VERMONT

2012

FIRE & BUILDING SAFETY CODE

VERMONT DEPARTMENT OF PUBLIC SAFETY

DIVISION OF FIRE SAFETY

OFFICE OF THE STATE FIRE MARSHAL, STATE FIRE ACADEMY and THE STATE HAZ-MAT TEAM

www.firesafety.vermont.gov

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2012 Vermont Fire & Building Safety Code
Introduction

Since 1972 the State of Vermont has adopted nationally recognized safety standards to protect the public from fire and explosion hazards and establish standards for fire safety. Standards for boiler safety have been in place even longer. Vermont is able to benefit from the research and fire safety experience from experts across the nation in every area of expertise by using nationally recognized safety standards in this *Code*. The national standards are amended only when necessary to address conditions specific to Vermont, stay within the limits set by law or to clarify interpretations of certain sections.

The *2012 Vermont Fire & Building Safety Code* establishes the process to obtain a construction or operating permit lists the codes and standards that are adopted and describes the process used to evaluate and grant a variance or exemption from the *Code.* The annexes to this *Code* are designed to help people understand the state laws related to fire, explosion, hazardous materials, structural safety and carbon monoxide, and enable people to understand and take advantage of the flexibility built into this *Code* for historic buildings.

This *Code* establishes separate minimum standards for new and existing buildings, and existing buildings that are used for a new purpose. This *Code* recognizes the need to protect the public when the use of a building changes putting more people at risk or introducing new hazards to a building. But, this *Code* is also written to facilitate the adaptive reuse of buildings recognizing certain limitations of existing buildings. This *Code* has less restrictive requirements for low risk occupancies and promotes the use of alternative solutions for safety.

The *Life Safety Code (NFPA 101)* is the most widely used standard adopted under this *Code* and applies to all buildings and premises regulated under this *Code.* The *Life Safety Code* regulates construction, fire protection and occupancy features necessary to minimize danger to life from fire and to allow escape from fire and non-fire emergencies.

The *Fire Code (NFPA 1)* applies to new and existing conditions including general fire safety provisions, fire protection including sprinkler systems, fire department access to buildings and special material and process fire hazards. The *Fire Code* functions as a guide to determine what other specialty codes and state amendments apply to a building, premise, or condition.

The *International Building Code (IBC)* applies to new construction and structural requirements. It is used to determine the allowable size of new construction, structural design features such as the snow load, and to ensure compliance with the performance requirements of other adopted standards.

The *National Board Inspection Code (NBIC)* is focused on the installation, maintenance and inspection of boilers and pressure vessels. The American Society of Mechanical Engineers (ASME) standards referenced in section 6 (c) regulates the design and manufacture of boilers and pressure vessels. Prior to the 2005 Vermont Fire & Building Safety Code there had been a separate set of rules for boilers and pressure vessels. By combining the boiler rules with the fire prevention rules there will be a simplified administrative process and better coordination for inspections regarding heating systems.

Information on how to contact the Division of Fire Safety and obtain copies of the adopted codes is in Annex V at the end of this *Code*.

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Section 1 — Title, Intent and Authority

(a) These rules are adopted under 20 V.S.A. Chapter 173, Subchapter 2 “Fire Safety Division”, Subchapter 3 “Fire Hazards and Dangerous Substances”, Subchapter 5 “Boilers and Pressure Vessels” and Chapter 177 “Explosives and Fireworks”, and shall be known and cited as the Vermont Fire & Building Safety Code - 2012. It is the intent of these rules to provide for the public safety as directed by these sections of the law. (see Annex I for Public Building definition)

(b) This *Code* shall be administered and enforced by the Commissioner of Public Safety and staff members of the Division of Fire Safety that are hereby designated to enforce this *Code* and utilize discretionary authority regarding the details of the application of 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** (AHJ). For the purpose of NFPA sections 1:1.13, Certificates of Fitness, and 1:20.12.3 & 101:37.7.5, Smoke Alarm & Carbon Monoxide Alarm – Consumer Information, the Commissioner and staff members of the Division of Fire Safety are designated as the AHJ.

(c) The AHJ may establish priorities for enforcing these rules and standards based on the relative risk to people and property.

(d) These rules apply to "public buildings" as defined by 20 V.S.A Chapter 173.

(Note: See Annex 1 for the definition of "public buildings" from 20 V.S.A. Chapter 173. Note that most owner-occupied single family residences are exempt from the definition of public buildings and are thus not included in the scope of this code; see definition of "public buildings" for exceptions).

Section 2 — Adoption of Nationally Recognized Standards

The following nationally recognized safety standards, as amended herein, are adopted for the purpose of making rules regarding the safeguarding of people and property in case of fire, explosion, hazardous materials, dangerous structural conditions and the generation of carbon monoxide.

LIFE SAFETY CODE – NFPA 101 – 2012
FIRE CODE – NFPA 1 – 2012
INTERNATIONAL BUILDING CODE – IBC - 2012
NATIONAL BOARD OF INSPECTION CODE (NBIC) 2004

This *Code* has been designed to minimize any conflict or difference between adopted codes and standards. Where there is a conflict between the codes or codes & standards the Life Safety Code (NFPA 101) or Fire Code (NFPA 1) shall apply. Where one code or standard has a requirement and another code or standard does not have a requirement the code or standard with a requirement shall apply.

The provisions of this code shall apply to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every public building or structure or any appurtenances connected or attached to such buildings or structures regulated under this code.

Matrix on next page shall be used to assist in designing construction projects.

