Vermont Fire Prevention and Building Code - 1999

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Section 1. Title and Intent

These rules are adopted under 21 V.S.A. Subchapter 7 "Fire Safety and Prevention", and Subchapter 8 "Dangerous Substances", and shall be known and cited as the Vermont Fire Prevention and Building Code - 1999. It is the intent of these rules to provide for the public safety as directed by these sections of the law.

Section 2. Adoption of Nationally Recognized Standards

The Commissioner of Labor and Industry adopts the following nationally recognized safety standards for the purpose of making rules regarding the construction of buildings, maintenance and operation of premises, prevention of fires, removal of fire hazards, prescribing standards necessary to protect the public, employees and property against harm arising out of or likely to arise out of fire, explosion prevention, fire prevention and public safety with respect to the safekeeping, storage, use, manufacturing, sale, handling, transportation and other disposition of explosive materials, flammable materials, hazardous materials, petroleum and petroleum products, and to protect the public from structures which are dilapidated, ruinous, unstable or dangerous. (Note: see page 36, Appendix VIII for information on how to obtain adopted standards and reference documents)

NFPA 1, Fire Prevention Code, 1997 edition (to meet the needs of Vermont NFPA 1 is amended as follows; for Sections 1-1 through 1-8 the amendments and the adopted text is printed in total, for the rest of NFPA 1 only the amendments are printed).

1-1 Title.
1-1 The title of this Code shall be NFPA 1, *Fire Prevention Code*, of the National Fire Protection Association. The short title of this Code shall be the NFPA *1 Fire Prevention Code.*

1-2 **Purpose.**
1-2.1 The intent of this Code is to prescribe minimum requirements necessary to establish a reasonable level of fire safety and property protection from the hazards created by fire and explosion. The scope covers the construction, maintenance, and use of property to the extent that such is not covered by existing NFPA codes and standards. When other codes and standards are applicable to the scope of this standard they are referenced herein.
1-2.2 This Code is partially comprised of limited text references extracted from other NFPA codes and standards in an effort to bring together information useful during field inspections. (See 1-5.4 *relative to conflicts of application.*)

1-3 **Scope**. The provisions of this Code are applicable to:

(a) The inspection of buildings, processes, equipment, systems, and other fire and related life safety situations.

(b) The investigation of fires, explosion, hazardous materials incidents, and other related emergency incidents handled by the fire department.

(c) The review of construction plans, drawings, and specifications for life safety systems, fire protection systems, access, water supplies for fire suppression, processes, and hazardous materials and other fire and life safety issues.

(d) The fire and life safety education of related professionals, employees, responsible parties, and the general public.

(e) Existing occupancies and conditions, the design and construction of new buildings, remodeling of existing buildings, and additions to existing buildings.

(f) The storage, use, processing, handling and transportation of hazardous materials.

(g) The design, alteration, modification, construction, maintenance, and testing of fire protection systems and equipment.

(h) Access requirements for fire department operations.

(i) Hazards from outside fires in vegetation, trash, building debris, and other materials.

(j) The regulation and control of special events including but not limited to exhibits, trade shows, haunted houses, and other similar special occupancies.

(k) The interior finish, decorations, furnishings, and other combustibles that contribute to fire spread, fire load, and smoke production.

1-4 **Authority**.

1-4.1 This Code shall be administered and enforced by the Commissioner of Labor and Industry and staff members of the Fire Prevention Division designated to enforce this Code and utilize discretionary authority regarding the details of the application of this Code and alternatives contained in this Code. Hereafter the Commissioner, or designated representative, or in the case of a cooperative municipal inspection agreement, the approved inspector(s), are designated as the authority having jurisdiction.

1-4.2 Police and other enforcement agencies shall have authority to render necessary assistance in the enforcement of this Code when requested to do so by the authority having jurisdiction.

1-4.3 The authority having jurisdiction shall be permitted to delegate to other qualified individuals such powers as necessary for the proper administration and enforcement of this Code.

1-4.4 The authority having jurisdiction shall be authorized to inspect, at all reasonable times, any building or premises for dangerous or hazardous conditions or materials as set forth in this Code. The authority having jurisdiction shall have authority to order any person(s) to remove or remedy such dangerous or hazardous condition or material. Any person(s) failing to comply with such order shall be in violation of this Code.

1-4.5 Where conditions exist, and are deemed hazardous to life and property by the authority having jurisdiction, the authority having jurisdiction shall have the authority to summarily abate such hazardous conditions that are in violation of this Code.

1-4.6 To the full extent permitted by law, any authority having jurisdiction engaged in fire prevention and inspection work shall be authorized at all reasonable times to enter and examine any building, structure, vehicle, or premises for the purpose of making fire safety inspections. Before entering a private dwelling, the authority having jurisdiction shall obtain the consent of the occupant thereof or obtain a court warrant authorizing entry for the purpose of inspection except in those instances where an emergency exists. As used in this section, "emergency" means circumstances that the authority having jurisdiction knows, or has reason to believe, exist and that reasonably can constitute immediate danger to life and property.

1-4.7 Persons authorized to enter and inspect buildings, structures, vehicles, and premises as herein set forth shall be identified by proper credentials issued by this governing authority.

1-4.8 Persons shall not interfere with an authority having jurisdiction carrying out any duties or functions prescribed by this Code.

1-4.9 Persons shall not use a badge, uniform, or other credentials to impersonate the authority having jurisdiction.

1-4.10 The authority having jurisdiction shall have the authority to assist the Vermont State Police at any scene of fire or explosion and only upon a specific request for assistance by the Vermont State Police. The Vermont State Police make all decisions regarding referrals for prosecution in cases of arson. The authority having jurisdiction shall have authority to investigate the building materials, methods, equipment, systems and use of buildings covered under this Code, regarding any fire, explosion or other hazardous conditions to determine the effectiveness or compliance with this Code and to identify potential risks. Prior to any examination by the authority having jurisdiction, all attempts will be made to determine if said examination will in any way hinder an investigation by the Vermont State Police. Information that could be related to trade secrets or process shall not be made part of the public record except as might be directed by a court of law or as required by the Vermont State Police.

1-4.11 The authority having jurisdiction shall have the authority to require plans and specifications to ensure compliance with applicable codes and standards. The process for the application for a construction permit and plan review is described in Section 4 of the Vermont Fire Prevention and Building Code.

1-4.12 Where ever any installation subject to inspection prior to use is covered or concealed without having first been inspected, the authority having jurisdiction shall have the authority to require that such work be exposed for inspection. The authority having jurisdiction shall be notified when the installation is ready for inspection and shall conduct the inspection within a reasonable period of time.
1-4.13 When any construction or installation work is being performed in violation of the plans and specifications as approved by the authority having jurisdiction, a written notice shall be issued to the responsible party to stop work on that portion of the work that is in violation, and no work shall be continued on that portion until the violation has been corrected.
1-4.14 The authority having jurisdiction shall have the authority to order the immediate evacuation of any occupied building deemed unsafe when such building has hazardous conditions that present imminent danger to building occupants.
1-4.15 The authority having jurisdiction shall have the authority to develop and implement a public fire safety education program as deemed necessary for the general welfare with respect to the potential fire hazards within the jurisdiction.
1-4.16 The authority having jurisdiction shall have the authority to ensure that appropriate or duly authorized public fire safety education programs or public fire safety messages are disseminated to the general public.

1-5 **Application.**
1-5.1 This Code applies to both new and existing conditions. In various chapters there are specific provisions for existing facilities that might differ from those for new facilities.
1-5.2 Details regarding processes, methods, specifications, equipment testing and maintenance, design standards, performance, installation, or other pertinent criteria contained in those standards and codes listed in Chapter 43 of NFPA 1 shall be considered a part of this Code to the extent called for by Chapters 1 through 42 of NFPA 1.
1-5.3 Applicable provisions of documents listed in Appendix D of NFPA 1 are not required, but shall be permitted to be used by the authority having jurisdiction as appropriate criteria for meeting the intent of this Code when specific provisions do not exist within this Code or other nationally recognized codes or standards.
1-5.4 Where the requirement differs between NFPA 1 and other nationally recognized standards adopted under Section 2 of these rules, the requirements of the nationally recognized standards shall apply.
1-5.5 Buildings in existence or permitted for construction prior to the adoption of this Code shall comply with the provisions stated herein or referenced for existing buildings. Existing buildings or installations that do not comply with the provisions of the publications referenced in NFPA 1; 43-1.1 shall be permitted to be continued in use, unless the authority having jurisdiction determines that the lack of conformity with these standards present an imminent danger.
Exception: A limited but reasonable time shall be allowed for compliance with any part of this Code for existing buildings, commensurate with the magnitude of expenditure, disruption of services, and degree of hazard. Occupied existing buildings shall comply with 1-8.2.
1-5.6 Buildings permitted for construction after the adoption of this Code shall comply with the provisions stated herein for new buildings.
1-5.7 When in fixed locations and occupied as buildings, vehicles, vessels, or other similar conveyances, as defined by 30-1.3 of NFPA 101®, Life Safety Code, shall be treated as buildings and comply with this Code.
1-5.8 Additions, alterations, or repairs to any building shall conform to that required of a new building without requiring the existing building to comply with all the requirements for new construction. Additions, alterations, or repairs shall not cause an existing building to become unsafe or adversely affect the performance of the building as determined by the authority having jurisdiction.
1-5.9 Where two or more classes of occupancy occur in the same building or structure, and are so intermingled that separate safeguards are impracticable, means of egress facilities, construction, protection and other safeguards shall comply with the most restrictive fire safety requirements of the occupancies involved.

1-6 **Equivalencies and Alternatives.**
1-6.1 Nothing in this Code is intended to prevent

the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety to those prescribed by this Code, provided technical documentation is submitted to the authority having jurisdiction to demonstrate equivalency and the system, method, or device is approved for the intended purpose.
1-6.2 The specific requirements of this Code shall be permitted to be modified by the authority having jurisdiction to allow alternative arrangements that will secure as nearly equivalent fire safety as practical, but in no case shall the modification afford less fire safety than, in the judgement of the authority having jurisdiction, that which would be provided by compliance with the corresponding provisions contained in this Code.
1-6.3 Buildings with alternative fire protection features approved by the authority having jurisdiction shall be considered as conforming with this Code.
1-6.4 Each application for an alternative fire protection feature shall be filed with the authority having jurisdiction and shall be accompanied by such evidence, letters, statements, results of tests, or other supporting information as required to justify the request. The authority having jurisdiction shall keep record of actions on such applications, and a signed copy of the authority having jurisdiction's decision shall be provided for the applicant.

1-7 **Appeals**: Requests for variances, exemptions and reconsideration of the interpretation of this Code, shall be made and processed in accordance with Section 5 of this Code.

