialty contractors. Licensed contractors may obtain a fire sprinkler contracting specialty license, which provides for the installation, repair, improvement or removal of sprinkler systems using water as a means of fire suppression when annexed to real property. There are currently 421 contractors licensed by the Commonwealth with this designation. Throughout the study process, the Board sought to determine whether further regulation is necessary to protect the public. The Board relied upon the statute in this determination. Section 54.1-100 of the *Code of Virginia* clearly states that government regulation should not be imposed upon any profession or occupation except for the exclusive purpose of protecting the public interest.

The Board received numerous public comments from trade associations as well as fire protection agencies supporting regulation of fire sprinkler installers. The Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects warned that only licensed professionals should be permitted to design fire sprinkler systems. This position was also supported by the Joint Legislative Committee representing the Virginia Society of the American Institute of Architects, Consulting Engineer's Council of Virginia, and Virginia Society of Professional Engineers.

The Board concludes that the public relies upon properly designed and installed fire sprinkler systems, and should be given assurance that fire sprinkler contractors have met minimum competency standards in this area. The Board recommends that its regulations be amended to require such minimum competency for all licensed contractors who desire the specialty classification of "fire sprinkler contracting."

II. Introduction

A. Background and purpose of report

A series of destructive apartment complex fires in Virginia prompted the 1998 General Assembly to request the Department of Housing and Community Development and the Virginia Housing Study Commission to appoint a subcommittee to study whether sprinkler protection should be extended to attics and other areas not currently required by the Virginia Uniform Statewide Building Code (USBC) for structures relying on National Fire Protection Association (NFPA) Standard 13R sprinkler systems. The Subcommittee recommended no modifications to the fire sprinkler requirements.

The report of the Subcommittee also addressed the issue of professional competency and responsibility concerning the design and installation of sprinkler systems as well as other fire safety features used in residential construction. The report suggested that the Board for Contractors study the need for a licensure or certification program for sprinkler system designers and installers. In addition, the Subcommittee recommended that the Board for Contractors include in its regulations for tradesmen provisions for testing or guidance in the principles and installation of fire stopping, fire protection assemblies and other related fire safety aspects of apartment building construction. House Joint Resolution 748 incorporated this recommendation, and was agreed to by the 1999 General Assembly. See Appendix A for a copy of the resolution.

B. Statutory authority

Section 54.1-100 of the *Code of Virginia* provides the statutory authority for the regulation of professions and occupations. It states:

> The right of every person to engage in any lawful profession, trade or occupation of his choice is clearly protected by both the Constitution of the United States and the Constitution of the Commonwealth of Virginia. The Commonwealth cannot abridge such rights except as a reasonable exercise of its police powers when it is clearly found that such abridgement is necessary for the preservation of the health, safety and welfare of the public.
>
> No regulation shall be imposed upon any profession or occupation except for the exclusive purpose of protecting the public interest when:
>
> 1. The unregulated practice of the profession or occupation can harm or endanger the health, safety or

welfare of the public, and the potential for harm is recognizable and not remote or dependent upon tenuous argument;
2. The practice of the profession or occupation has inherent qualities peculiar to it that distinguish it from ordinary work and labor;
3. The practice of the profession or occupation requires specialized skill or training and the public needs, and will benefit by, assurances of initial and continuing professional and occupational ability; and
4. The public is not effectively protected by other means.

No regulation of a profession or occupation shall conflict with the Constitution of the United States, the Constitution of Virginia, the laws of the United States, or the laws of the Commonwealth of Virginia. Periodically and at least annually, all agencies regulating a profession or occupation shall review such regulations to ensure that no conflict exists.

The Board uses this statute as a benchmark for determining when state regulation is necessary.

C. Methodology

The Board sought to obtain information that could be helpful in determining the need for further regulation. The following methods were used:

- Review of "Senate Joint Resolution 115: Apartment Sprinkler Systems," a report of the Department of Housing and Community Development and the Virginia Housing Study Subcommittee;

- Review of existing statutes and regulations affecting the installation of fire sprinkler systems;

- A public hearing and the solicitation of written comments; and

- Review of other state regulations regarding fire sprinkler installers.