Matrix of Vermont Fire and Building Codes by Project Type

New Construction	Major Rehabilitation, Modification, Reconstruction No Additions	Building Addition	Existing Building With Change of Use/Renovation
IBC & NFPA 1 & 101 apply. All IBC Chapters apply except Chapters; 8, 10, 11, 13, 27, 28, 29, 33 & 34 NFPA 101 Chapter 1 thru 11 and New Occupancy chapter apply, and all chapters of NFPA 1 as applicable • Purpose of IBC is to safeguard public health, safety and general welfare • Purpose of NFPA 1 & 101 is to provide an environment reasonably safe from fire	IBC used for structural requirements only Refer to NFPA 101 Chapter 43 for Building rehabilitation NFPA 1 applies Refer to NFPA 220 for type of construction (NFPA 101 page 386)	IBC applies to new construction and 3401.1 height & area Refer to NFPA 101 Chapter 43 for Building rehabilitation NFPA 1 applies Refer to NFPA 220 for type of construction (NFPA 101 page 386)	IBC used for structural requirements only Refer to NFPA 101 Chapter 43 for Building rehabilitation NFPA 1 applies Existing NFPA 101 chapter applies to existing building section not being altered 1- Determine occupancy use 2- Refer to NFPA 220 for type of construction

1- Always determine occupancy type first
2- Include a code analysis with plan submittal for all new or large renovation projects
3- Vermont Fire & Building Code Amendments apply to all categories above
4- Vermont Access Rules and 2010 ADA Standards for Accessible Design applies to all categories
5- Vermont Electrical, Plumbing, Elevator and Energy Rules applies to all categories
6- NFPA 1 applies to all categories, in addition to referenced standards in IBC, NFPA 1 & 101
7- When a conflict between codes is identified, NFPA governs for all categories, or where one code or standard has a requirement and another code or standard does not have a requirement the code or standard with a requirement shall apply.

[Updated October 2, 2012]

-delete & replace in part- section 101:2.2 **National Electrical Code & Residential Electrical Safety Code**: Any reference to NFPA 70 and 73 in this *Code* shall be to the edition adopted by the Vermont Electricians Licensing Board. The temperature and flame exposure ratings, resistance to the spread of fire, or flame spread, and the fire-resistant characteristics preventing the carrying of fire from floor to floor, shall be in accordance with the National Electrical Code as published.

-delete & replace in part - section 101:2.2 Reference Publications: Any reference to NFPA 5000, Building Construction and Safety Code, 2012 Edition, shall be to the **International Building Code**, 2012 edition, as amended in this *code.*

-delete & replace in part- section 101:2.3.4 Safety Code for **Elevators**: Any reference to ASME 17.1 or 17.3 in this *Code* shall be to the edition adopted by Vermont Elevator Safety Review Board.

-delete & replace- section 101:3.3.188.7 Definition of **Health Care Occupancy**: An occupancy used for purposes of medical or other treatment or care of three or more persons where such occupants are mostly incapable of self-preservation due to age, physical or mental disability, or because of security measures not under the occupant's control.

-delete & replace- section 101:3.3.188.12 Definition of **Residential Board & Care Occupancy**: A building or portion thereof that is used for lodging or boarding of three or more residents, not related by blood or marriage to the owners or operators, for the purpose of providing personal care services.

-add- section 101:4.6.4.2.1 **Historic Buildings**: NFPA 914, Code for Fire Protection of Historic Structures, 2010 edition, provides guidance to the AHJ in exercising the discretionary authority granted in section 4.6.2.2.

-add- section 101:7.1.10.1.1 Clearance for **Inclined Lifts on Stairways**: Where a platform or chair lift is installed on an exit stair in an existing building the minimum clear width on the stair when the inclined lift is in the down position shall be

- 18" when the stair serves fewer than 10 people
- 22" where the stair serves fewer than 50 people
- as required by this *Code* when the stair serves 50 or more people

Where a platform or chair lift is installed on an exit stair in a new building the minimum clear width on the stair when the inclined lift is in the down position shall be as required by this *Code.*

-delete & replace- section 101:7.2.2.4.4.5 **Handrail Clearance:** New handrails shall be installed to provide a clearance of not less than 1 ½" nor more than 2 ¼" between the handrail and the wall to which it is fastened.

-delete- section 7.2.2.5.5.4 Perimeter Demarcation Marking

-delete & replace- section 101:7.2.2.6.5 **Outside Stairs, Accumulation of Snow, Ice or Water**: New outside stairs and landings, other than the primary entrance, shall be designed to minimize the accumulation of snow, ice and water by a roof or other approved means. [*cross reference to 1:14.4.1.*]

-add- section 101:7.12.3 **Boiler Room Exits**: Two means of egress shall be provided for boiler rooms exceeding 500 sq. ft. floor area and containing one or more boilers having a fuel capacity of 1,000,000 BTU/HR or more. Each elevation shall be provided with at least two means of egress, each to be remotely located from the other. A platform at the top of a single boiler is not considered an elevation. [*reference NBIC I-2341*]

[Commentary: *Vermont amendments to NFPA 54, Fuel Gas Code, and NFPA 58, LP Gas Code, are found in NFPA 1:11.5 and 1:69*]

-delete & replace- section 101:9.1.2 **Electrical Systems**: All electrical wiring and equipment shall installed and maintained in accordance with NFPA 70, National Electrical Code and NFPA 73, Residential Safety Code, as adopted by the Electricians' Licensing Board. The temperature and flame exposure ratings, resistance to the spread of fire, or flame spread, and the fire-resistant characteristics preventing the carrying of fire from floor to floor, shall be in accordance with the National Electrical Code as published.

-add- section 101:9.2.3.1 **Isolated Cooking Operations**: The requirements for the hood, grease removal devices, duct and fixed fire extinguishing system may be modified by the AHJ 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 of fuel, and electrical shut off for equipment are in compliance with this *Code.*

-add- section 101:9.6.1.9 **Fire Alarm Circuit Classification:** All newly installed fire alarm systems in healthcare, detention & correctional, residential board & care occupancies, assembly occupancies with more than 300 people, and all high rise buildings, shall be electrically wired as a Class A system.

-delete & replace- section 101:9.6.2.10.2.1 **Power for Smoke Alarms**: All newly installed (including replacement) smoke alarms in one & two family dwellings, multiple unit dwellings, lodging or rooming houses, hotels and dormitories shall be directly wired to a non-dedicated electrical branch circuit for the building and by battery.

-add- section 101:9.6.2.12 **Photoelectric Smoke Alarms:** All newly installed smoke alarms in dwelling units, lodging or rooming houses, hotels and dormitories, shall be the photoelectric-only-type.