1-8 **Occupancy**.
1-8.1 No new construction or existing building shall be occupied in whole or in part in violation of the provisions of this Code.
1-8.2 Existing buildings that are occupied at the time of adoption of this Code shall remain in use provided:
(a) The occupancy classification remains the same.
(b) There exist no condition deemed hazardous to life or property that would constitute an imminent danger.
1-8.3 Buildings or portions of buildings shall not be occupied during construction, repair or alteration, without the approval of the authority having jurisdiction and only when all means of egress, all fire protection systems, the permanent building heating system, and the fire department access to buildings are in place and continuously maintained for the portion occupied.
1-8.4 Changes of Occupancy.
1-8.4.1 In any building or structure, whether necessitating a physical alteration or not, a change from one occupancy classification to another, or from one occupancy subclassification to another subclassification of the same occupancy, shall be permitted only if such structure, building, or portion thereof conforms with the requirements of NFPA *101, Life Safety Code* applying to new construction for the proposed new use (101:1-3.12)
1-8.4.2 Occupancy and subclassifications, as defined shall be in accordance with NFPA *101, Life Safety Code.*
1-8.4.3 A place of assembly which changes ownership, or increases the occupant load, shall not be occupied or used until a permit for use and occupancy has been issued by the authority having jurisdiction.

<u>For Sections 1-1 through 1-8 the amendments and the adopted text is printed in total, for the rest of NFPA 1 only the amendments are printed).</u>

Section 1-9.5 ***Periodic Inspection and Test*** *- add subsections*
1-9.5.1 Periodic Inspection and Test: Inspections and field tests of fire suppression, alarm, detection and any other fire protection systems, devices and equipment shall be conducted for the owner by a technically qualified person as herein required. A written inspection report shall be filed with the authority having jurisdiction upon completion of each inspection.
1-9.5.2 Identification of fire protection systems: A fire protection system identification number, provided by the authority having jurisdiction, shall be affixed to the control panel or control valve of the fire protection system to provide a unique identification number for the fire protection system.
1-9.5.3 Proof of Inspection: Proof of inspection, approved by the Authority having jurisdiction

shall be affixed by a technically qualified person to the control panel or control valve of the fire protection system after the required inspection has been completed as evidence of that inspection. The proof of inspection fee for fire suppression, alarm, detection and any other fire protection systems shall be $10.00.

1-9.5.4 Technically qualified person: Periodic inspection and test of fire protection systems as required by 1-9 shall be conducted by a technically qualified person as listed below:

a. For fire alarm and detection systems - an electrician appropriately licensed under 26 V.S.A. Chapter 15.

b. For fire sprinkler systems, standpipes, and fire pumps - those persons meeting the qualifications of:

(1) Passing the examination for Level II or III certification for automatic sprinkler system layout from the National Institute for Certification in Engineering Technologies (NICET); or

(2) passing the examination for, or completing, an approved sprinkler apprenticeship program; or

(3) passing the examination given by the Experior Assessments.

c. For fire suppression systems other than fire sprinkler systems - those persons passing the appropriate examination for fire suppression from the National Institute for Certificate in Engineering Technologies, persons certified through similar programs and persons demonstrating competency and experience in the testing of fire suppression system through training by the manufacturer of such systems, as acceptable to the authority having jurisdiction.

d. For emergency generators - those persons demonstrating competency and experience in the testing of emergency generators through training by the manufacturer of such systems as acceptable to the authority having jurisdiction.

1-9.5.5 Inspection and tests: Inspection and tests of fire protection systems by technically qualified persons as required by Section 1-9.5 shall be conducted at least annually and cover all intervals of testing frequency for the system. Annual testing by a technically qualified person does not relieve the owner of the responsibility of maintenance, inspection and testing at more frequent intervals as required by the applicable NFPA Standard.

Exception: Suppression systems other than fire sprinkler and carbon dioxide systems shall be inspected and tested by technically qualified persons at least every 6 months.

- delete and replace as follows - Section 1-9.8 Elevator Testing

1-9.8 Elevator Testing: All elevators equipped with firefighter service shall be subject to a monthly operation with a written record of the findings made and kept on the premises as required by ASME/ANSI A17.1, Safety Code for Elevators and Escalators, Rule 1206.7.

-delete in part - Section 1-15.16 permits; Subsection (c) Bonfires and Outdoor Rubbish Fires

-add Subsections - Section 1-16.1

(k) Design and Installation of Automatic Sprinkler Systems

(l) Installation of Propane and Natural Gas Systems

- add Section 1-16.7.1 Experience and Training

1-16.7.1 Experience and Training: The authority having jurisdiction may accept successful completion of appropriate examination or certification other then those listed in this Section when the examination or certification demonstrates an equivalent level of experience and training.

-add Section 1-16.7.2 Fire Sprinkler Installations

1-16.7.2 Fire Sprinkler Installations: The required fire sprinkler system plans, calculations, design, installation and acceptance testing shall be accomplished by a person who has obtained Level III certification for automatic sprinkler system layout from the National Institute for Certification in Engineering Technologies, or a licensed Fire Protection Engineer.

Exception: Installation and acceptance testing may be accomplished by a person passing the examination for, or completing, an approved sprinkler apprenticeship program or meeting the testing requirements of the Experior Assessments.

-add -Section - 1-16.7.3 Limited Area Fire Sprinkler Installation
1-16.7.3 Limited Area Fire Sprinkler Installation: Limited area (three sprinkler heads or greater) fire sprinkler systems plans, calculations, design, installation and acceptance testing shall be accomplished by a person who has obtained Level III Certification for automatic sprinkler system layout from the National Institute for Certification in Engineering Technologies.
Exception: Installation and acceptance testing may be accomplished by persons meeting the qualifications established by 1-16.7.2 and by persons demonstrating competency and experience in the installation and testing of fire sprinkler systems as acceptable to the authority having jurisdiction.

-add Section-
Section 1-16.7.4 Fuel Gas Installation
1-16.7.4 Fuel Gas Installation: All fuel gas installations, repair and maintenance shall be accomplished by a person successfully completing the American Gas Association course of study including "The Fundamentals of Combustion, Gas Appliance Venting, Electricity, Gas Controls, and Gas Appliances."

-add Section - 1-16.7.5 Installation of LP Gas
1-16.7.5 Installation of LP Gas: All LP gas installation, repair and maintenance shall be accomplished by a person successfully completing Sections 1, 4, 6 and 7 of the National Propane Gas Association's Certified Employee Training Program (CETP). Persons involved with Propane delivery, plant operations and transfer system operations shall complete Sections 1, 2, 3 or 5 of CETP as appropriate.

- add Section 1-16.7.6 Installation of Propane Gas, Limited Certification
1-16.7.6 Installation of LP GAS, Limited Certification: A person who has successfully completed the American Gas Association course of study including "The Fundamentals of Combustion, Gas Appliances Venting, Electricity, Gas Controls and Gas Appliances" and has completed Sections 1 (Basic Principle and Practices) and Section 4 (Distribution System Operations) of the CETP course, shall be deemed qualified to install propane gas equipment and related piping as may be accomplished without making new connections to an existing, charged, propane gas system. Notification of such work shall be made in advance to the supplying propane company.

-add - Section 1-16.7.7 Installation of Natural Gas, Limited Certification
Section 1-16.7.7 Installation of Natural Gas, Limited Certification: A person who has successfully completed Sections 1, 4, 6 and 7 of the National Propane Gas Association, Certified Employee Training Program (CETP), and has completed the sections on Fundamentals of Combustion, Piping and Pressures of the American Gas Association's Course shall be deemed qualified to install natural gas equipment and related piping as may be accomplished without making new connections to an existing, charged, natural gas system. Notification of such work shall be made in advance to the supplying natural gas company.

-add Section 1-16.7.8 Chimneys
Section 1-16.7.8 Chimneys: The cleaning, maintenance and evaluation of chimneys shall be accomplished by a person passing the examination for Certified Chimney Sweep from the Chimney Safety Institute of America.

-add Section 1-16.7.9 Oil Burning Equipment
Section 1-16.7.9 Oil Burning Equipment: The installation, repair and maintenance of all oil burning equipment shall be accomplished by a person passing the examination for a Silver Certificate from the National Oil Heat Certification Program.

Note: See Section 7 for effective date.

-delete and replace as follows -
Section 1-16.11 Renewal of Certificate
Section 1-16.11 Renewal of Certificate: Applications for renewal of a certificate of fitness shall be filed with the authority having jurisdiction on forms provided by the authority having jurisdiction and shall include documentation of having completed 8 hours of related instruction during the previous certificate period.

-add Exception 2 - Section 3-2.1.1:
Exception 2: Existing installations within residential dwelling units shall be in accordance with NFPA 73, Residential Electrical Code.

-delete Sections 3-4.1; 3-4.2, 3-4.3, 3-4.4., 3-4.5 and 3-4.6 - Open Outdoor fires

-add Section 3-7.4 Truss Construction
Section 3-7.4 Truss Construction. To assist the fire department in fire suppression and rescue operations, all buildings containing truss construction assemblies shall be provided with signage permanently affixed at a height 4 feet above the ground located at the left side of the main entrance door on the address side of the building, or at the location of the remote fire alarm annunciation panel. The sign shall be triangular in shape measuring 12 inches horizontally and 6 inches vertically and of contrasting color to the background containing the letter "F" for the truss floor assemblies, the letter "R" for truss roof assemblies and "FR" for truss floor and roof assemblies.

-Add section 3-9.1 Historic Buildings add subsection-
(a) NFPA 914 Recommended Practice for Fire Protection in Historic Structures, provides guidance to the authority having jurisdiction in exercising the judgement granted in this section.
(b) NFPA 909 Standard for the Protection of Cultural Resources provides guidance to the authority having jurisdiction in exercising the judgment granted in this section regarding museums, libraries and places of worship.

-add exception #1 - Section 3-10.1
exception #1: The requirements for the hood, grease removal devices, duct and fixed fire extinguishing system may be modified by the authority having jurisdiction for cooking operations in free standing tents, mobile units or other small buildings located greater than 30' from grandstands or other public buildings and occupied by employees only, when the clearance to combustibles, safety controls, portable fire extinguishers, staff training, fuel use, storage and shut-off, and electrical shut off for equipment are in compliance with this code.
-delete and replace as follows Section 4-5.2
4-5.2 Illumination of means of egress shall be continuous during the time that the conditions of occupancy require that the means of egress be available for use. Artificial lighting shall be employed at such places and for such period of time as required to maintain the illumination to the minimum criteria values herein specified and shall be controlled by key switches or other alternative arrangements so that no area required to be illuminated by this section is left in darkness.

Exception: Automatic, motion sensor-type lighting switches shall be permitted within the means of egress, provided that switch controllers are equipped for fail-safe operations, illumination timers are set for a minimum 15 minute duration and the motion sensor is activated by any occupancy movement in the area served by the lighting units.

-delete exception to Section 10-2.1.2.1

-delete exception to Section 19-2

-delete and replace as follows-
Section 22-2.1.2 Application
Section 22-2.1.2 Application: This section and NFPA 30A, Automatic and Marine Service Station Code shall apply to all new and existing automotive and marine service stations, service stations located inside buildings, and any other facilities for dispensing liquid motor fuel.

-add Section 23-7 Records Storage
23-7 Records Storage: Public records storage shall be in accordance with NFPA 232, Standards for the Protection of Records (1995 Edition).

-delete and replace as follows section 30-1.1.2
Section 30-1.1.2 Plans for fixed (stationary) installations of LP gas utilizing storage containers of over 2,000 gallons (7.6 m3) individual water capacity or with aggregate water capacity exceeding 4,000 gallons (15.1m3), or with any size containers involving LP gas liquid transfer from one container to another, shall be submitted to the authority having jurisdiction and receive a construction permit in accordance with the Code. Mobile or temporary installations used or operated as a fixed installation shall meet the requirements of

a fixed installation.