III. Findings

A. Existing codes and regulations

The Rules and Regulations of the Board for Contractors establish various license/certification classifications, i.e. building contractors, electrical contractors, HVAC contractors, and plumbing contractors. In addition, those individuals whose contracts are for specialty services, which do not generally fall within the scope of any other classification within the regulations, are referred to as "specialty services." A licensed contractor may obtain a license with the designation of "fire sprinkler contracting" (SPR) on the license. A Class A contractor's license is required for projects of $70,000 or more; a Class B contractor's license is required for projects of more than $7,500, but less than $70,000; and a Class C contractor's license is required for projects over $1,000, but less than $7,500. There are currently 273 Class A contractors; 121 Class B contractors and 27 Class C contractors who have a SPR specialty license. The current licensing requirements do not include any specific testing or education requirements for obtaining this specialty classification.

The Virginia Uniform Statewide Building Code places responsibility on the local building official for enforcement of the code. The building official requires sufficient technical data to substantiate the proposed use of any type of equipment and materials. In some localities, however, the building officials do not have plan reviews that can review sprinkler systems so they must rely on the expertise of the designers and installers of these systems. A representative of the Fairfax County Office of Building Code Services and the Board of Supervisors testified that plan reviews and inspections can catch many of the errors in the design of sprinkler systems, but many others go undetected and could cause catastrophes.

Fire sprinklers were installed in the past primarily to satisfy the requirements of insurance carriers. However recent changes in the building code have specified, as opposed to recommended, sprinkler installations in a number of occupancies. The codes require sprinklers for new buildings classified in several use groups such as nursing homes, hospitals, homes for adults, hotels and high rise college dormitories. The requirement for the installation of sprinklers in certain multifamily residential buildings was also added.

B. Design, layout and installation of systems

The Virginia Society of Professional Engineers (VSPE) noted that the Virginia Uniform Statewide Building Code requires a licensed professional engineer's seal for certain occupancy groups. The Joint Legislative Committee representing the Virginia Society, American Institute of Architects, the Consulting Engineer's Council of Virginia and the Virginia Society of Professional Engineers noted that the design engineer establishes the hazard level of the sprinkled area, makes certain "big picture" decisions, such as whether the system should be wet pipe or dry pipe; determines whether a fire pump and/or storage tank is necessary; and determines the configuration of the sprinkler service entrance. There are currently twenty-three professional engineers licensed by the Commonwealth with a fire protection designation.

While the study resolution specifically refers to a licensing or certification program for "fire sprinkler designers and installers," the Board notes that the professionals already licensed by the Commonwealth (architects and professional engineers) are responsible for the design of fire sprinkler systems. The Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects (APELSCIDLA Board) submitted the following statement: "Due to life safety concerns, licensed professionals of the APELSCIDLA Board should be the only ones permitted to design fire sprinkler systems."

The National Fire Sprinkler Association's comments supported the position that the basic design of fire sprinkler systems takes place through specifications or preliminary plans. "This function is appropriately carried out by a licensed professional engineer or architect in compliance with state requirements." The association further noted that the term "layout" refers to the preparation of working plans which are typically prepared by fire protection engineering technicians working in the employ of a fire sprinkler contractor. These working plans are also used as shop drawings to permit economical and efficient system fabrication and installation. The proper layout and installation of the fire sprinkler system is the responsibility of the fire sprinkler contractor. The individuals who physically install the systems, referred to as sprinkler "fitters," follow the approved plans of the engineering technicians responsible for the system layout. The proponents for further regulation in this industry saw no need for regulation of the sprinkler "fitter."

C. Regulation in other states

A National Fire Sprinkler Association survey of other states revealed thirty-five states that require fire sprinkler contractors to be licensed. Some states, such as Arizona and California conduct their own certification examinations. However, many states accept the certification of the National Institute for Certification in Engineering Technologies (NICET). NICET was formed by the National Society of Professional Engineers in an attempt to elevate the role and validate the education of engineering technicians. NICET provides nationally applicable voluntary certification programs covering several broad engineering technology fields and a number of specialized sub-fields.

Maryland recently passed legislation requiring the licensure of sprinkler contractors. The statute establishes three classes of sprinkler contractor licenses and requires corresponding levels of NICET engineering certifications. For example, a Class II sprinkler contractor must maintain a NICET Engineering Technician Level II certification in the field of fire protection, automatic sprinkler system layout or employ a responsible managing employee who meets that qualification. A Level II NICET certification involves a minimum of two years experience, a written examination, supervisor evaluation of on-the-job performance, and a recommendation from a qualified individual. The neighboring state of North Carolina recognizes only Levels III and above for fire sprinkler contractors while West Virginia conducts its own examination of all fire sprinkler contractors.