-add- section 101:9.6.4.2.1 **Telecommunication Marking**: Where Emergency Force Notification is provided the fire alarm control panel and the demarcation point for all fire alarm systems shall be marked as to the method of emergency forces to assist in the periodic inspection of the fire alarm. The sticker/tag shall be adhered or tie rapped at the demarcation point, and shall include the following; Plain Old Telephone Service (POTS Numbers), Internet Protocol (IP), Radio/Master Box Number, Private Radio, Cellular Units or Managed Facilities Voice Network (MFVN).

-add- section 101:9.6.4.4 Single Line DACT: A **Digital Alarm Communicator Transmitter (DACT)** utilizing a single line, without a secondary transmission means as required by NFPA 72:26.6.3.2.1.4, shall be permitted where a fire alarm system is not required to provide emergency forces notification under this *Code when no other means is available. A secondary transmission means, ONLY when available, to be provided by any means available 72:29.6.3.2.1.4(A).*

[Commentary: *Vermont amendments to NFPA 13, 13D, 13R and 25 are found in NFPA 1:13.3*]

-add- section 101:9.7.2.2.1 **Outside Bell and an Inside Bell in Apartment and Condo Occupancies,** All buildings shall be protected throughout by an approved, supervised automatic sprinkler system installed in accordance with Section 30.3.5.2. In buildings with 11 or fewer dwelling units, an interior and exterior bell shall be accepted as supervision.

-delete & replace- section 101:9.7.4.1 **Portable Fire Extinguishers**: Portable fire extinguishers shall be located, installed, inspected and maintained in accordance with NFPA 1 section 13.6.

-delete & replace 9.8 **Carbon Monoxide Detection**: Where required by another section of this *Code* carbon monoxide alarms (detectors) shall be installed in accordance with NFPA 720, Standard for the Installation of Carbon Monoxide Warning (CO) Equipment in Dwelling Units, 2012 edition. NFPA 720 covers the selection, application, installation, location, testing and maintenance of carbon monoxide warning equipment in all buildings in which people sleep.

-add- section 101:9.8.1 **Power for Carbon Monoxide Alarms**: All newly installed carbon monoxide alarms (detectors) in multiple unit dwellings, lodging or rooming houses, hotels and dormitories, or other buildings in which people sleep, shall be directly wired to a non-dedicated electrical branch circuit for the building and by battery. Carbon monoxide detectors in one-two family dwellings that existed on October 22, 2005, shall be permitted to be powered by any approved source. (9 VSA Chapter 77)

-add- section 101:9.8.2 **Testing for Carbon Monoxide Alarms** (Detectors): All carbon monoxide alarms (detectors) shall have functional tests conducted in accordance with the manufacturer's instructions initially when installed and annually thereafter. The requirements for monthly testing in accordance with NFPA 720 shall also apply and may be accomplished by the owner or tenant.

-add- section 101:9.8.3 **Carbon Monoxide Alarms for Through the Wall Vent Termination:** In buildings other than where people sleep, carbon monoxide alarms shall be installed in areas adjacent to, but not outside of the distance established in the manufacturer's instructions, for all fuel fired heating appliances vented through the wall and terminating less than 7 feet above ground level.

[Commentary: *Carbon Monoxide alarms (detectors) installed in accordance with the manufacturer's instructions in one-two family dwellings are considered in compliance with the requirements for audibility under NFPA 72 and 720. Carbon Monoxide alarms (detectors) installed in accordance with the manufacturer's instructions are also considered in compliance with the requirements for audibility under NFPA 72 and 720 for apartments when the design of the apartment unit is consistent with a single family dwelling unit, however, where Carbon Monoxide alarms (detectors) are located remote from the bedroom area, or where doors have been designed to keep out noise, the audibility of Carbon Monoxide alarms (detectors) may not meet the requirements established under section 6.4.4 & 6.5.1 of NFPA 720.] The audibility standard may also be difficult to meet in lodging & rooming facility or a hotel or dormitory where doors are designed to keep out noise. Where additional sound is needed the sound level can be increased by decreasing the spacing of Carbon Monoxide alarms (detectors) or by placing Carbon*

Monoxide alarms (detectors) in each bedroom. Where Carbon Monoxide alarms (detectors) are installed in each bedroom Carbon Monoxide alarms (detectors) are not required in the corridor or common area.]

-add- 101:9.8.4 **Carbon Monoxide/Fire Alarm Interconnection**). Where desired carbon monoxide alarms may be integrated into the fire alarm system control panel. Notification appliances installed as part of the fire alarm system may be used for CO alarm detection notification of the building occupants when the notification appliances have been installed in compliance with the appropriate sections of NFPA-72. Requirements do not apply to single-station or multi-station Carbon Monoxide Alarm devices.

-add- section 101:13.1.1.4.1 Change of Ownership: A **place of assembly that 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.

-delete & replace- section 101:14.7.2.3(1) **Emergency Egress and Relocation Drills**: Not less than one emergency egress and relocation drill, in accordance with the school's emergency preparedness plan, shall be conducted every month the facility is in session.

-delete & replace- section 101:15.2.1.2 **Student Occupied Space**: Rooms normally occupied by preschool, kindergarten or first grade students shall be located on a level of exit discharge, unless otherwise permitted by 15.2.1.4. Rooms with 4 or fewer students, where the ratio of students to teachers or aides does not exceed 2:1 at any time, are not considered normally occupied by students in regards to this section.

-delete & replace- section 101:15.7.2.3(1) **Emergency Egress and Relocation Drills**: Not less than one emergency egress and relocation drill, in accordance with the school's emergency preparedness plan, shall be conducted every month the facility is in session.

-delete & replace – section 101:16.6.3.4.4 **Carbon Monoxide Detection in New Daycare**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 in the immediate vicinity of each separate sleeping area.

-delete & replace – section 101:17.6.3.4.5 **Carbon Monoxide Detection in Existing Daycare**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 in the immediate vicinity of each separate sleeping area.