-add - Section 30-1.1.2.1 Record of Installation
30-1.1.2.1 Record of Installation: Installers shall maintain a record of all installations for which a permit is not required by Section 30-1.1.2.1 (but not including replacing of portable cylinders) and have it available for inspection by the authority having jurisdiction.

-delete and replace as follows- Section 30-3.1.2(c)
30-3.1.2(c) Where physical damage to LP Gas Containers, or systems of which they are a part, from vehicles is a possibility, physical protective barriers shall be provided to protect against such damage.

NFPA 10, Standard for Portable Fire Extinguishers, 1994 edition (to meet the needs of Vermont NFPA 10 is amended as follows):

-add Section 1-1.1 where required -
1-1.1 Where required: Portable fire extinguishers shall be selected, installed, located, tested, inspected and maintained in accordance with this standard in all buildings and premises subject to this Code.

NFPA 13, Standard for the Installation of Sprinkler Systems, 1996 edition.

NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, 1996 edition (to meet the needs of Vermont NFPA 13D is amended as follows:)

-add Section 1-7 Approval of Sprinkler Systems-
1-7.1 The installer shall perform all required acceptance tests, complete the Contractor's Material and Test Certificate(s), and forward the certificate(s) to the authority having jurisdiction prior to asking for approval of the installation.
1-7.2 Where the authority having jurisdiction desires to be present during the conducting of acceptance tests, the installer shall provide advance notification of the time and date the testing will be performed.

NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, 1996 edition.

NFPA 14, Standard for the Installation of Standpipe and Hose Systems, 1996 edition.

NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection, 1996 edition.

NFPA 16, Standard for the Installation of Deluge Foam-Water Spray Systems , 1995 edition.

NFPA 17, Standard for Dry Chemical Extinguishing Systems, 1994 edition.

NFPA 17A, Standard for Wet Chemical Extinguishing Systems, 1994 edition.

NFPA 20, Standard for the Installation of Centrifugal Fire Pumps, 1996 edition.

NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 1995 edition.

NFPA 30, Flammable and Combustible Liquids Code, 1996 edition.

NFPA 30A, Automotive and Marine Service Station Code, 1996 edition (to meet the needs of Vermont NFPA 30A is amended as follows):

-add Section 2-4.1.2 Fire Resistant Tanks
Section 2-4.1.2 Fire Resistant Tanks: All aboveground tanks storing Class I liquids shall be fire resistant tanks in accordance with Section 2-4.5.

-delete-Exception 2 from Section 2-4.2.2.

-add section-
Section 9-4.8 Automatic Fire Suppression
9-4.8 Automatic Fire Suppression: An approved automatic fire suppression system shall be provided to protect all attended and unattended self-service fuel dispensing areas where Class 1 flammable liquids are dispensed. Where full service and self-service dispensing is conducted under a common canopy, or Class 1 flammable liquids and other fuels are dispensed in a common area, all dispensing units shall be protected with the fire suppression systems.
-add Subsections-Section 9-9 Signs
9-9.1: Identification signs identifying the type of

motor fuel, such as Gasoline, Kerosene or Diesel Fuel, shall be conspicuously posted on each side of the flammable or combustible fuel dispenser device at least 3 feet above the bottom of the dispensing device.
9-9.2 - Warnings signs shall be conspicuously posted in the dispensing area incorporating the following or equivalent wording, " - warning - remove portable containers from vehicle before filling."

-add Section 9-10 Lighting
9-10 Lighting: Adequate lighting shall be provided for all fuel dispensing locations.

(Note: NFPA 30A Automatic Marine Service Station Code, applies to all facilities dispensing Class I and II liquid motor fuel)

NFPA 30B, Code for the Manufacture and Storage of Aerosol Products, 1994 edition.

NFPA 31, Standard for the Installation of Oil-Burning Equipment, 1997 edition.

NFPA 32, Standard for Dry-cleaning Plants, 1996 edition.

NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials, 1995 edition.

NFPA 43B, Code for the Storage of Organic Peroxide Formulations, 1993, edition.

NFPA 45, Standard on Fire Protection of Laboratories Using Chemicals, 1996 edition.

NFPA 50, Standard for Bulk Oxygen Systems at Consumer Sites, 1996 edition.

NFPA 50A, Standard for Gaseous Hydrogen Systems at Consumer Sites, 1994 edition.

NFPA 50B, Standard for Liquefied Hydrogen Systems at Consumer sites, 1994 edition.

NFPA 51, Standard for the Design and Installation of Oxygen Fuel Gas Systems for Welding, Cutting, and Allied Processes, 1997 edition.

NFPA 51A, Standard for the Acetylene Cylinder Charging Plants, 1996 edition.

NFPA 51B, Standard for Fire Prevention in Use of Cutting and Welding Processes, 1994 edition.

NFPA 54, National Fuel Gas Code, 1996 edition (to meet the needs of Vermont NFPA 54 is amended as follows):

-delete and replace as follows - Section 1.1.1(a)1
1.1.1(a)1. Coverage of piping systems shall extend from the point of delivery to the connections with each gas utilization device. For other than undiluted liquefied petroleum gas systems, the point of delivery shall be considered the outlet of the service meter assembly, or the outlet of the service regulator or service shutoff valve when no meter is provided. For undiluted liquefied petroleum gas systems, the point of delivery shall be considered the outlet of the first stage pressure regulator.

-add new section - Section 1.5.5 Interruption or discontinuance of service
1.5.5 Interruption or discontinuance of service. Whenever service to a customer is discontinued one of the following must be complied with:

(a) The valve that is closed to prevent the flow of gas to the customer must be provided with a locking device or other means designated to prevent the opening of the valve by persons other than those authorized by the operator.

(b) A mechanical device or fitting that will prevent the flow of gas must be installed in the service line or in the meter assembly.

(c) The customer's piping must be physically disconnected from the gas supply and the open pipe ends sealed.

-delete and replace as follows - Section 6.24.1 Prohibited Installations
6.24.1 Prohibited Installations: Unvented room heaters shall not be used in any building or structure regulated under this code.

NFPA 55, Storage Use and Handling of Compressed and Liquefied Gases in Portable Cylinders 1993 edition.

NFPA 58, Standard for the Storage and Handling of Liquefied Petroleum Gases, 1995 edition (to meet the needs of Vermont NFPA 58 is amended as follows)

-delete and replace as follows - Section 3-2.4.1(c)
3-2.4.1(c) Where physical damage to LP Gas Containers or systems of which they are a part, from vehicles is a possibility, physical protective barriers shall be provided to protect against such damage.

-add new section - Section 3-3.2.1 New Bulk Plant Installation.
3-3.2.1 New Bulk Plant & Industrial Plant installations. Internal valves with pneumatic shut-offs or other approved safety designs shall be required.

-delete and replace as follows - Section 3-2.4.8(b)
3-2.4.8(b) Where containers are installed underground within 10' of where vehicle traffic can be reasonably expected, such as driveways and streets or within a utility easement subject to vehicle traffic, physical protective barriers shall be provided for the fitting housing, housing cover, tank connections, and piping, to protect against vehicular damage. All other underground containers shall be provided with a reflective marker or other readily visible marker acceptable to the authority having jurisdiction, at 4' in height to mark the location of the housing cover.

NFPA 59, Standard for the Storage and Handling of Liquefied Petroleum Gases at Utility Gas Plants, 1995 edition.

NFPA 59A, Standard for the Production, Storage and Handling of Liquefied Natural Gas (LNG), 1996 edition.

NFPA 61, Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Products Facilities, 1995 edition.

NFPA 65, Standard for the Processing and Finishing of Aluminum, 1993 edition.

NFPA 69, Standard on Explosion Prevention Systems, 1997 edition.

NFPA 70, National Electrical Code, as adopted under the Vermont Electrical Safety Rules.

NFPA 72, National Fire Alarm Code, 1996 edition.

- add exception - section 4-2.5
Exception; A minimum of one person on duty may be permitted by the authority having jurisdiction based on the volume of subscribers and the history of alarm activity, when a second person is available for duty on premises.

NFPA 73, Residential Electrical Code, as adopted under the Vermont Electrical Safety Rules.

NFPA 80, Standard for Fire Doors and Fire Windows, 1995 edition.

NFPA 86, Standard for Ovens and Furnaces, 1995 edition.

NFPA 88A, Standard for Parking Structures, 1995 edition.

NFPA 88B, Standard for Repair Garages, 1991 edition.

NFPA 90A, Standard for the Installation of Air Conditioning and Ventilating Systems, 1996 edition.

NFPA 91, Standard for Exhaust Systems for Air Conveying of Materials, 1995 edition.

NFPA 96, Standard for Ventilating Control and Fire Protection of Commercial Cooking Operations, 1994 edition.

NFPA 99, Standard for Health Care Facilities, 1996 edition.

NFPA 101, Life Safety Code, 1997 edition (to meet the needs of Vermont NFPA 101 is amended as follows):

-add Section 5-2.2.6.6.1 Outside Stair Roofs
5-2.2.6.6.1 Outside Stairs Roofs: Outside stairs shall be protected from the accumulation of snow and ice by a roof.
Exception: Existing outside stairs where it is demonstrated to the satisfaction of the authority having jurisdiction that any snow and ice accumulation is promptly removed.

-add Section 5-2.8.4.1 Fire Escape Roofs
5-2.8.4.1 Fire Escape Roofs: Fire escapes serving more than 10 occupants shall be protected from accumulation of snow and ice by a roof.

Exception: Existing fire escapes where it is demonstrated to the satisfaction of the authority having jurisdiction that any snow and ice accumulations is promptly removed.

- delete and replace as follows - Section 5-8.1.2.
5-8.1.2 Illumination of means of egress shall be continuous during the time that the conditions of occupancy require that the means of egress be available for use. Artificial lighting shall be employed at such places and for such period of time as required to maintain the illumination to the as required to maintain the illumination to the minimum criteria values herein specified and shall be controlled by key switches or other alternative arrangements so that no area required to be illuminated by this section is left in darkness.

Exception: Automatic, motion sensor-type lighting switches shall be permitted within the means of egress, provided that switch controllers are equipped for fail-safe operations, illumination timers are set for a minimum 15 minute duration and the motion sensor is activated by any occupancy movement in the area served by the lighting units.

-add Exception 2 - Section 7-1.2
Exception 2: Existing installations within residential dwelling units shall be in accordance with NFPA 73, Residential Electrical Code.

-delete and replace as follows - Section 7-4.2
7-4.2 Except as modified herein, new elevators, escalators, dumbwaiters, and moving walks shall be installed in accordance with the requirements of all sections of ANSI/ASME A17.1, Safety Code for Elevators and Escalators which contains requirements relative to fire safety.

-delete and replace as follows - Section 7-4.3
7-4.3 Except as modified herein, existing elevators, escalators, dumbwaiters, and moving walks shall conform to the requirements of all sections of ANSI/ASME A17.3 Safety Code for Existing Elevators and Escalators which contains requirements relative to fire safety.