D. Public comments

The Board conducted a public hearing to gather information and opinions on the need for further regulation of fire sprinkler designers and installers. In addition, the Board requested that written comments be submitted.

Proponents of regulation included the Virginia Chapter of the American Fire Sprinkler Association and the National Fire Sprinkler Association. In addition, the President of the Virginia Fire Prevention Association urged the Board to establish minimum levels of competence for individuals performing fire sprinkler designing and installation. One fire sprinkler contractor testified that to his knowledge only three localities require a professional engineer seal on all drawings. He testified that other building officials require a set of shop drawings.

Both the Fairfax County Office of Building Code Services and the Arlington County Fire Marshall supported efforts to require minimum competency for fire sprinkler designers and installers. The Arlington County Fire Marshall supported a program that would encompass installers, testers and repairpersons.

A representative of the Department of Housing and Community Development reminded the Board that the Building Code is a minimum code, and the inspection procedures are somewhat minimal as well. Sprinkler systems can be complicated and defects are quite often found after the installation. The President of the Virginia Building and Code Officials Association supported certification requirements, which at a minimum would be a NICET Level III Certified Engineering Technician in the sub-field of Fire Protection/Automatic Sprinkler System layout. A licensed architect agreed with this position.

Concern was raised by the Chairman of the APELSCIDLA Board regarding changes in the current regulations that could exclude certain professions from the design process. The chairman warned that the engineering profession needs to be included where life safety is at risk. The Virginia Society of Professional Engineers' (VSPE) spokesperson supported that position noting that no certificate or license should be required in place of the professional engineer's seal. If the NICET certification were to be adopted by the Board, the VSPE also questioned whether there was an adequate number of NICET certified contractors available in Virginia.

Written comments of support were received from several building officials, fire chiefs, fire sprinkler contractors as well as the State Fire Chiefs Association of Virginia and the Virginia Fire Prevention Association. The Virginia Fire Services Board noted that there has never been a major loss of life from fire in a structure with a properly designed and operational sprinkler system. There is presently a risk, however, that individuals without proper knowledge and skills are designing and installing such systems.

The Fairfax County Department of Public Works and Environmental Services noted that Fairfax County fire inspections have revealed numerous examples of faulty installations of sprinkler systems. Fairfax County plan reviewers have found numerous errors in the design of sprinkler systems where water flow calculations have been based on the flow rate through pipes that did not exist. In other cases, design pressures higher than those actually available on site were used. The Fairfax County Office supported a requirement for additional testing on fire safety principles for all contractors involved in multifamily construction.

The Virginia Society of the American Institute of Architects (AIA) strongly supported the existing design process that requires a professional engineer to design the sprinkler system. However, the association also encouraged an improved educational program which might include certification for those entrusted with installing sprinkler systems. The Virginia Society of AIA suggested that such a program should include how the installer's work integrates with other systems to protect the public. See Appendix B for a summary of public comments.

IV. Conclusion and recommendation

Fire sprinkler systems do save lives. Such systems must be properly designed, installed and operational in order to do so. There was no evidence presented to the Board that any Virginia disasters were exacerbated by poorly installed sprinkler systems. However, the Board is cognizant of the concern expressed by the Virginia Housing Study Commission's report:

> In reviewing the general area of occupational regulation and fire safety, the Subcommittee noted that current contractor licensing requirements do not provide any specific provisions intended to assure that construction contractors are aware of the principles of fire stopping and other construction techniques intended to increase the fire safety aspects of residential construction (Senate Joint Resolution 115 Report).

In addition, the comments of building officials and fire safety advisors for the Commonwealth indicate a potential for harm and thus a threat to public safety.

While the Board does not recommend a separate licensing program for fire sprinkler installers, it does recommend that the existing regulations be amended to include competency requirements to ensure that fire sprinkler contractors are competent in installing such systems. The Board's regulatory review process will provide the stage for deciding the level of competency required and the parameters of the work, which can and should be performed by such licensed individuals.