-delete- sections 101:18.1.1.4.3.3 and 101:18.1.1.4.3.4 Alternative Provisions for Fire Sprinkler System during Rehabilitation Work in new Health Care Occupancies.

-add – section 101:18.3.4.6 **Carbon Monoxide Detection in New Health Care**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 in each nursing station. [*Location of Carbon Monoxide alarms (detectors) at each nursing station enables staff to monitor any level of Carbon Monoxide and to take appropriate action prior to an alarm condition*]

-add – section 101:19.3.4.6 **Carbon Monoxide Detection in Existing Health Care**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 in each nursing station. [*Location of Carbon Monoxide alarms (detectors) at each nursing station enables staff to monitor any level of Carbon Monoxide and to take appropriate action prior to an alarm condition*]

-delete & replace- sections 101:19.3.5.1 & 19.3.5.3 **Existing Health Care**: Existing health care facilities shall be protected throughout by an approved supervised automatic fire sprinkler system installed in accordance with section 9.7.

-add – section 101:22.3.4.5 **Carbon Monoxide Detection in New Detention and Correctional Facilities**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 in control rooms used by the facility.
-delete- section 101:22.4.4 Renovations for Existing Non-sprinklered Detention and Correctional Facilities

-delete & replace- section 101:22.4.5.1.1 **Capacity of New Lockups**: Lockups in occupancies, other than detention and correctional and health care occupancies, where the holding area has capacity for more than 3 detainees shall be classified as detention and correctional occupancies and shall comply with chapter 22.

-delete & replace- section 101:22.4.5.1.3 **Requirements for New Lockups**: Lockups in occupancies, other than detention and correctional and health care occupancies, where the holding area has capacity for not more than 3 detainees, and where no individual is detained for 24 hours or more, shall comply with 22.4.5.1.4 and 22.4.5.2.

-add – section 101:23.3.4.5 **Carbon Monoxide Detection in Existing Detention and Correctional Facilities**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 in control rooms used by the facility.

-delete and replace- section 101:23.3.5.2 **Existing Detention & Correctional**: Existing detention & correctional facilities classified as Use Condition II, III, IV or V shall be protected throughout by an approved supervised automatic fire sprinkler system installed in accordance with section 9.7.

-delete & replace- section 101:23.4.5.1.1 **Capacity of Existing Lockups**: Lockups in occupancies, other than detection and correctional and health care occupancies, where the holding area has capacity for more than 3 detainees shall be classified as detention and correctional occupancies and shall comply with chapter 23.

-delete & replace- section 101:23.4.5.1.3 **Requirements for Existing Lockups**: Lockups in occupancies, other than detention and correctional and health care occupancies, where the holding area has capacity for not more than 3 detainees, and where no individual is detained for 24 hours or more, shall comply with 23.4.5.1.4 and 23.4.5.2.

-add- section 101:24.1.1.1.1 **One & Two Family Dwellings used for Transient Lodging:** A building that provides sleeping accommodations for a total of more than 6 people on a transient basis shall be classified as a lodging or rooming house or a hotel or dormitory under this code.

-add- section 101:24.2.2.3.3.1 **Existing Means of Escape**: The clear opening of an existing means of escape (***escape window***) under 24.2.2.3.3 shall be permitted to be not less than 5.0 square feet.

-add- section 101:24.2.5.7 **Stair riser heights and tread depths**: Maximum riser heights of 7 ¾ in. and minimum tread depths of 10 in. shall be permitted in new construction.

-delete- 101:24.3.4.1.3 smoke alarms powered by batteries

-add – section 101:24.3.4.4 **Carbon Monoxide Detection, One-Two Family Dwellings**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 outside of each separate sleeping area in the immediate vicinity of the bedrooms. An additional carbon monoxide alarm (detector) shall be installed in any sleeping room that contains a fuel-burning appliance.

-delete- section 101:24.3.5.1 **Fire Sprinkler Protection for One and Two Family Dwellings**.

[Commentary: ***Manufactured housing*** *that is built on a chassis to conform to the Housing and Urban Development (HUD) Standard is preempted by that federal standard and not subject to additional requirements under this Code except for smoke alarm and carbon monoxide alarm requirements. Manufactured housing built to the HUD standard has an identification plate.*

Smoke alarms installed in accordance with NFPA 501:5.9 are required to be photoelectric only in accordance with Title 9 V.S.A. Chapter 77 and this code. An owner may contact the U.S. Department of Housing and Urban Development (HUD) in Washington, D.C. at 1-800-927-2891 or the Consumer Assistance Program of the Vermont Office of Attorney General at 1-800-649-2424 for additional information regarding construction requirements.]

-delete & replace- section 101:24.5.1.2 **Unvented Fuel-fired Heaters**: Unvented room heaters and unvented fireplaces shall not be used.

-add- section 101:24.6 **Subdivision of Building Spaces in One-Two Family Dwellings**: New one-two family dwellings shall be provided with dwelling unit separation in accordance with 30.3.7.

-add- section 101:26.1.1.1.1 **Small Lodging & Rooming Houses**: A building that provides sleeping accommodations for a total of 6 or fewer persons, and is occupied by the proprietor, may be classified as a one and two family dwelling by the AHJ.

-delete & replace -add – section 101:26.3.4.6 **Carbon Monoxide Detection, Lodging & Rooming**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 outside of each separate sleeping area in the immediate vicinity of the bedrooms. An additional carbon monoxide alarm (detector) shall be installed in any bedroom that contains a fuel-burning appliance.

-delete- section 101:26.3.6.2 **Exception for Automatic Sprinkler**: Protection for New Lodging & Rooming Houses with Direct Access.

-delete & replace- section 101:26.5.2.2 **Unvented Fuel-fired Heaters**: Unvented room heaters and unvented fireplaces shall not be used.

-delete & replace-add – section 101:28.3.4.6 **Carbon Monoxide Detection in New Hotels & Dormitories**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 in any section of corridor or common area that is in the immediate vicinity of sleeping rooms, or where there is no corridor, in each sleeping room. An additional carbon monoxide alarm (detector) shall be installed in any sleeping room that contains a fuel-burning appliance.