- delete and replace as follows - Section 7-6.4
7-6.4 Emergency Forces Notification. Where required by another section of this Code, emergency forces notification shall be provided to alert the municipal fire department and fire brigade (if provided) of fire or other emergency.

Where fire department notification is required by another Section of this *Code*, the fire alarm system shall be arranged to transmit the alarm automatically via the most acceptable means available and in accordance with NFPA 72, *National Fire Alarm Code.*

Listed in order by the most acceptable to the least acceptable means of notification:

1. Fire Department Master or Radio Box.
2. Leased direct line to the Fire Department.
3. Leased direct line to the Police Department or dispatching agency for the Fire Department.
4. Approved Central Station - UUFX providing protective signaling services.
5. Approved Central Station - CVSU providing monitoring services.
6. Proprietary system.
7. Recognized remote station.
8. Digital dialer connected to approved remote station.
9. Listed digital dialer.

-add Section 8-3.4.1.2
8-3.4.1.2 The required fire alarm system shall be electrically wired as a Class A system.

-add exception #1 - Section 10-2.1.2 - exception #1:
Rooms with 4 or fewer students where the ratio of students to teachers or aides does not exceed 2:1 at any time.

-delete exception to Section 10-7.1.2.1

-add exception #1 - Section 11-2.1.2 - exception #1:
Rooms with 4 or fewer students where the ratio of students to teachers or aides does not exceed 2:1 at any time.

-delete exception to Section 11-7.1.2.1

-add section - Section 12-3.4.1.3
12-3.4.1.3 The required fire alarm system shall be electrically wired as a Class A system.

-add section - Section 12-6.3.4.6
12-6.3.4.6 The required fire alarm system shall be electrically wired as a Class A system.

-delete and replace as follows - Section 13-3.5.1
13-3.5.1 Health care facilities shall be protected throughout by an approved supervised automatic sprinkler system installed in accordance with Section 7-7.

- delete and replace the exception to Section 13-7.5.2 as follows:
Exception: Upholstered furniture belonging to the patient in sleeping rooms of nursing homes provided that a smoke detector is installed in such rooms.

- delete the exception Section 13-7.5.3.

-add section - Section 14.3.4.1.4.
14-3.4.1.4. The required fire alarm system shall be electrically wired as a Class A system.

- add Section 15-3.5.1
15-3.5.1 All buildings classified as Use Condition II, III, IV or V shall be protected throughout by an approved supervised automatic sprinkler system installed in accordance with Section 7-7.

-delete exception to Section 16-3.5.2

-add Section - Section 17-3.4.4.1 Detection
17-3.4.4.1 Detection: A corridor smoke detection system in accordance with Section 7-6 shall be provided.
Exception: Buildings protected throughout by an approved supervised automatic sprinkler system installed in accordance with 16-3.5.1.

-add Section 18.3.4.4.3 Battery Backup
18.3.4.4.3 Battery Backup: Smoke detectors installed in accordance with this section shall receive power from a battery when the building electrical system power is interrupted.

-add Section 19-3.4.4.3 Battery Backup
19-3.4.4.3 Battery Backup: Smoke detectors installed in accordance with this section shall receive power from a battery when the building electrical system power is interrupted.

Exception: Previously approved and installed smoke detectors.

-delete exception No. 2 to Section 19-3.4.4.1

-add exception No.1 - Section 20-1.1.1-
Exception No. 1: A building that provides sleeping accommodations for a total of 6 or fewer persons as described in this Section may be classified as a one and two family dwelling by the authority having jurisdiction.

-add section - Section 20-3.3.5 Battery Backup
20-3.3.5 Battery Backup: Smoke detectors installed in accordance with this section shall receive power from a battery when the building electrical system power is interrupted.
Exception: previously approved and installed smoke detectors.

- delete exception to Section 20-3.5.2

-add section - Section 21-3.3.2 Battery Backup
21-3.3.2 Battery Backup: Smoke detectors installed in accordance with this section shall receive power from a battery when the building electrical system power is interrupted.
Exception: previously approved and installed smoke detectors.

-delete exception to Section 21-5.1.2.-

- delete exception no. 1 to Section 22-2.3.5.1.

-add section - 22-3.3.4.9 Battery Backup
22-3.3.4.9 Battery Backup: Smoke detectors installed in accordance with this section shall receive power from a battery when the building electrical system power is interrupted.

-add section - Section 23-3.3.4.7 Battery Backup
23-3.3.4.7 Battery Backup: Smoke detectors installed in accordance with this section shall receive power from a battery when the building electrical system power is interrupted. Exception: previously approved and installed smoke detectors.

-add Section 32-8.3.1.1-
32-8.3.1.1 The required fire alarm system shall be electrically wired as a Class A.

NFPA 102, Standard for Grandstands, Folding and Telescopic Seating, Tents and Membrane Structures, 1995 edition.

NFPA 110, Standard for Emergency and Standby Power Systems, 1996 edition.

NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-burning Appliances, 1996 edition.

NFPA 220, Standard on Types of Building Construction, 1995 edition.

NFPA 231, Standard for General Storage, 1995 edition.

NFPA 231C, Standard for Rack Storage of Materials, 1995 edition.

NFPA 231D, Standard for Storage of Rubber Tires, 1994 edition.

NFPA 232 Standard for the Protection of Records, 1995 edition.

NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations, 1996 edition.

NFPA 407, Standard for Aircraft Fuel Servicing, 1996 edition.

NFPA 409, Standard on Aircraft Hangars, 1995 edition.

NFPA 410, Standard on Aircraft Maintenance, 1994 edition.

NFPA 415, Standard on Airport Terminal Buildings, Fueling, Ramp Drainage, and Loading Walkways, 1997 edition.

NFPA 418, Standard for Heliports, 1995 edition.

NFPA 430, Code for Storage of Liquid and Solid Oxidizers, 1995 edition.

NFPA 495, Explosive Materials Code, 1996 edition.

NFPA 498, Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives, 1996 edition.

NFPA 664, Standard for the Prevention of Fires ad Explosions in Wood Processing and Woodworking Facilities, 1993 edition.

NFPA 1123, Code for Fireworks Display, 1995 edition.

NFPA 1124, Code for the Manufacture, Transportation, and Storage of Fireworks, 1995 edition.

NFPA 1125, Code for the Manufacture of Model Rocket and High Power Rocket Motors, 1995 edition.

NFPA 1126, Standard for the Use of Pyrotechnics before a Proximate Audience, 1996 edition.

Section 3. Reference Documents

The following documents or portions thereof are referenced within this Code and are considered part of the requirements of this Code when necessary to ensure compliance with the performance requirements of this Code and the intent of this Code to protect the public from harm arising out of fire and to protect the public from structures which are unstable or dangerous. In the case of any differences between the requirements adopted under Section 2 and the requirements in this Section, the requirements adopted in Section

2 shall apply. The failure to incorporate these documents in their entirety should not be construed to minimize the value of these Codes as effective standards with current technology. (Note: see page 36, Appendix VIII for information on how to obtain standards and reference documents)

ASHRAE 90-80, Energy Conservation in New Building Design, 1980 edition.

ASME/ANSI A17.1, Safety Code for Elevators and Escalators, 1993 edition.

ASME Boiler/Pressure Vessel Standards Sect I, II (A B & C), IV, V, VIII (Div. 1 & 2) IX and X, as adopted under the Vermont Boiler & Pressure Vessel Rules.

ASME B31.1 Power Piping, as adopted under the Vermont Boiler and Pressure Vessel Rules.

ASTM E136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 73°C, 1995 edition.

ASTM E 1537 Standard Method of Fire Testing of Real Scale Upholstered Furniture Items 1995 edition.

ASTM E1590, Standard Method for Fire Testing of Real Scale Mattresses, 1995 edition.

AWS F-4.1, Recommended Safe Practices for the Preparation for Welding and Cutting of Containers and Piping, 1994 edition.

AWWA Manual 14, Backflow Prevention and Cross Connection Control, 1990 edition.

ANSI/CGA C-4, Method of Marking Portable Compressed Gas containers to Identify the Material Contained, 1990 edition.

BOCA National Building Code, 1996 edition.

- delete and replace as follows - Section 114.1
The authority having jurisdiction may require that plans, engineering details, or other construction documents or evaluations be prepared by an architect, engineer, or other licensed, registered or certified professional as necessary to provide for the public safety under these rules. The acceptance or rejection of construction documents is not intended to imply compliance or non-compliance with professional licensing laws established under title 26 V.S.A.

-delete and replace as follows - Section 504.1
B504.1 Height modifications: The provisions of this section shall modify the height limitations of Table 503 as herein specified. These increases shall only be allowed when the water supply for fire protection is available in a quantity and rate of flow as determined by NFPA 1231 and/or NFPA 24.

-delete and replace as follows - Section 506.1
506.1 B506.1 area modifications: The provisions of this section shall modify the areas limitation of Table 503 as herein specified. These increases shall only be allowed when the water supply for fire protection is available in a quantity and rate of flow as determined by NFPA 1231 and/or NFPA 24.

BOCA/ICC International Mechanical Code, 1996 edition.

BOCA Plumbing Code, as adopted by the Plumbers' Examining Board.

PEI RP200, Recommend Practices for Installation of Above-ground Storage Systems for Motor Vehicle Fueling, 1992 edition.

National Board Inspection Code, as adopted under the Vermont Boiler and Pressure Rules.

NFPA 11, Standard for Low-Expansion Foam, 1994 edition.

NFPA 11A, Standard for Medium- and High-Expansion Foam Systems, 1994 edition.

NFPA 12, Standard on Carbon Dioxide Extinguishing Systems, 1993 edition.

NFPA 12A, Standard on Halon 1301 Fire Extinguishing Systems, 1992 edition.

NFPA 16A, Standard for the Installation of Closed-Head Foam-Water Sprinkler Systems, 1994 edition.

NFPA 22, Standard for Water Tanks for Private Water Protection, 1996 edition.

NFPA 24, Standard for the Installation of Private Fire Service Mains and Their Appurtenances, 1995 edition.

NFPA 34, Standard for Dipping and Coating Processes Using Flammable or Combustible Liquids, 1995 edition.

NFPA 35, Standard for the Manufacture of Organic Coatings, 1995 edition.

NFPA 36, Standard for Solvent Extraction Plants, 1997 edition.

NFPA 40, Standard for the Storage and Handling of Cellulose Nitrate Motion Picture Film, 1994 edition.

NFPA 68, Guide for Venting of Deflagrations, 1994 edition.

NFPA 77, Recommended Practice on Static Electricity, 1993 edition.

NFPA 86C, Standard for Industrial Furnaces Using a Special Processing Atmosphere, 1995 edition.

NFPA 86D, Standard for Industrial Furnaces Using Vacuum as an Atmosphere, 1995 edition.

NFPA 92A, Recommended Practice for Smoke Control Systems, 1996 edition.

NFPA 92B, Guide for Smoke Management Systems in Malls, Atria and Large Areas, 1995 edition.

NFPA 101A, A guide on Alternative Approaches to Life Safety 1998 edition.

NFPA 105, Recommended Practice for the Installation of Smoke Control Assemblies, 1993 edition.

NFPA 120, Standard for Coal Preparation Plants, 1994 edition.