991531204

HOUSE JOINT RESOLUTION NO. 748

Offered January 21, 1999

Requesting the Board for Contractors to study the need for and, if required, issue regulations establishing a licensure or certification program for fire sprinkler system designers and installers, and further requesting the Board for Contractors to include in its regulations for tradesmen provisions for testing or guidance in the principles and installation of fire stopping, fire protection assemblies, and other related fire safety aspects of multifamily residential construction.

Patrons—Diamonstein, Almand, Hall, Scott and Williams; Senators: Mims and Woods

Referred to Committee on General Laws

WHEREAS, recent devastating fires in multifamily residential complexes in several Virginia localities have resulted in extensive property damage; and

WHEREAS, the Virginia Housing Study Commission (the Commission) and the Department of Housing and Community Development (the Department) were requested by the 1998 Session of the General Assembly to study whether apartment buildings should be required to have fire sprinkler systems in areas such as attics, crawl spaces, and certain other concealed spaces, currently exempted under the provisions of the Uniform Statewide Building Code; and

WHEREAS, the Commission and the Department have completed an extensive review of the matter and concluded that, although no legislative action modifying the current sprinkler requirements for apartment buildings should be taken at this time, a thorough review of state requirements relating to the qualifications of those who design and install sprinkler systems or other fire safety features of residential structures is warranted:

WHEREAS, those who own, manage, and reside in multifamily residential structures rely on those who design and install sprinkler systems to design and install such systems so as to assist in protecting their lives and property from death, injury, or loss by fire; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Board for Contractors be requested to study the need for and, if required, issue regulations establishing a licensure or certification program for fire sprinkler system designers and installers; and, be it

RESOLVED FURTHER, That the Board for Contractors be requested to include in its regulations for tradesmen provisions for testing or guidance in the principles and installation of fire stopping, fire protection assemblies, and other related fire safety aspects of multifamily residential construction.

All agencies of the Commonwealth shall provide assistance to the Board for Contractors for this study, as requested.

The Board for Contractors shall complete its work in time to submit its findings and recommendations to the Governor and the 2000 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

Official Use By Clerks

Passed By The House of Delegates		**Passed By The Senate**	
without amendment	☐	without amendment	☐
with amendment	☐	with amendment	☐
substitute	☐	substitute	☐
substitute w/amdt	☐	substitute w/amdt	☐

Date: _____ Date: _____

Clerk of the House of Delegates | Clerk of the Senate

Summary of Written Comments
Regulation of Fire Sprinkler Designers and Installers
House Joint Resolution 748

Name and Affiliation	Summary of Comments
Steve Eanes, Virginia Fire Services Board	Fire sprinkler systems are designed to prevent the expansion of fire, and to inhibit rapid build up of smoke and flames. The systems also provide an alarm upon activation by notifying occupants of the dangers. There has never been a major loss of life from fire in a structure with a properly designed and operational sprinkler system. There is presently a risk that individuals without the proper knowledge and skills are designing sprinkler systems that may not meet national standards and may not provide the level of protection for the citizens who occupy these structures. The Fire Services Board supports effort to require fire sprinkler contractors to have at least one full time employee who 1) has been certified by NICET as a Level III or IV Certified Engineering Technician or 2) is a licensed professional engineer.
Harry A. Hoffon, Jr., Eagle Fire	Supports effort to require fire sprinkler contractors to employ an individual with a NICET Level III or Level IV engineering certification or a licensed professional engineer. Believes the requirement will be in the best interest of owners and occupants of buildings with fire sprinkler systems.
Russell E. Harris, Bohannon Staley & Associates	Supports effort to require fire sprinkler contractors to employ an individual with a NICET Level III or Level IV engineering certification or a licensed professional engineer.

Name and Affiliation	Summary of Comments
Kevin R. Sherlock, Hanover Engineers, PC	Supports effort to require fire sprinkler contractors to employ an individual with a NICET Level III or Level IV engineering certification or a licensed professional engineer.
Thomas L. Herman, Eagle Fire	Supports effort to require fire sprinkler contractor to have an employee with a NICET Level III or Level IV engineering certification or a licensed professional engineer on staff. Such individuals will expedite plan reviews and assist in providing sprinkler systems that meet the required codes at the least cost.
Thomas D. Decatur, Building Official, Caroline County	Supports effort to require fire sprinkler contractors to employ an individual with a NICET Level III or Level IV engineering certification or a licensed professional engineer.
Thomas E. Simmons; Simmons, Rockecharlie & Prince Inc.	Supports effort to require fire sprinkler contractors to employ an individual with a NICET Level III or Level IV engineering certification or a licensed professional engineer. Believes the requirement will result in a level of expertise that will expedite plan reviews and assist in providing quality sprinkler systems.
Kenneth M. Somerset, Building Official, County of Gloucester	Supports proposal to require fire sprinkler contractor to have on staff a NICET Level III or Level IV engineering technician or a professional engineer.
Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects (APELSCIDLA Board)	Board adopted the following motion on June 3, 1999, "Due to life safety concerns, licensed professionals of the APELSCIDLA Board should be the only ones permitted to design fire sprinkler systems."