-delete - section 101:28.3.5.2 **Exception for Automatic Sprinkler:** Protection for New Hotels & Dormitories with Direct Access.

add- section 101:29.3.4.4 **Detection for Existing Hotels & Dormitories**: A corridor smoke detection system in accordance with section 9.6 shall be installed in existing hotels & dormitories other than those protected throughout by an approved supervised automatic sprinkler system in accordance with section 9.7.

-add – section 101:29.3.4.6 **Carbon Monoxide Detection in Existing Hotels & Dormitories**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 in any section of corridor or common area that is in the immediate vicinity of sleeping rooms, or where there is no corridor, in each sleeping room. An additional carbon monoxide alarm (detector) shall be installed in any sleeping room that contains a fuel-burning appliance.

.-delete & replace– section 101:30.3.4.6 **Carbon Monoxide Detection, New Apartment Buildings**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 outside of each separate sleeping area in the immediate vicinity of the bedrooms. An additional carbon monoxide alarm (detector) shall be installed in any bedroom that contains a fuel-burning appliance.

-delete and replace – section 30.3.5.1 **Sprinkler Protection New Apartment Buildings**: Sprinkler systems shall not be required where every dwelling unit provides one of the following: 1) Exit door opening directly to the street or yard at ground level; 2) Direct access to an outside stair that complies with 7.2.2 and serves a maximum of two units, both located on the same floor; 3) Direct access to an interior stair serving only that unit and separated from all other portions of the building by fire barriers having a 1-hour fire resistance rating with no openings therein.

-delete & replace- section 101:30.5.2.2 **Unvented Fuel-fired Heaters:** Unvented room heaters and unvented fireplaces shall not be used.

-delete & replace – section 101:31.3.4.5.2 **Smoke Alarms Existing Apartment Buildings**: All electrically wired smoke alarms shall be required to be provided with secondary power supply source. Interconnection of smoke alarms shall apply only to new construction. 9.6.2.10.1.3

-delete & replace- section 101:31.3.4.5.4 **Smoke Alarms Existing Apartment Buildings**: Smoke alarms required by 31.3.4.5.3 shall be installed in all sleeping rooms by 11/1/2015 at which time all smoke alarms must be electrically wired.

-add – section 101:31.3.4.6 **Carbon Monoxide Detection, Existing Apartment Buildings**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 outside of each separate sleeping area in the immediate vicinity of the bedrooms. An additional carbon monoxide alarm (detector) shall be installed in any bedroom that contains a fuel-burning appliance.

-delete & replace- section 101:31.5.2.2 **Unvented Fuel-fired Heaters:** Unvented room heaters and unvented fireplaces shall not be used.

-add- section 101:32.1.1.4 **Assisted Living Facilities**: In addition to the requirements of this chapter a facility licensed under the Department of Aging & Disabilities Rules for Assisted Living Residences shall comply with the following:

(1) All facilities shall be fully sheathed (15 min. fire rating) in addition to having complete automatic fire sprinkler protection.

(2) Emergency lighting shall be provided for the means of egress and in the vicinity of doors equipped with delayed egress locks.

(3) Small facilities shall have the minimum of 30-minute fire rated exit stair enclosures.

(4) Smoke detection must be provided in addition to the complete automatic fire sprinkler protection.

(5) The fire alarm system shall provide emergency forces notification.

(6) All automatic fire sprinkler systems shall be electronically supervised.

(7)Large assisted living facilities and assisted living residences located in apartment buildings shall meet the minimum construction requirements for existing health care occupancies in section 19.1.6.

(8) Corridors for large facilities shall not be less than 48”.

(9) Subdivision of building spaces in accordance with 101:18.2.2.5 shall be provided in common areas of large facilities using the same criteria as used for limited care facilities (15 square feet per resident).

-add – section 101:32.1.1.4.1 **Carbon Monoxide Detection in New Residential Care**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 in any section of a corridor or common area that is in the immediate vicinity of sleeping rooms.

-delete & replace- section 101:32.2.3.5.1 **New Residential Board & Care**: All new residential board & care facilities with 3 or more residents shall be protected throughout by an approved supervised automatic fire sprinkler system installed in accordance with section 9.7.

-delete- section 101:32.2.3.5.2 Exception for Sprinkler Protection for New Small Board and Care Facilities.

-add – section 101:33.1.1.4.1 **Carbon Monoxide Detection in Existing Residential Care**: Carbon Monoxide alarms (detectors) shall be installed in accordance with section 9.8.1 and 9.8.2 in any section of corridor or common area that is in the immediate vicinity of sleeping rooms.

-delete & replace- section 101:33.2.3.4.3.1 **Smoke Alarms in Sleeping Rooms in Existing Residential Care**: Approved smoke alarms shall be provided in each sleeping room in accordance with 9.6.2.9.

-delete- section 101:33.2.3.4.3.6 Exception for Smoke Alarms in Residential Care with Sprinkler Protection.

-delete- section 101:33.2.3.4.3.7 Exception for Smoke Alarms in Residential Care with Sprinkler Protection – Battery Operated.

-add- section 101:37.7.7 **Smoke Alarm & Carbon Monoxide Alarm – Consumer Information:** Information provided by the AHJ, on the type, placement and installation of smoke alarms and carbon monoxide alarms, shall be posted in the retail sales area where the alarms are sold.

-add- section 101:38.3.1.1(3) **Protection of Vertical Opening in New Small Business**: Unenclosed vertical openings shall be permitted to be unenclosed in two-story buildings when the travel distance does not exceed 75' and all areas opening to the exit access stairs are provided with smoke alarms in accordance with 9.6.2.9.

-add- section 101:39.3.1.1(4) **Exception for Protection of Vertical Openings for Existing Small Business**: Exit access stairs shall be permitted to be unenclosed in two-story buildings when the travel distance does not exceed 75' and all areas opening to the exit access stairs are provided with smoke alarms in accordance with 9.6.2.9.