NFPA 170, Standard for Fire Safety Symbols, 1996 edition.

NFPA 204M, Guide for Smoke and Heat Venting, 1991 edition.

NFPA 251, Standard Methods of Tests of Fire Endurance of Building Construction and Materials, 1995 edition.

NFPA 255, Standard Methods of Test of Surface Burning Characteristics of Building Materials, 1996 edition.

NFPA 259, Standard Test Method for Potential Heat of Building Materials, 1993 edition.

NFPA 260, Standard Methods of Tests and Classification System for Cigarettes, 1994 edition.

NFPA 261, Standard Method of Test for Determining Resistance of Mock-up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes, 1994 edition.

NFPA 265, Standing method of Fire Tests for Evaluating Room Fire Growth Contribution of Textile Wall Coverings 1994 edition.

NFPA 266, Standard Method of Test for Fire Characteristics of Upholstered Furniture Exposed to Flaming Ignition Sources, 1994 edition.

NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants, 1995 Edition.

NFPA 307 Standard for the Construction and Fire Protection of Marine Terminals Piers and Wharves, 1995 edition.

NFPA 327, Standard Procedures for Cleaning or Safeguarding Small Tanks and Containers Without Entry, 1993 Edition.

NFPA 385, Standard for tank vehicles for Flammable and Combustible Liquids, 1990

edition.

NFPA 480, Standard for the Storage, Handling, and Processing of Magnesium Solids and Powders, 1993 edition.

NFPA 481, Standard for the Production, Processing, Handling, and Storage of Titanium, 1995 edition.

NFPA 482, Standard for the Production, Processing, Handling, and Storage of Zirconium, 1996 edition.

NFPA 485, Standard for the Storage, Handling, Processing and Use of Lithium Metal, 1994 edition.

NFPA 490, Code for the Storage of Ammonium Nitrate, 1993 edition.

NFPA 501A, Standard for Fire Safety Criteria for Manufactured Home Installations, Sites and Communities, 1992 edition.

NFPA 505, Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operation, 1995 edition.

NFPA 601, Standard for Security Services in Fire Loss, Loss Prevention, 1996 edition.

NFPA 650, Standard for Pneumatic Conveying Systems for Handling Combustible Materials, 1990 edition.

NFPA 651, Standard for the Manufacture of Aluminum Powder, 1993 edition.

NFPA 654, Standard for the Prevention of Fire and Dust Explosions in the Chemical, Dye, Pharmaceutical, and Plastics Industries, 1994 edition.

NFPA 655, Standard for Prevention of Sulfur Fires and Explosions, 1993 edition.

NFPA 701, Standard Methods of Fire Tests for Flame-resistant Textiles and Films, 1996 edition.

NFPA 704, Standard Systems for the Identification of the Fire Hazards of Materials, 1996 edition.

NFPA 705, Recommended Practice for a Field Test of Textiles and Films, 1993 edition.

NFPA 750; Standard on Water Mist Protection Systems, 2000 edition.

NFPA 780, Lightning Protection Code, as adopted under the Vermont Electrical Safety Rules.

NFPA 820 Standard for Fire Protection in Wastewater Treatment and Collection Facilities, 1995 edition.

NFPA 909, Standard for the Protection of Cultural Resources, Including Museums, Libraries, Places of Worship & Historic Properties, 1997 edition.

NFPA 914, Recommended Practice for Fire Protection in Historic Structures, 1994 Edition.

-delete and replace the definition as follows in Section 1-5
"Historic building" or "historic structure" means any structure which has been listed in the National Register of Historic Places or the state register of historic properties or which has been determined to be historically significant by the Vermont Advisory Council on historic preservation or which meets the standards adopted by the division for historic preservation pursuant to Section 723(a) of Title 22.

NFPA 1122, Code for Model Rocketry, 1994 edition.

NFPA 1127, Code for High Power Rocketry, 1995 edition.

NFPA 1231, Standard on Water Supplies for Suburban and Rural Fighting 1993 edition.

NFPA 1963, Standard for Fire Hose Connections, 1993 edition.

NFPA 2001, Standard on Clean Agent Fire Extinguishing Systems, 1996 edition.

NFPA 8503, Standard for Pulverized Fuel Systems, 1992 edition.

State of Vermont, Department of State Buildings Energy Conservation Standard for New and Existing Buildings, 1991 Edition.

UL 8, Foam Fire Extinguishers, 1995.

UL 147A, Standard for Nonrefillable (Disposable) Type Fuel Gas Cylinder Assemblies, 1992.

UL 147B, Standard for Nonrefillable (Disposable) Type Metal Container Assemblies for Butane, 1992.

UL 154, Standard for Carbon Dioxide Fire Extinguishers, 1995.

UL 299 Standard for Dry Chemical Fire Extinguishers, 1995.

UL 567, Standard Pipe Connectors for Flammable and Combustible Liquids and LP-Gas, 1996.

UL 626, Standard for 2 ½ Gallon Stored Pressure Water Type Fire Extinguishers, 1995.

UL 711, Standard for Rating and Fire Testing Fire Extinguishers, 1995.

UL 842, Standard for Valves for Flammable Fluids, 6th Edition, 1993.

UL 900, Standard for Air Filter Units, 1994.

UL 924, Standard for Safety Emergency Lighting and Power Equipment, 1995.

UL 1093, Standard for Halogenated Agent Fire Extinguishers, 1995.

UL 1975, Standard for Fire Tests for Foamed Plastics Used for Decorative Purposes, 1990.

UL 2085, Standard for Insulated Aboveground Tanks for Flammable and Combustible Liquids, 1994.

ULC-S503, Standard for Carbon Dioxide Hand and Wheeled Fire Extinguishers, 1990.

ULC-S504, Standard for Dry Chemical and Dry Powder Hand and Wheeled Fire Extinguishers, 1986.

ULC-S507, Standard for 9 Litre Stored Pressure Water Type Fire Extinguishers, 1983.

ULC-S508, Standard for Rating and Fire Testing of Fire Extinguishers, 1990.

ULC-S512, Standard for Halogenated Agent Fire Extinguishers, 1987.

Section 4. Application for a Construction Permit

(a) The owner or a designated representative, of a building or premises shall obtain a construction permit before beginning any construction, addition, alteration, demolition or installation of equipment, at the building site unless specifically waived by the Commissioner or designated representative for repair or maintenance work.

(b) To obtain a construction permit the applicant shall:
(1) Complete a Construction Permit Application form and submit it to the Fire Prevention Division regional office.
(2) Provide construction documents relating to the construction work and equipment under consideration unless specifically waived by the Commissioner or designated representative based on the size, use, occupancy or complexity of the work.
(3) Submit the required construction permit fee as follows:
(i) The construction permit fee is $4.50 per each $1,000 of the total valuation of the construction work.
(ii) The construction permit fee is $3.75 per each $1,000 of the total valuation of the construction work for alterations to

buildings constructed prior to 1983.
(iii) When an inspection is required due to the change in use of a public building the minimum fee shall be $25.00.
(4) For buildings where the applicant is requesting special consideration for a historic building, include documentation on the designation of the building as being historic, including identification and evaluation of historic adjacent structures and site elements such as sheds, walkways, and fencing; historic construction features such as sheathing, facade or roofing materials, chimneys, skylights, cornices or molding, windows or doors, wainscoting, cabinets and finishes; and historic spaces such as archways, lobbies or rooms which are important to the understanding and application of the building.

(c) The construction documents shall include an express certification that the design meets or exceeds the particular reference standards outlined below. Construction documents prepared by an architect or professional engineer consistent with the professional licensing and registration laws of Vermont meets the intent of this Section without additional certification.
(1) For new buildings and additions utilizing height and area modifications per Section 504 and 506, BOCA National Building Code including; certification indicating compliance with NFPA 1231 and/or NFPA 24.
(2) For new State funded buildings and additions; certification indicating compliance with the "State of Vermont Department of State Buildings Energy Conservation Standard for New and Existing Buildings".

(3) For new federal or municipal funded buildings and additions; certification indicating compliance with "Energy Conservation in New Building Design (ASHRAE 90-80).
(4) For new buildings and additions; certification indicating the building is designed to prevent normally anticipated unstable or dangerous structural conditions.

(d) Plans required under this Code shall be drawn to scale and shall be sufficiently clear, comprehensive, detailed and legible when submitted to the Commissioner or designated representative so that, together with any accompanying specifications and data, the Commissioner or designated representative can readily determine whether or not the proposed building, addition, or alteration, and all proposed building equipment will conform to this Code.

(e) The Commissioner or designed representative shall review the application for a construction permit and the construction documents where applicable and shall issue or deny the application within a reasonable time after filing. The Commissioner or designated representative may require additional information before issuing or denying the application for a construction permit and may issue a conditional construction permit under specified terms and conditions. Conditions of the permit or reasons for denial of the permit shall be transmitted to the applicant in writing.

(f) The Commissioner or designated representative may provide consultation or preliminary plan review for proposed construction when deemed warranted by the significance or complexity of the project.

(g) The Commissioner or designated representative may rebate up to $2,000 of the construction permit fee paid the department toward the cost of a qualified fire sprinkler system installed in an existing building in a designated downtown area.

(h) In the case of abandonment or discontinuance of a building project involving a construction permit fee greater than $150 the construction permit fee may be refunded, upon written request to the Commissioner or designated representative prorated on construction work, services, reviews and inspections conducted prior to such abandonment. Such request shall normally be received within 12 months of the date that the construction permit application was received.

(i) The Commissioner or designated representative may refuse to issue a construction or occupancy permit if the owner or a designated representative owes the Department fees.

Section 5. Variance, Exemption and Reconsideration

(a) The Commissioner may grant a variance approving a different solution to compliance with the intent of this code, or may exempt a portion of a building from the requirements of this Code. It is the policy of the Commissioner that whenever possible the determination of a variance or exemption request be made by the Fire Prevention Program's Director and Regional Managers.

(b) In order for a variance or exemption request to be reviewed the owner or designated representative shall submit:

1. Evidence that the proposed or existing building or premises is not in compliance with this Code.

2. Evidence, letters, statements, test results, construction documents, or other supporting information as required to justify the request.

3. Evidence that strict compliance with the Code would entail practical difficulty, unnecessary hardship or otherwise found unwarranted.

4. Evidence that any such variance or exemption secures the public safety and health and that the methods, means or practices proposed provide equal protection of the public safety and health.

(c) Review of the variance or exemption request shall consider evidence that the Code from which the variance or exemption is sought has not been promulgated as a rule or standard under the Vermont Occupational Safety and Health Act.

(d)The determination on the variance or exemption request shall be made in writing to the applicant and shall advise the applicant of the reconsideration process as contained in Section (e).

(e) The Commissioner may reconsider an interpretation or decision made by a designated representative pursuant to this Section. To request reconsideration the owner or designated representative shall submit a written request to the Commissioner including:

1. Evidence the proposed or existing building or premises is not in compliance with this Code.

2. Evidence, letters, statements, test results, construction documents or other supporting information as required to justify the request.

3. Evidence that the true intent of the Code has been incorrectly interpreted, or the provisions of the Code do not fully apply; or the decision is unreasonable or arbitrary as it applies to alternatives or new materials.