Name and Affiliation	Summary of Comments
Zofia A. Zager, Director Chief Edward L. Stinnette, Fire and Rescue Department Fairfax County Dept. of Public Work and Environmental Services	Strongly support the development of a sprinkler-licensing requirement. Fairfax County also supports a requirement for additional testing on fire safety principles for all contractors involved in multifamily construction. Fairfax County fire inspections have revealed numerous examples of faulty installations of sprinkler systems. Fairfax County plan reviewers have found numerous errors in the design of sprinkler systems. In some cases, water flow calculations have been based on the flow rate through pipes that did not exist. In other cases, design pressures higher than those actually available on site were used. Supports minimum level of technical competency for individuals designing and installing systems. License requirements should include an examination to ensure adequate knowledge. Testing of Class A and B contractors should be expanded to include fire safety aspects of construction.
Bernie Murrell, Virginia Chapter of American Fire Sprinkler Association	Supports requirement that fire sprinkler contractors have on their staff a NICET Level III or Level IV engineering technician certified in Fire Protection/Automatic Sprinkler System Layout or a professional engineer licensed by the state and competent in design and installation of fire sprinkler systems.
Emory R. Rodgers, Building Official, Arlington Inspection Services	Arlington County requires fire sprinkler plans and shop drawings to be sealed by a registered design professional wherever required by their licensure program. Proposes that sprinkler contractors, like the mechanical, plumbing and electrical contractors be required as a NICET III or IV employee to have a supervisory role for installation work. Recommended that drywall contractors or other trade contractors should not be required to have certification and testing at this time for the installation of fire stopping and fire wall assemblies. USBC is taking appropriate first steps to address this issue.

Name and Affiliation	Summary of Comments
McEldon L. Fleming, Regional Manager, National Fire Sprinkler Association, Inc.	States that the basic "design" of a fire sprinkler system takes place through specifications or preliminary plans. A licensed professional engineer or architect in compliance with state requirements appropriately carries out this function. NFSA's position is that the proposed regulation of the fire sprinkler contractor does not affect the regulation of professional engineers as the Commonwealth presently deals with these professionals. The term "layout" refers to the preparation of working plans, which are typically prepared by fire protection engineering technicians working in the employ of a fire sprinkler contractor. It is the functions of layout and installation that the NFSA recommends regulating. Supports a minimum of NICET Level II certification for NFPA 13D installations and a minimum of Level III for NEPA13R and NFPA 13 installations.
Jan Mitchell, President, Virginia Fire Prevention Association, Inc.	Supports amendment to licensing requirements for contractors to include sprinkler contractors. Views such requirements as an important step in ensuring accurate and effective review of plans and installation of sprinkler systems.
James W. Epperly, President, State Fire Chiefs Association of Virginia	Concurs with the Virginia Chapter of the American Fire Sprinkler Association that sprinkler systems should be designed by individuals who are both familiar with the hardware and specifically trained to interpret the building codes applicable to sprinkler systems.
Richard C. Witt, President, Virginia Building and Code Officials Association	Supports requirement of a certified individual within each sprinkler contractor firm licensed in the Commonwealth. Board of Directors supports a requirement that every sprinkler contractor licensed in Virginia who installs NFPA 13 or 13R sprinkler systems have on their staff a person certified by NICET.