-add- section 43.10.1.1 Existing Code Violations: **Historic buildings** not otherwise undergoing rehabilitation work shall be permitted to use alternative solutions to correct existing code violations based on sections 43.10.4.3 through 43.10.4.10.

-*delete*- section 1:1.8 Duties and Powers of the Incident Commander

-*delete & replace*- section 1:1.10 **Appeals**: Requests for variances, exemptions and reconsideration of the interpretation of this *Code*, shall be made and processed in accordance with Section 8 of this *Code*.

-*delete & replace*- section 1:1.13.1 **Certificate of Fitness**: A certificate of fitness is required for all individuals performing activities related to fire or life safety based on the qualifications as follows:

(1) Inspection, servicing or recharging of **Portable Fire Extinguishers** (Reserved)

(2) Design, installation, inspection, servicing or recharging of **Fixed Fire Extinguishing Systems –** A current certificate from the National Institute for Certificate in Engineering Technologies (NICET) for fire suppression; or from the National Association of Fire Equipment Distributors (NAFED) for Pre-Engineered Kitchen Fire Extinguishing System or Industrial Pre-Engineered Fire Extinguishing System. [*see section 8 for transition effective date*]

(3) **Inspection, and testing of fire alarm** and detection systems and equipment – A current master electrician, journeyman electrician or type S journeyman commercial fire alarm license, issued in accordance with Title 26 V.S.A. chapter 15. Eight hours of related instruction is required for certificate renewal for master and journeyman electricians, but not for type S journeyman commercial fire alarm license. [*72:10.4.2 is deleted and replace by this section*]

(4)(a) **Delivery of Liquid Propane (LP):** successful completion of the LP Gas Certified Employee Training Program (CETP) Book 1 (Basic Principles and Practices of Propane); Book 2.1/2.4 (Propane Delivery Operations and Cylinder Delivery) and Book 2.2 (Bobtail Delivery Operations).

4(b) **Plant Operations:** successful completion of CETP Book 1; 3.1 (Maintaining ASME Tanks); 3.2 (Maintaining DOT cylinders); 3.3 (Operating Dispensing Equipment to Fill Containers) and 3.4 Maintaining Bulk Equipment.

4(c) (reserved)
4(d) (reserved)
4(e) (reserved)

4(f)- **Installation, Inspection and Service of LP Gas Appliances:** successful completion of CETP books 1.0; 4.1; 4.2; 4.3; and either 4.4 or 7.0; or other approved course of instruction. Eight hours of related instruction is required for certificate renewal every three years, including at least two hours regarding the prevention of CO leakage and the procedure for safety inspection of an existing appliance (see NFPA 54- Annex G).

(Commentary: *The National Propane Gas Association is expected to update CETP Book 7 in 2013 and re-number as CETP Book 4.4.*)

4(g)- **Installation, Inspection and Service of both Natural Gas and LP Gas systems and equipment:** successful completion of the American Gas Association(AGA) course of study including "The Fundamentals of Combustion, Gas Appliance Venting, Electricity, Gas Controls, and Gas Appliances" and CETP Books 1.0, 4.1, 4.2. Eight hours of related instruction is required for certificate renewal every three years, including at least two hours regarding the prevention of CO leakage and the procedure for safety inspection of an existing appliance.(see NFPA 54- Annex G).

4(h)- **Installation, Inspection and Service of Natural Gas systems and equipment:** successful completion of the AGA course of study including "Fundamentals of Combustion, Gas Appliance Venting, Electricity, Gas Controls, and Gas Appliances; or other approved course of study. Eight hours of related instruction is required for certificate renewal every three years, including at least two hours regarding the prevention of CO leakage and the procedure for safety inspection of an existing appliance. (see NFPA 54- Annex G).

(4)(i) Installation, inspection and service of **Oil Burning Equipment** – A Silver or Gold certificate from the National Oil heat Research Alliance (NORA). Eight hours of related instruction is required for certificate renewal including at least two hours regarding the prevention of CO leakage and the procedure for inspection, or a current NORA Silver or Gold certificate.

(4)(j) LIMITED installation, inspection and service of **Oil Burning Equipment** not including placing a new unit in service – A Bronze certificate from the National Oil heat Research Alliance (NORA). Eight hours of related instruction is required for certificate renewal including at least two hours regarding the prevention of CO leakage and the procedure for inspection, or a current bronze certificate from NORA.

(5) Cleaning, maintenance and evaluation of **Chimneys and Solid Fuel Burning Appliances** – A current certificate from the Chimney Safety Institute of America.

(6) Installation, inspection or servicing of range hood systems - (Reserved)

(7) Installation or servicing of private fire service mains and their appurtenances – Reserved

(8) Crowd management required by the code – Reserved

(9) Utilization of pyrotechnics before a proximate audience – Reserved

(10) Installation, modification, or maintenance of liquefied petroleum gas or liquefied natural gas tanks or systems – See number 4 above

(11) Installation or modification of medical gas systems where a permit is required by Table 1.12.8(a) – Reserved

(12) Installation, modification, or maintenance of standpipe systems – See number 13 below

(13) **Installation, maintenance, repair and testing for water based fire protection systems** including but not limited to **fire sprinkler** systems regulated under NFPA 13, 13D and 13R, multipurpose piping systems, standpipe systems, aboveground fire mains and fire pumps – Completion of an approved fire sprinkler apprentice program or four years of documented supervised installation, maintenance, repair and testing experience and meeting the testing requirements established by the AHJ. Fifteen hours of related instruction is required for certificate renewal. **Calculations and design,** for water based fire protection systems including but not limited to **fire sprinkler** systems regulated under NFPA 13, 13D and 13R, multipurpose piping systems, standpipe systems, aboveground fire mains and fire pumps - A current level III certificate, or higher, for automatic fire sprinkler systems from NICET or a fire protection engineer license issued in accordance with Title 26 V.S.A. chapter 20. A person with a certificate of fitness under this section shall also be permitted to install, maintain, repair and test fire sprinkler and standpipe systems under section 1.13.1