(f) The request for reconsideration shall be submitted no later than 30 days after receiving the variance or exemption request.

(g) A request for variance, exemption, or reconsideration shall not relieve a person from complying with this Code, permit or occupancy requirements, unless the Commissioner expressly authorizes an extension of compliance period pending review of the request.

(h) A request for a variance relating to access to a public building for people with disabilities shall be referred for decision to the Access Board established under Title 21 V.S.A. Section 271-277.

(i) A request for a variance from this Code for historical buildings are forwarded for determination by the historic variance appeals board as established by 21 V.S.A. 252a.

Section 6. Municipal Enforcement and Coordination

(a) Each municipality shall provide information regarding building permits issued by the municipality to the authority having jurisdiction upon request.

(b) The Commissioner may assign the responsibility for the enforcement of all or part of these rules to municipalities which meet the qualifications established in 21 V.S.A. Sec. 256.

(c) Any fire prevention and building code standards adopted by any municipality shall be consistent with the standards adopted in Section 2 and referenced in Section 3 of these rules.

(d) List of the current cooperative inspection agreements are contained in Appendix IV.

(e) A request for a variance relating to access to a public building for people with disabilities shall be referred for decision to the Access Board established under Title 21 V.S.A. Section 271-277.

(f) A request for a variance from this Code for historical buildings are forwarded for determination by the historic variance appeals board as established by 21 V.S.A. 252a.

Section 7. Effective Dates and Severability

(a)These rules shall take effect April 15, 2000 and shall be known as the Vermont Fire Prevention and Building Code - 1999. This Code shall not require changes in the construction documents or construction of a building or portions of a building for which a construction permit has been issued and construction has started within 90 days of the effective date of this Code provided that the building or portions of a building meet or exceed the requirements for existing buildings under this Code. To achieve an orderly transition for compliance with these rules Section 1-16.7.9 of NFPA 1 shall take effect October 15, 2000, Section 15-3.5.1 of NFPA 101 shall take effect January 1, 2001, and Section 13-3.5.1 shall take effect January 1, 2003.

(b)In the event any part or provision of these rules is held to be illegal, this shall not have the effect of making void or illegal any of the other parts or provisions of these rules.

Appendix I - Emergency Notification

The Vermont Division of Emergency Management is the central notification point for obtaining state assistance and response in the event of a hazardous material incident. To notify the Vermont Division of Emergency Management of a hazardous material or other emergency call 1-800-641-5005, 24 hours a day.

Appendix II Requirements for Reporting Fires -Vermont Fire Incident Reporting System (VFIRS)

To understand the fire problem in Vermont, plan for the future and develop strategies to address the fire problem, it is important to have complete reliable data for all fire incidents in Vermont. The Fire Prevention Division, through a cooperative agreement with the Department of Public Safety, maintains and manages the data collection for the Vermont portion of the National Fire Incident Reporting System (NFIRS). The Vermont data is forwarded to NFIRS to help develop a clear picture of the fire problem throughout the United States.

The United States has one of the worst fire loss records of the developed countries. In the early 1980s Vermont had the worst per capita fire fatality record in the United States. Despite significant improvements in fire code enforcement and fire suppression capabilities by local fire departments, Vermont still has a worse than average per capita fire fatality record and one of the worst records in residential property loss.

Complete and reliable data of fire incidents is needed to make informed decisions to protect the people of Vermont.

Title 20 V.S.A. §§ 2833 require that all fires resulting in injury or death, or damage of over $200, be reported to the State fire marshal's office by the fire chief. Failure to submit reports may result in fines or penalties.

The Fire Prevention Division provides local and regional training programs and technical assistance and support for fire departments participating in the fire reporting system.

Appendix III Smoke Detector Law for Single-Family Dwellings

Smoke detectors are necessary to provide early warning in event of a fire. Having working smoke detectors in your home cuts the risk of dying in a fire in half.

The Vermont Smoke Detector Law will reduce the loss of life, injuries and property damage caused by house fires.

Any new single family dwelling constructed in Vermont after January 1, 1994 must be equipped with smoke detectors installed in accordance with the manufacturers' instructions. They must be powered by the house electrical service with battery back-up.

Any existing single family dwelling when transferred or sold must have working smoke detectors installed in accordance with the manufacturers' instructions. At any time of the sale a form must be completed as part of the closing and be presented to the buyer indicating the dwelling is in compliance with this law.

The manufacturers' instructions, which come with each smoke detector, will provide information on the required placement and proper installation of the smoke detectors.

Forms have been made available to real estate agents, attorneys and bankers. Anyone who needs a form or more information can contact your local Fire Prevention Division regional office.

Appendix IV - Current Cooperative Municipal Inspection Agreements:

There are municipalities where the Commissioner has assigned the responsibility for the enforcement of all or part of these rules. Whether a municipality is operating under a cooperative inspection agreement or is independently enforcing a fire prevention and building code, the codes and standards must be consistent with those adopted under Section 2 and 3 of these rules.

The following is a list of cooperative municipal inspection agreements:

Fire and Building Code:

Barre - Responsibility for the enforcement of the Vermont Fire Prevention and Building Codes for residential occupancy.

Bellows Falls - Responsibility for the enforcement of the Life Safety Code for all existing public buildings.

Bennington - Responsibility for the enforcement of the Vermont Fire Prevention and Building Code for selected uses.

Brattleboro - Responsibility for the enforcement of the Vermont Fire Prevention and Building Code for all existing public buildings not in the process of renovations; except hospitals, nursing homes, residential care, day care, public schools or state owned buildings.

Burlington - Responsibility for the enforcement of the Vermont Fire Prevention and Building Code for all new and existing public buildings except for state owned buildings and federally certified health care facilities.

Hartford - Responsibility for the enforcement of the Life Safety Code for all existing public buildings.

Appendix V - Coordination of Activities with Other State Agencies

Underground Storage Tanks

The Agency of Natural Resources, Department of Environmental Conservation (DEC) regulates petroleum and chemical Underground Storage Tanks (USTs) that are 10 percent or more beneath the surface of the ground. All USTs are required to be registered with the Agency except for: (a) Tanks less than 1100 gallons containing fuel oil (#2-#6) which is used for on premises heating and domestic hot water, and (b) farm and residential tanks less than 1100 gallons containing motor fuel which is used for noncommercial purposes. In addition, certain registered USTs are required to have permits for their operation and are subject to other operational standards. All USTs are subject to closure (removal) requirements upon being taken permanently out of service. For additional information contact the Vermont DEC at (802)241-3888.

Asbestos

The Vermont Department of Health regulates the removal of asbestos containing materials, as well as the training for persons who remove asbestos containing materials, in the Vermont regulations for Asbestos

Control. For additional information, contact the Vermont Department of Health, Division of Environmental Health (1-800-439-8550).

Residential Building Energy Standards

The Department of Public Service provides technical assistance and expert advice regarding the energy standard requirements for new residential construction. This includes criteria that builders may use in lieu of computer or systems analysis of the building. For additional information contact the Vermont Department of Public Service at 1-888-373-2255.

Manufactured Housing

This code applies to manufactured or modular housing when the unit is classified as rental housing or is otherwise used as a public building (see Appendix VI page 27). For safety complaints related to manufactured housing that are built on a chassis to conform to the HUD Standard, which are not covered under this code, the owner may contact the U.S. Department of Housing and Urban Development (H.U.D.) in Washington, D.C. at 1-800-927-2891; fax (202)708-4213; or email at www.nhs@hud.gov. Consumer complaints may also be filed with the Consumer Assistance Program of the Vermont Office of Attorney General at 1-800-649-2424.

Pipeline Safety Standards

The Department of Public Service regulates the transportation of natural and other gas by pipeline. For additional information contact the Vermont Department of Public Service at (802)828-2811.

Explosives and Fireworks

The Department of Public Safety requires a person to be licensed to possess, purchase, store, use, transport, give, transfer or sell explosives. For license applications or additional information contact the Division of State Police at (802)244-8781.

The Department of Labor and Industry, Fire Prevention Division, regulates the safekeeping, storage, use, manufacturing, sale, handling, and other disposition of explosive material under the Vermont Fire Prevention and Building Code; see Section 2 and 3 for adopted and referenced codes and standards related to explosive material.

The Department of Labor and Industry, Fire Prevention Division, also regulates the construction, manufacturing, storage, handling and use of fireworks for supervised public displays and pyrotechnic special effects under the Vermont Fire Prevention and Building Code; see Section 2 and 3 for adopted and referenced codes and standards relative to fireworks and pyrotechnic special effects.

It is unlawful for any person to offer for sale, sell at retail or wholesale, possess, use or explode any fireworks except as permitted for a supervised public display of fireworks.

A permit for a supervised public display of fireworks may be obtained from the Chief of the Fire department, or in towns where there is no Fire department from the board of selectman, where it is determined the display would not be hazardous to property or endanger the public. Application for a permit must be made at least 15 days in advance of the fireworks display.

Appendix VI Supplemental Information

Definition of a Public Building

21 V.S.A. § 251a.
(a) As used in this subchapter "public building" means buildings owned or occupied by public utilities, hospitals, schools, houses of worship, convalescent centers and homes for the aged, infirm or disabled, nurseries, kindergartens and day cares; buildings in which 2 or more persons are employed or, occasionally enter as part of their employment or are entertained, including private clubs and societies; cooperatives and condominiums; buildings in which people rent accommodations, whether overnight or for a longer term; restaurants, retail outlets, offices or office buildings, hotels, tents or other structures for public assembly, including outdoor assembly, such as grandstands; buildings owned or occupied by the State of Vermont, a county, a municipality, a village or any public entity, including but not limited to a school or fire district. Use of any portion of a building in a manner described in this subsection shall make the entire building a "public building" for purposes of this subsection. For purposes of this subsection a "person" does not include individuals who are directly related to the employer and who reside in the employment related building.

The term "Public building" does not include:
(1) an owner-occupied single family residence, unless used for a purpose described in subsection (a) of this section;
(2) a family residence registered as a day care home under chapter 35 of Title 33, or specifically exempted from registration by Section 3502(b)(1) of Title 33;

(3) farm buildings on a working farm or farms. For purposes of this subchapter, and subchapter 8 of this chapter; the term "working farm or farms" means farms with fewer than the equivalent of 10 full-time employees who are not family members and who do not work more than 26 weeks a year. In addition, the term means a farm or farms:
(a) whose owner is actively engaged in farming; or
(b) if the farm or farms are owned by a partnership or a corporation, one which includes at least one partner or principal of the corporation who is actively engaged in farming;
(c) where the farm or farms are leased, the lessee is actively engaged in farming. The term farming means:
(i) the cultivation or other use of land for growing food, fiber, Christmas trees, maple sap, or horticultural and orchard crops;
(ii) the raising, feeding, or management of livestock, poultry, equines, fish or bees;
(iii) the production of maple syrup;
(iv) the operation of greenhouses;
(v) the on-site storage, preparation and sale of agricultural products principally produced on the farm. Notwithstanding this definition of farming, housing provided to farm employees other than family members shall be treated as rental housing and shall be subject to the provisions of this chapter: In addition, any farm building which is open for public tours and for which a fee is charged for those tours shall be a considered a public building.
(4) a single family residence with an accessory dwelling unit as permitted under subdivision 4406(4)(D) of Title 24.