Name and Affiliation	Summary of Comments
J. Steven Conti, President, Fire Sprinkler Service Corp.	Supports the requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician certified in fire protection/automatic sprinkler system layout.
Jim Dooley, Division Sales Manager, Viking Supply Net	Supports requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician.
Lawrence R. Moter, Jr., Executive Director, National Electrical Contractors Association	Atlantic Coast Chapter supports fire sprinkler licensing.
Nathan I. Broocke, Director, Virginia Department of General Services, Division of Engineering and Buildings	Believes a licensed engineer must design sprinkler systems for use in state buildings.
Dana Graham, Vice President, J & D Sprinkler Co., Inc.	Supports the requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician certified in fire protection/automatic sprinkler system layout.
William McCrickard, Branch Manager, Grinnell Fire Protection Systems Company	Supports requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician certified in fire protection/automatic sprinkler system layout.
Mike Chesson, President, Williams Fire Sprinkler Company, Inc. Tom Moore, Area Manager, Williams Fire Sprinkler Company, Inc.	Supports requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician certified in fire protection/automatic sprinkler system layout.
Manning J. Strickland, President, Strickland Fire Protection, Inc.	Supports the requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician certified in fire protection/automatic sprinkler system layout.
W. Todd Fain, Carolina Fire Control, Inc.	Supports the requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician certified in fire protection/automatic sprinkler system layout.
T. E. Anthony, Twin City Sprinkler Co., Inc.	Supports the requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician certified in fire protection/automatic sprinkler system layout.
Charles L. McGhee, Magic City Sprinkler Inc.	Supports the requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician certified in fire protection/automatic sprinkler system layout.

Name and Affiliation	Summary of Comments
Wayne G. Harris, President, Fire Sprinkler, Ltd.	Supports the requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician certified in fire protection/automatic sprinkler system layout.
Emory A. Gross, President, Fire Suppression Systems	Supports the requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV technician certified in fire protection/automatic sprinkler system layout.
Larry Dorsett, Vice President, Virginia Sprinkler Company, Inc.	Strongly recommends that all sprinkler contractors be required to have at least one NICET Level III or Level IV technician on staff.
Kenneth G. Stepka, P.E., Joint Legislative Committee Representing the Virginia Society, American Institute of Architects, Consulting Engineer's Council of Virginia, Virginia Society of Professional Engineers	Agrees that a contractor is better off with the trained technician than without the technician. Strongly disagrees that the mere existence of a single NICET technician on staff is adequate to provide any degree of public protection. NICET trained technicians' credentials should not be accepted in lieu of a licensed professional engineer for those use groups that require an engineer's seal under the Virginia Uniform Statewide Building Code. Believes the American Fire Sprinkler Association initiated this study to provide more autonomy to the sprinkler contractors. The National Society of Professional Engineers (NSPE) continues to view the NICET technicians as a valuable part of the engineering team, but should not serve as an alternative to duly educated, experienced, and qualified licensed professional engineers in designing fire sprinkler systems. Concerned that there are a limited number of Level III or Level IV certified technicians available to work in Virginia.

Name and Affiliation	Summary of Comments
Clark O. Martin, Jr., Chairman, Northern Virginia Fire Marshals	Strongly supports development of a sprinkler-licensing requirement. At some point, one or more of the member fire marshals has experienced a problem with contractors who install sprinkler systems. The problems have ranged from improper water flow calculations to erroneous pipe schematics.
T. Duncan Abernathy, Director of Government and Industry Affairs, Virginia Society of the American Institute of Architects	Strongly supports the existing design process that requires a professional engineer to approve the sprinkler system. Does not believe a change is warranted. Also supports an improved educational program, which may include certification for those entrusted with installing sprinkler systems. Such program would include how the installer's work integrates with other systems to protect the public. The difficult points surrounding this issue include the opportunity for building owners to alter fire protection assemblies long after designers, installers and inspectors have left.
R. Stephen Best, Sr., Fire Chief, City of Chesapeake	Supports the requirement that every fire sprinkler contractor have on staff a NICET Level III or Level IV engineering technician or a professional engineer.
Michael F. Meehan, Vice President, Virginia Sprinkler Company, Inc.	Supports requirement that fire sprinkler contractors have on staff a NICET Level III or Level IV engineering technician. The proper layout and design of a sprinkler system is a complicated task. Urges the Board to avoid any form of sprinkler fitter licensing. The fitters are working in the employee of the licensed contractor and under the supervision of the responsible managing employee so certification of the fitter is inappropriate.