(14) Installation, modification, or maintenance of **fire pumps** – See number 13 above

(15) Installation, modification, or maintenance of tanks, wells, or drafting points used for fire protection water supplies – Reserved

(16) LIMITED installation, maintenance, inspection and testing for **domestic fire sprinkler systems** with not more than 6 sprinklers for any isolated hazard area in accordance with 101:9.7.1.2 or an automatic fire sprinkler system in accordance with NFPA 13D, Standard for the Installation of Sprinkler Systems in One and Two Family Dwellings and Manufactured Homes, including multipurpose piping systems – Documented competency and experience acceptable to the AHJ. Eight hours of related instruction is required for certificate renewal. [*Information on the periodic inspection & tests of fire protection systems is found in NFPA 1 amended section 4.5.8 7*]

(17) Installation, maintenance, repair and testing for **emergency generators** – Documented competency and experience through training by the manufacturer or acceptable by the AHJ is required. Eight hours of related instruction is required for certificate renewal.

-delete & replace section 1:1.13.2 (1) Use of **Explosive materials** – A current explosive license issued in accordance with Title 20 V.S.A. 3072 by the Vermont State Police is required for the use of explosive materials in Vermont. [*For license applications or additional information contact the Department of Public Safety at (802) 244-8781 or* http://vsp.vermont.gov/about_us/divisions/bci/explosives_permit

(2) **Fireworks** displays – (Reserved)

-add- section 1:1.13.4.1 **Experience & Training**: The AHJ may accept successful completion of appropriate examination or certification other than those listed in this section when the examination or certification demonstrates an equivalent level of experience and training.

-add- section 1:1.13.8.1 Documentation for **Renewal**: An application for renewal shall include:

(1) Documentation of having completed the required hours of approved related instruction regarding this *Code* during the previous certificate period, or maintaining the required level of certification, and

(2) A completed and signed tax certification form in accordance with Title 32 V.S.A. 3113, and

(3) A completed and signed child support certification form in accordance with Title15 V.S.A. section 795, and

(4) A completed and signed unemployment compensation certification form in accordance with Title 21 V.S.A. 1378, and

(5) A completed and signed fine or penalty certification form in accordance with Title 4 V.S.A. 1110.

-add- section 1:1.13.8.2 **Approval of Related Instruction**: An individual or organization providing related instruction, as required for renewal of a certificate of fitness, shall provide information on the training provided as requested by the AHJ prior to approval of the related instruction. Individuals providing the instruction shall demonstrate competency to the AHJ in the codes and standards for which the certificate of fitness is issued and shall attend such training as required by the AHJ.

-add- section 1:1.13.12.4 **Due Process**: A person who has a certificate of fitness revoked or suspended shall be given written notification and the opportunity for a hearing following due process.

-add referenced standards- section 1:2.2 **Referenced Publications**: the following standards are added to section 2.2;

-delete- section 1:16.4.2 Penalty Schedule

NFPA 53, Recommended Practice on Materials, Equipment, and Systems in Oxygen-Enriched Atmospheres, 2011 Edition.
NFPA 73, Residential Safety Code, as adopted by the Vermont Electrician's Licensing Board.
NFPA 92A, Recommended Practice for Smoke Control Systems, 2009 edition.
NFPA 92B, Guide for Smoke Management Systems in Malls, Atria and Large Areas, 2009 edition.
NFPA 101A, A guide on Alternative Approaches to Life Safety, 2010 edition.
NFPA 291, Recommended Practice for Fire Flow Testing and Marking of Hydrants, 2010 Edition.
NFPA 720, Standard for the Installation of Carbon Monoxide Warning (CO) Equipment in Dwelling Units, 2012 edition.
NFPA 820 Standard for Fire Protection in Wastewater Treatment and Collection Facilities, 2012 edition.

-add- NFPA 1221, Standard for the Installation, Maintenance and Use of Emergency Services Communication Systems, 2010 edition.

-delete & replace in part - section 1:2.2 **Reference Publications**: Any reference to NFPA 5000, Building Construction and Safety Code, 2012 Edition, shall be to the International Building Code, 2012 edition, as amended in this *code.*

-delete & replace- section 1:3.3.182.11 Definition of **Health Care Occupancy**: An occupancy used for purposes of medical or other treatment or care of three or more persons where such occupants are mostly incapable of self-preservation due to age, physical or mental disability, or because of security measures not under the occupant's control.

-delete & replace- section 3.3.182.25.22 Definition of **Residential Board & Care Occupancy**: A building or portion thereof that is used for lodging or boarding of three (3) or more residents, not related by blood or marriage to the owners or operators, for the purpose of providing personal care services.

-add- section 1:4.5.2.1 **Historic Buildings**: NFPA 914, Code for Fire Protection of Historic Structures, 2010 edition, provides guidance to the AHJ in exercising the discretionary authority granted in section 4.5.2.

-add- section 1:4.5.7.3 Place of Assembly: A **place of assembly that 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.

-delete & replace- section 1:4.5.8.7 **Periodic Inspection and Test of Fire Protection Systems:** Inspections and tests of fire sprinkler (other than multipurpose piping systems), suppression, emergency electrical generation, alarm, detection and any other fire protection systems, devices and equipment shall be conducted for the owner by a technically qualified person who has obtained the required certificate of fitness according to section 1.13. Inspections and tests 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 this code. A technically qualified person shall file a written inspection report with the AHJ within 14 days of completion of each inspection.

-add- section 1:4.5.8.8 **Identification of fire protection systems**: A fire protection system identification number, provided by the AHJ, shall be affixed to the control panel, control valve or riser of the fire protection system to provide a unique identification number for the fire protection system.

-add- section 1:4.5.8.9 **Proof of Inspection**: Proof of inspection, approved by the AHJ shall be affixed by a technically qualified person to the control panel, control

valve or riser of the fire protection system after any 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 as currently adopted.

-add- section 1:10.10.1.2 No Smoking label for small-size **Oxygen Cylinders**: All small-size oxygen cylinders shall be provided with a conspicuous no smoking precautionary label in the form of the international "no smoking" symbol, not less than 2" by 2" in size.