21 V.S.A. § 251d.
(d) Any condominium or multiple dwelling using a common roof, or row houses so-called, whether any units are owned or leased or rented, shall be subject to the rules promulgated under this chapter.

Vermont Department of Labor and Industry's Homepage

http://www.state.vt.us/labind/

The Vermont Department of Labor and Industry's Homepage is developing into a resource of Department activities and regulations with additional information available from other Internet sources.

Information for Historic Buildings

The Vermont Fire Prevention and Building Code has many sections which allow alternatives which facilitate the preservation of significant architectural features of historic buildings. These sections may be difficult for individuals without knowledge of the code to locate and apply. This appendix summarizes these sections and provides other related information that may be helpful.

Vermont has an unusually high proportion of older buildings. These buildings contribute substantially to the sense of community and place which makes Vermont unique. At the same time, these buildings may be particularly challenging to adaptively reuse. The Fire Prevention Division Staff encourages all owners of older and historic buildings to seek the assistance of experienced designers specializing in the preservation of these structures. In addition, the Historic Preservation Division and the Fire Prevention Division staff will assist you in using the features of this Code to preserve and enhance your building.

Important Sections Affecting Historic Buildings

To facilitate the review of plans for alterations of existing buildings, clear and comprehensive information needs to be provided to the Assistant State Fire Marshal conducting the review including information on the significant historic features.

There are a number of codes which are part of this Code specifically written for existing and historic buildings;

* NFPA 1, Fire Prevention Code, primarily addresses maintenance and the operation of buildings with performance guidelines for historic buildings.

* NFPA 73, Residential Electrical Code, addresses electrical code requirements in existing residential units.

* NFPA 101, Life Safety Code, principally addresses life safety issues and has specific chapters for existing buildings.

* NFPA 909, Protection of Cultural Resources including Museums, Libraries and places of worship, brings together the design and implementation of fire protection plans designed to protect both people and property.

*NFPA 914, Recommended practice for Fire Protection in Historic Structures, addresses the identification of existing conditions, planning and fire protection practices for historic buildings.

The regional offices of the fire prevention division are staffed with safety professionals who have training and experience in developing solutions to meet both safety and historic preservation concerns. If a solution to a problem has not been developed after plan review or inspection, the owner or

designated representative should contact the regional manager for assistance. With more experience and resources to draw on the regional manager often will develop a solution without requesting a formal variance.

For many buildings there are alternatives for certain code requirements which will provide an equivalent level of safety for the people using the building. To facilitate the review process for historic buildings, a fire safety plan should be developed. Guidance for that plan is found in Section 4.4 of NFPA 914 and Section 2.2 of NFPA 909. Additional flexibility is provided for historic buildings having the option to use the Alternative Approaches to Life Safety contained in NFPA 101A.

Fire Alarm and Detection Systems

Fire alarm and detection systems provide early warning of a fire allowing for safe evacuation of the building and a prompt response of fire suppression activities. There are numerous types, styles and designs of fire alarm and detection equipment which provide options and flexibility for sympathetic installation in historic buildings.
(See NFPA 914, Appendix A or NFPA 909, Appendix F for a general discussion of fire alarm systems and NFPA 101 Section 7-6)

Fire Extinguishing Systems

Automatic fire sprinkler systems and other types of automatic fire extinguishing systems provide early warning of a fire allowing for safe evacuation of the building and provide prompt suppression of the fire using a minimal amount of water. Each sprinkler head has to be heated to a certain temperature by a fire before water is released. Most fires are extinguished by the operation of just one or two sprinkler heads due to the prompt response by the sprinkler system. The amount of water applied to a fire is much less than what would need to be applied by a fire hose line.
(See NFPA 914, Appendix A or NFPA 909 Appendix F for a general discussion of fire extinguishing systems and NFPA 101 Section 7-7)

Automatic fire sprinkler systems have an excellent record of success in saving both people and property. Because of the excellent experience of automatic fire sprinkler systems the Codes have fewer requirements for buildings that have automatic fire sprinkler systems. For example, the Codes would drop or "trade off" certain requirements for historic buildings which have an automatic fire sprinkler system.

To promote the installation of fire sprinkler systems in existing buildings in designated downtown areas, a rebate of up to $2,000 of the construction permit fee is available to applicants where a complete fire sprinkler system is installed. The process for receiving the rebate includes providing documentation from the City or Town Clerk that the building is in a designated downtown area; completion of the fire sprinkler system in accordance with appropriate codes and final acceptance testing and approval of the fire sprinkler system.

Maintenance and Testing of Fire Protection Systems

To help assure that the fire protection systems installed in buildings will function properly when needed, all fire protection systems such as a fire alarm, sprinkler or kitchen hood exhaust system must be tested

periodically by a technically qualified person. Upon completion of the test, the technically qualified person will affix an inspection sticker and notify the fire prevention division of the inspection.

(See NFPA 1 Section 1-9 and the amendments on page 7 of these rules)

Use of Archaic Building Materials

Building materials used within buildings are evaluated for "interior finish ratings" and "fire resistance ratings."

1) Interior finish ratings include evaluations for flame spread, fuel contribution and smoke development. Interior finish ratings are classified as A, B or C. Common archaic finish material such as plaster, tile flooring, wood flooring and metal ceilings will normally meet the standards for interior finish. Wood trim and incidental finish which is less than 10% of the aggregate wall and ceiling areas will also meet the standards for interior finish. Wood paneling which consists of more than 10% of the aggregate wall and ceiling areas will also meet the standards for interior finish in a number of historic buildings such as a bed and breakfast with 16 or fewer guests. However, in some buildings such as schools, the wood paneling would need to be treated with a fire retardant finish. The fire retardant finishes are available in both clear and solid color. The application of a fire retardant finish would not be required for wood paneling in a building provided with an automatic fire sprinkler system.
(See NFPA 101 Section 6-5 and NFPA 909)

2) Fire resistance ratings evaluate building walls, ceilings or doors for the amount of time that it would resist the passage of fire. Construction assemblies can be evaluated by standard tests, rating guidelines published by nationally recognized authorities or by engineering analysis. Many common archaic construction assemblies have substantial resistance ratings while other assemblies may need to be enhanced to meet fire resistance requirements. Fire resistance requirements are commonly found in the code for separation walls which separate a more hazardous area from the rest of the building, such as a boiler room or stairway walls which protect the means of egress from a building. The requirements for construction or wall assemblies with fire resistance ratings in a building are reduced or totally eliminated for existing buildings with an automatic fire sprinkler system.

Field Guide for Historic Buildings

The Field Guide is designed to be used by those involved at all levels in the alteration process of historic and older buildings, including: trades persons, planners, architects, engineers, and property owners. The purpose of the Field Guide is to illustrate and describe successful examples of code compliance that reconcile safety considerations with preservation goals. In addition to including pertinent code and noting sources for further referencing, this manual also encourages and outlines the early and continued cooperation between those directly involved in the project with local code and preservation officials. Contact the Main Office of the Fire Prevention Division for a copy of the Field Guide.

Owning and Operating a Bed & Breakfast

Information on fire and building regulations for people who own and operate small inns and bed and breakfast facilities is available from any office of the Fire Prevention

Division.

A Guide to Building, Construction and Occupancy Permits

This guide is intended to assist you in obtaining the appropriate permits from the Vermont Department of Labor & Industry, Fire Prevention Division, and is available from any office of the Fire Prevention Division.

Carbon Monoxide Detector Location and Information

Carbon Monoxide Detectors are not required to be installed under this Code, however, it is strongly recommended that Carbon Monoxide detectors be installed to protect the sleeping areas in all residential occupancies.

Carbon Monoxide, or CO, is a colorless, odorless, tasteless gas that results from incomplete combustion, such as the fumes emitted from appliances, furnaces, fireplaces or automobile exhaust. CO is a cumulative poison. The symptoms of CO poisoning range from "flu like" symptoms such as: headache, nausea, vomiting and fatigue, for a mild exposure, to disorientation and drowsiness, leading to unconsciousness and death, for a more extreme exposure.

Statistics of the National Fire Protection Association (NFPA) show that most of the fatalities due to CO poisoning happen at night when people are sleeping. Many victims of CO poisoning reported that they were aware they were not feeling well but they were so disoriented that they were unable to call for assistance or leave the building.

The installation of CO detectors can give a warning to people in the building of unhealthy or dangerous levels of CO before the symptoms of CO poisoning occur. CO detectors should be installed and maintained in accordance with the manufacturer's instructions which also includes information on CO safety.

A CO detector is not designed to detect smoke or heat. A CO detector is not a substitute for a properly installed smoke detector.

When purchasing a CO detector look for the Underwriters Laboratory (UL) designation and read, understand and follow the manufacturer's instruction.

Architects and Professional Engineering Licensing Laws Exerts

26 VSA 21 Definitions
(5) The "practice of architecture" means providing professional services such as consultation, investigation, evaluation, planning, designing (including structural design), or responsible supervision of construction in connection with any building or structure which has as its principal purpose human occupancy or habitation.

26 VSA 124 Construction; Exemptions
(a) This chapter shall not be construed to affect or prevent:

(1) The practice of engineering by a professional engineer licensed under the laws of this state;

(2) The preparation of working drawings, details and shop drawings by persons other than architects for use in connection with the execution of their work;

(3) Employees of those lawfully practicing

as architects under the provisions of this chapter from acting under the instruction, control, or supervision of their employers;

(4) supervision by builders or superintendents employed by such builders, of the construction or structural alteration of buildings or structures;

(5) Design and construction, and the provision of services related thereto, of the following if the structure is:

a. A detached single, two-family, three-family, or four-family dwelling, or a shed, storage building or garage incidental to that dwelling;

b. A farm building, including barns, silos, sheds or housing for farm equipment and machinery, livestock, poultry or storage; or,

c. A pre-engineered building, or a building, plans for which have been stamped or sealed by a licensed professional in appropriate field.

d. The provisions of this section shall not be construed to permit any person not licensed as provided in this chapter to use the title architect, or any title, sign, card, or device to indicate that such person is an architect.

e. This chapter shall not be construed to limit or restrict in any manner the right of a practitioner of another profession or occupation.

26 VSA 208 Seal
Each license shall obtain a seal of such design as the board shall authorize and direct. Plans and specifications prepared by, or under the direct supervision of, a licensed architect shall be stamped with the licensee's seal.

26 VSA 1161 Definitions
(2) "Professional engineering services" means any service or creative work, the adequate performance of which requires engineering education, training and experience in the application of special knowledge of the mathematical, physical and engineering sciences . This includes consultation, investigation, evaluation, planning and design of engeering surveys. Such services or work may be either for public or private purposes, and may be performed in connection with any utilities, structures, buildings, machines, equipment, processes, work systems, projects, and equipment systems of a mechanical, electrical, hydraulic, pneumatic or thermal nature, insofar as they involve safeguarding life, health or property.