Name and Affiliation	Summary of Comments
Paul F. Koll, Building Official, King & Queen County	Supports licensure for fire sprinkler system designers and installers. It is the building contractor's responsibility to assembly the fire protection mechanisms and often they are not well instructed.
Carl E. Hall, Director of Inspectors, City of Chesapeake	Virginia needs a system to regulate these important life safety installations. Should also include regulation for tradesmen provisions for testing in the principles and installation of fire stopping , fire protection assembles and other related fire safety aspects of multi-family residential construction.
Howard H. Summers, Jr., Virginia Chapter of the American Fire Sprinkler Association	Firmly believes the Contractor regulations should establish a minimum level of knowledge and skill for fire sprinkler contractors. Establishing requirements for certification will enhance public safety in sprinklered buildings. The Virginia Chapter of American Fire Sprinkler Association interprets "fire sprinkler system designers and installers" to mean a contractor who designs (lays out) and installs fire sprinkler systems. It should not be interpreted to mean the contractor's employees who assemble the material on the job. These individuals are sprinkler fitters. A requirement that sprinkler fitters be certified would result in a hardship for workers desiring to enter the field, would raise the costs of sprinkler systems and cause delays in the completion of projects. Fire sprinkler systems are different from most of the other mechanical systems in a building. Failure of the fire sprinkler system could endanger the public and will result in the loss of property and possible loss of life.

Summary of Public Hearing Comments
Regulation of Fire Sprinkler Designers and Installers
May 19, 1999 Richmond, VA

Name and Affiliation	Summary of Comments
David L. Janifer Fairfax County Office of Building Code Services Fairfax County Board of Supervisors	Fairfax inspections have revealed numerous examples of faulty installations of sprinkler systems. The design and installation of sprinkler systems is a very specialized field; there needs to be a minimum level of competency. License requirements should include a testing procedure to ensure an adequate level of knowledge. Also, the testing for all tradesmen should include the principles of fire-rated assemblies and through-penetration systems, because these assemblies are often breached by the trade work. Supports a licensing requirement for the design and installation of fire sprinkler systems.
Stanley Harris Chairman, Board for APELSCIDLA	Concerned for the health, safety and welfare of the public, not protection of any discipline. Some professions that are necessary to provide protection to the public may be excluded from the process if the bill as written becomes law. The engineering profession needs to be included where life safety is at risk. Opposes any requirement that would exclude certain professions excluded from certain levels of design.
Delmar Dayton Virginia Society of the American Institute of Architects	Concerned about public protection. Will submit written statement to the Board prior to the July 30 deadline.
Jan Mitchell President, Virginia Fire Prevention Association (VFPA)	The VFPA supports the AFSA's request to amend the Contractors' licensing regulations to include sprinkler contractors. The request would require every sprinkler contractor licensed in Virginia to have on their staff a person who is certified by NICET as a Certified Engineering Technician Level III or IV in the subfield Fire Protection/Automatic Sprinkler System Layout. This is an important step in establishing a minimum level of competence in designing sprinkler systems to applicable codes.

Name and Affiliation	Summary of Comments
Howard Summers, Jr. Virginia Chapter of the American Fire Sprinklers Association	Establishing certification requirements for fire sprinkler contractors can enhance public safety. All fire sprinkler contractors conducting business in Virginia should have at least one full-time employee who is: 1) certified by the NICET as a Level III or Level IV Certified Engineering Technician in the subfield of Fire Protection/Automatic Sprinkler System Layout; or 2) a professional engineer who is registered in Virginia and who is experienced in the design and installation of sprinkler systems. The cost of implementing this program would be borne by the applicant. There is some confusion as to the term "installer." The association interprets installers to mean those who assemble the material on the job, and does not support certification for installers. Several states have adopted this requirement.
Michael Meehan Virginia Chapter American Fire Sprinkler Association (AFSA) Vice President, Virginia Sprinkler Company	Supports licensing legislation for fire sprinkler contractors. In concurrence with the Fairfax observations, there have been numerous installations and designs that were suspect and in many cases could have rendered the systems inoperable. Licensing could prevent a tragedy. Urges the Board to consider the licensing laws to focus on the design aspects, NICET Level III or IV or PE on staff for the licensed companies. Sees no need for licensing the tradesman. It's the contractor's responsibility to design the system so the liability really lies with the firms in the office site, and in particular on the design side. Encourages A & E involvement, as it would improve the level of design and fire protection.