26 VSA 1162 Exemptions
(a) persons exempt. Section 1162 of this title does not prohibit acts constituting the practice of engineering performed as a necessary part of the duties of:

(1) An officer or employee of the federal government.
(2) An officer or a full-time employee of the state.
(3) An officer or full-time employee of a municipality.
(4) A full-time employee of the Vermont Association of Conservation Districts while performing work for the on-site sewage disposal program.
(5) An officer or employee of a corporation engaged in interstate commerce as defined in the act of Congress entitled "An Act to Regulate Commerce" approved February 4. 1887, as amended.
(6) An officer or employee of a corporation

in interstate communication as defined in the act of Congress entitled "Communications Act of 1934" or of a telephone company under the supervision and regulation of the Department of Public Service.
(7) An employee of a professional engineer.
(8) Students of engineering acting under the supervision of a profession engineer.
(b) Other professions. Section 1162 does not prohibit acts constituting the practice of any other legally recognized profession or occupation, including the activity of site technicians licensed by the Agency of Natural Resources.
(c) Purposes exempt. Section 1162 does not prohibit any person from performing acts constituting the practice of engineering for the purposes of:

(1) Designing or fabricating a manufactured product.
(2) Designing or constructing a building which is not a public building as defined in Title 18.
(3) Designing or constructing a building which contains only one, two or three dwelling units, or accessory buildings.
(4) Construction of public works by a municipality.
(5) Designing or constructing recreational trails and trail-related structures by a not-for-profit organization whose trails have been recognized by the Agency of Natural Resources as part of the Vermont trails system; provided such organization purchases and maintains liability insurance in the amount required by law or under a contract with the State of Vermont, but in no event in an amount that is less than $100,000.00

d. [Repealed].
e. Temporary practice. Section 1162 does not prohibit a person who has become a resident of this State within the preceding six months from performing acts constituting the practice of engineering, provided that:
(1) The person has filed an application for a license under this chapter; and
(2) The person is licensed or registered as a professional engineer in another state which, in the opinion of the Board, has licensing standards substantially equivalent to those applicable under this chapter.

26 VSA 1181a. Transient Practice
A person who is not a resident of this State may obtain a transient practice permit to perform acts constituting the practice of engineering, provided that:

(1) The practice in this State does not exceed 30 days in any calendar year; and
(2) The person is licensed or registered as a professional engineer in another state which, in the opinion of the Board, has regulatory standards substantially equivalent to those applicable under this chapter.

26 VSA 1188 Seal
(a) Each licensee shall obtain a seal of a design authorized or approved by the Board. The seal shall bear the licensee's name and the title "professional engineer".
(b) plans, specifications, plats and reports issued by a licensee shall be stamped with his seal and shall also be signed by the licensee.

Appendix VII Rules for Administrative Citations and Penalties

FIRE PREVENTION DIVISION
VERMONT DEPARTMENT OF LABOR & INDUSTRY

Rules for Administrative Citations and Penalties

Section 1. Scope

The Commissioner or the representative of the Commissioner may, after notice and an opportunity for a hearing, assess an administrative penalty against any person who violates the laws, rules and standards enforced by the Fire Prevention Division. These rules establish the procedure for issuing administrative citations, assessing penalties and appealing citations. All programs enforced by the Fire Prevention Division including boiler/pressure vessel, fire safety, structural, access for persons with disabilities, electrical and plumbing, are covered by these rules ensuring that all programs will have a consistent process for administrative citations. The purpose of these rules is to encourage code compliance which will result in improved safety and access for the public in a timely manner.

Section 2. Authority

These rules are adopted pursuant to:

(a) 21 VSA § 245; Subchapter 6 Boiler & Pressure Vessels
(b) 21 VSA § 254; Subchapter 7 Fire Safety & Prevention
© 21 VSA § 277; Chapter 4 Facilities for the Handicapped
(d) 26 VSA § 897; Chapter 15 Electricians
(e) 26 VSA § 2175; Chapter 39 Plumbers

Section 3. Issuance of Administrative Citation

(a) The Fire Prevention Director may issue an administrative citation based on the recommendation and inspection or investigation by the Commissioner or the representative of the Commissioner, and have the administrative citation served on the person by certified mail or personal service. Each citation shall be in writing and shall specifically describe the nature of the violation, its location and include a reference to the particular section of the law, rule or standard alleged to have been violated. The citation shall also state the amount of the fine and the process for appeal.

(b) The person alleged to have committed the violations shall have twenty days from the date of service to notify the Director, in writing, of any intent to appeal the citation and fine. If no notice or appeal is filed the citation and penalty shall be deemed a final order of the Commissioner.

(c) Administrative citations and penalties issued under these rules shall not limit the authority of the Commissioner or a representative of the Commissioner under other sections of law to issue orders, revoke permits, stop work on construction, seek injunctive relief and penalties through the court system, order buildings closed, demolished or to be fenced off, or to order the electrical power to be disconnected, or to take any other appropriate enforcement action.

Section 4. Appeal of Proposed Penalty

The procedures set forth in 3 V.S.A. § 809 and 813 shall cover all hearings under these rules.

(a) A person who appeals a citation issued by the Director, pursuant to Section 3 of this rule shall be entitled to a hearing before the Commissioner or designee within 45 days of filing the notice of appeal. The 45 day time frame may be extended if the appellant requests, in writing, additional time to prepare for the hearing.

(b) A hearing notice to the appellant shall include the following information:

(1) A statement of the time, place, and nature of the hearing;

(2) A statement of the legal authority and jurisdiction under which the hearing is to be held;

(3) A reference to the sections of the statutes and rules involved;

(4) A short and plain statement of the matters at issue.

(c) The Commissioner may appoint a hearing officer to hear evidence on any complaint and prepare findings and recommend a decision.

(d) The applicant may appear at the hearing with Counsel, present evidence and cross-examine witnesses.

(e) At the hearing the rules of evidence shall be according to 3 V.S.A. § 810.

(f) Opportunity shall be given all parties to respond and present evidence and argument on all issues involved.

(g) The hearing officer may compel, by subpoena, the attendance and testimony of witnesses and the production of books and record in accordance with 3 V.S.A. § 809.

(h) At the close of the evidence the Commissioner shall issue a written decision with findings of fact and conclusions of law determining whether a violation or violations have occurred and the amount of any penalty to be assessed.

(i) Nothing in this section shall prohibit the informal disposition of a citation by stipulation, agreed settlement, consent order or default. Informal disposition may proceed with clear and simple documentation without complete adherence to this section.

Section 5. Administrative Penalty/Fine

When a penalty is assessed the fine shall be as follows:

(a) Permits:

(1) Failure to obtain an identification tag for a boiler or pressure vessel, the fine shall be $50.00 for each occurrence.

(2) Failure to obtain a construction permit before starting work, the fine shall be an additional amount equal to ½ of the construction permit fee due the Department, but not less than $50.00 for each occurrence.

(3) Failure to file an electrical or plumbing work notice with the appropriate fee, before starting work, the fine shall be $50.00 for each occurrence.

(b) Repair and Construction:

(1) Failure to notify a state or special inspector for the repair, alteration or relocation of a boiler or pressure vessel, the fine shall be
$50.00 for each occurrence.

(2) Failure to request a rough electrical inspection, the fine shall be $50.00 for each occurrence.

(3) Failure to comply with a stop work order, the fine shall be $500.00 for each occurrence.

(c) Operation and Use:

(1) Operating or allowing a boiler or pressure vessel to be operated without a valid certificate of inspection, the fine shall be $250.00 for each occurrence.

(2) Failure to obtain a Use and Occupancy Permit before occupancy or using a building, the fine shall be $250.00 for each occurrence.

(3) Failure to obtain an energizing permit before the electrical installation is energized, the fine shall be $250.00 for each occurrence.

(d) Code Violations:

In assessing the penalty for code violations the Commissioner or a duly authorized representative shall consider the seriousness of the hazard, the number of people exposed to the hazard, whether or not the violation was corrected after notification of its existence, and whether the person has been fined for the same or similar violations in the past. In assessing the penalty where the violation concerns access to the building, whether access to the building is prevented as well as any alternative provisions shall be considered.

(1) The fine shall not exceed $500.00 for each code violation which poses a serious threat to life safety, or prevents access or use of a building or premise.

(2) The fine shall not exceed $1,000.00 for each code violation which poses a serious threat to life safety, or prevents access or use of a building or premise, where the person has not corrected the violation after receiving written notification.

(3) The fine shall not exceed $100.00 for each technical code violation which does not pose a serious threat to life safety, or does not prevent access or use of a building or premise.

(4) The fine shall not exceed $200.00 for each technical code violation which does not pose a serious threat to life safety, or does not prevent access or use of a building or premises, where the person has not corrected the violation after receiving written notification.

(e) Licensing and Certification:

(1) A person who performs electrical or plumbing work without being properly licensed shall be fined not more than $500.00 for each occurrence.

(2) A person who performs sprinkler design or installation, gas installation, or inspection and tests of fire protection systems without a certificate of fitness shall be fined not more than $250.00 for each occurrence.

(f) Other:

The fine shall not exceed $500.00 for each administrative or technical violation not otherwise noted in this section.

Section 6. Severability Clause

In the event any part or provision of these rules is held to be illegal, this shall not have the effect of making void or illegal any of the other parts or provisions of these rules.

Section 7. Effective Date

These rules shall take effect on November 2, 1994 and shall supersede Article III, Section 6, 7 and 8 of the State of Vermont Electrical Safety Rules adopted June 1, 1993

(Note: See Page 23 for the effective date of the Vermont Fire Prevention and Building Code)

Appendix VIII - How to Obtain Adopted Standards and Reference Documents:

National Fire Protection Association
1 Batterymarch Park
Quincy Mass 02269-9101
1-800-344-3555
www.nfpa.org/

American Society of Heating Refrigeration and Air Condition Engineers
1791 Tullie Circle N.E.
Atlanta, GA 30329
404-636-8400
www.ashrae.org/

American Society of Mechanical Engineers
22 Law Drive, Box 2900
Fairfield, NJ 07007
1-800-843-2763
www.asme.org/

American Society for Testing and Materials
100 Barr Harbor Drive
West Conshohocken PA 19428-2959
610-832-9585
www.astm.org/

American Water Works Association Inc.
6666 West Quincy Avenue
Denver CO 80235
303-794-7711
www.awwa.org/asp/default.asp

American Welding Society, Inc.
550 N.W. Lejunne Road
P.O. Box 351040
Miami FL 33135
1-800-699-9277
www.cssinfo.com/info/aws.html

Building Officials & Code Administrators International, Inc.
4051 West Flossmoor Road
Country Club Hill IL 60478-5795
708-799-2300
www.boca\.org/

Compressed Gas Association, Inc.
1725 Jefferson Davis Highway
Arlington, VA 22202
703-412-0900
www.cganet.com/default.html

Petroleum Equipment Institute
P.O. Box 2380
Tulsa OK 74101
1-800-699-9277
www.cssinfo.com/info/api.html

State of Vermont, Department of Buildings and General Services, 2 Governor Aiken Avenue, Montpelier VT 05633
802-828-3314
www.bgs.state.vt.us/

Underwriters Laboratories Inc.
333 Pfingsten Road
Northbrook IL 60062
847-272-8800
www.ul.com/

Underwriters Laboratories of Canada
7 Crouse Road
Scarborough ONT MIR 3A9
416-757-3611
uld.ca/contactinfo.html

Appendix IX - Average Yearly Snowfall