Name and Affiliation	Summary of Comments
McEldon Fleming National Fire Sprinkler Association (NFSA)	Agrees with the AFSA on the regulation of the fire sprinkler industry. Nationally, some 35 states currently require the licensing and certification of fire sprinkler contractors, while several other states are working on such proposals. Maryland is in the final stages. Feels it is proper for a jurisdiction to take extraordinary steps and means to help ensure the proper installation of fire sprinkler systems, including the requirement for certification of expertise by a nationally recognized agency such as NICET. Agrees the contractor should be the focus of the study. Each contractor (license-holder) should be required to have at least one full-time Responsible Managing Employee (RME) who holds a Level III or IV NICET certificate in the field of Fire Protection, subfield Automatic Sprinkler System Layout, or an equivalent program acceptable to the state Fire Marshal, or a PE with fire protection experience. If "installer" means the person who assembles the material at the job site, the association does not endorse certification for installers, whom are referred to as "fitters." Fitters work for the licensee, under the supervision of the RME. Other concerns for a full licensure program include administration of the program, registration, fees, required insurance, renewal, license examination, powers and duties of the state Fire Marshal, prohibited practices, denial, suspension or revocation of license or certification, penalties and appeal procedures.
John Moore Virginia Society of Professional Engineers	Doesn't support any certificate or license being required instead of or in addition to the seal of a PE. The Virginia Uniform Statewide Building Code (USBC) requires a PE's seal for certain occupancy groups and the Board should not pass something that overrides the USBC. Understands that there are currently 47 NICET Level IIIs and 19 Level IVs in Virginia. That may not be enough. In the PE workplace, the work must be performed under the complete direction and control of the PE; a similar constraint should be on the Certified Engineering Technician (CET). Merely requiring a contractor to have a CET on his staff isn't going to change anything. That individual should be directly involved in the project and be responsible for the contractor that designs the sprinkler systems.

Name and Affiliation	Summary of Comments
Michael Hairfield Fire Sprinklers Limited Board of Directors, Va. Chapter AFSA	Supports requirement for NICET certification of Engineering Technicians on the NICET Level IV, and on the Sprinkler Layout on NICET Level III, and Special Hazard Systems on the NICET Level II in Fire Alarm Systems. Aware of only three localities that require a PE seal: Newport News, Frederick County and Winchester. The other localities want a set of shop drawings sent to the local building official for review and approval for installation.
Jack Proctor Dep. Director, Dept. Housing and Community Development	The DHCD study last year was to determine whether or not the NFPA standards for sprinkler systems in residential buildings are adequate or not. It was determined that the sprinkler system installation standards that are now on the books are adequate. There may be some problems with the design and installation of some of those systems that could create problems, and that's why they recommended that this Board look at whether these individuals should be licensed, certified, etc. The USBC makes the Building Code Official responsible for enforcing that Code, but a lot of the building departments do not have plan reviews that can review sprinkler systems. So they must rely on the expertise of the people doing the design and installation. The USBC and inspection procedures are somewhat minimal, and it's absolutely impossible to inspect these buildings in such a way as to catch every flaw in a system such as a sprinkler system. Often defects are found after the fact. It is essential that these systems be installed in such a manner as they will work and do the job when a fire occurs.
Shawn Kelley Chief Fire Marshal, Arlington County Fire Dept. Northern Virginia Fire Marshals	A licensing requirement is in line with other licensing practices in Virginia and would help alleviate some of the concerns. Supports a program which encompasses installers, testers and repairpersons, and it should be implemented over a three-year program to allow regulants to obtain the necessary certification. Recommends NICET standards. The training could be gained through community colleges or online and then testing could take place.

Name and Affiliation	Summary of Comments
Rick Witt President, Va. Buildings and Code Officials Association	Supports the requirement that sprinkler contractor firms who install NFPA 13 and 13R sprinkler systems have a NICET certified individual employed within their firm. The minimum certification required should be NICET III or better, and a CET in the subfield Fire Protection/Automatic Sprinkler System Layout. Clarifies that the association's support is inclusive of all sprinkler systems with the exception of NFPA 13D and Limited Area Assistance.
Bob Boynton Architect member of Board for APELSCIDLA	Concurs with the comments of other speakers, especially the building official. Suggests contacting the Department of General Services, which has created regulation upon commonwealth buildings, such as dormitories, which are similar to what is being studied.