-delete & replace- Section 1:10.11.1 **Permits for Open Fires & Burning:** A permit is not required for an open fire where a permit has been obtained from the Town Forest Fire Warden in accordance with Title 10 V.S.A. chapter 83; 2645.

-add- section 1:10.12.4 **Truss Construction**: 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, at the location of the remote fire alarm annunciation panel or at the fire department connection for the fire sprinkler system. 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 1:10.12.5 **Heating Vent Termination**: All through the wall vents for fuel fired heating appliances**,** located less than 7 feet above ground level, shall be provided with signage permanently affixed at a height of 7 feet above ground level directly above the through the wall vent. The sign shall be a "V" shape, not less than 4 ½ inches in height, with the principal stroke of the letter "V" not less than ¾ inch in width, colored black on a white background. The sign shall contain the wording "Heating Vent" using plainly legible letters.

-add- section 1:10.14.1.2 **Combustible Vegetation**: In other than Health Care, Detention and Correctional occupancies, combustible vegetation, including natural cut Christmas trees otherwise prohibited under table 10.14.1.1 shall be permitted when located in areas protected by an approved automatic fire sprinkler system.

-delete- section 1:10.15.11.1 Permits for Crop Mazes

-delete- section 1:10.17.1 Permits for Parade Floats

-delete & replace- section 1:11.1.2 **Electrical Systems**: All electrical wiring and equipment shall be installed and maintained in accordance with NFPA 70, National Electrical Code and NFPA 73, Residential Safety Code, as adopted by the Electricians' Licensing Board. The temperature and flame exposure ratings, resistance to the spread of fire, or flame spread, and the fire-resistant characteristics preventing the carrying of fire from floor to floor, shall be in accordance with the National Electrical Code as published.

[Commentary: *Information regarding natural fuel gas-section 11.4: 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*]

-add- section 1:11.2.3 **Ash Disposal**: Where wood-burning stoves or fireplaces are installed, a metal receptacle with lid for disposal of ashes shall be provided. Written instructions shall be provided to instruct occupants on the importance of proper disposal of fireplace or woodstove ashes.

-add- section 1:11.4.3 **Application of NFPA 54**: Coverage of piping systems shall extend from the point of delivery to the appliance connections. For other than undiluted liquefied petroleum gas systems, the point of delivery shall be considered to be the outlet of the service meter assembly or the outlet of the service regulator or service shutoff valve where no meter is provided. For undiluted liquefied petroleum gas systems, the point of delivery shall be considered to be the outlet of the first stage pressure regulator.

-add- section 1:11.5.1.6.1 Interruption or **Discontinuance of Gas 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. [*reference 54:4.2.1 & 4.2.2*]

-add- section 1:11.5.1.4.5 **Water Heater Installations:** Water heaters installed in bedrooms or bathrooms shall be of the direct vent type. [*54:10.28.1.1 is deleted & replaced by this subsection*]

-add– section 1:11.5.1.6.2 **Change in LP Gas Delivery Service:** The building owner, tenant, or responsible party shall obtain a safety inspection that meets or exceeds NFPA 54 annex H, for gas utilization equipment by person(s) certified in accordance with section 1.13, when new fuel delivery service is provided. [*reference 54:8.1.*]

-add- section 1:11.5.1.6.3 Room Heater Installations: **Unvented room heaters and unvented fireplaces** shall not be used in any building or structure regulated under this code. [*54:10.23.1 is deleted & replaced by this subsection. It is not the intent of this section to prohibit heaters defined under NFPA 54 section, 3.3.57.1, Industrial Air Heaters, Direct Gas-Fired Non-Recirculating, or 3.3.57.2, Industrial Air Heaters, Direct Gas-Fired Recirculating, used for large well ventilated areas.*]

-add- section 1:11.5.1.7.1 **Periodic Inspection of Heating Appliances**: All fuel fired heating appliances shall be cleaned and maintained in accordance with the manufacturer's instructions, and shall be inspected at least once during any 2 year period by person(s) certified in accordance with section 1.13. Inspections shall be in accordance with the standards and recommended procedures for inspection of existing appliances established under NFPA 31, 54 and 211, including the measurement of carbon monoxide in the flue gas. At the time of inspection the appliance shall be marked with the date of the inspection and the name and certificate number of the person who performed the inspection. When the inspection determines the existing situation involves a distinct hazard to life or property and requires immediate action, the violation(s) shall be immediately corrected or the certified inspector conducting the inspection shall contact the AHJ and disconnect the heating appliance from operation.

-delete- section 1:11.5.1.11.2 **Clothes Dryers in Dwelling Units**:

-add- section 1:11.5.4.1 Carbon Monoxide Alarms for **Through the Wall Vent Termination**: In buildings other than where people sleep, carbon monoxide alarms shall be installed in areas adjacent to, but outside of the distance established in the manufacturer's instructions, for all fuel fired heating appliances vented through the wall and terminating less than 7 feet above ground level.

-add- section 1:13.3.1.2.1 **Approval of NFPA 13D Sprinkler Systems**: For all sprinkler systems designed in accordance with 13D, the technically qualified person certified under section 1.13 shall perform all required acceptance tests as required for NFPA 13R sprinkler systems, perform a water flow test for the most remote area, complete the Contractor's Material and Test Certificate(s), and forward the certificate(s) to the AHJ prior to asking for approval of the installation. Where the AHJ desires to be present during the conducting of acceptance tests, the installer shall provide the AHJ 15 day notification of the time and date of the testing. [*13D:4.3 is deleted & replaced by this subsection*]

-add- section 1:13.3.1.2.2 **Arrangement of Fire Department Connections**: All new & existing fire department connections shall be arranged so that water from the fire department connection shall reach the sprinkler system regardless of any manually closed control valve. This section does not apply to remote electrically supervised zone / floor control valves on existing systems installed in accordance with NFPA 13. [*NFPA 13:8.16.2.4.3 and 8.16.2.4.4 are amended by this section*]

-add- section 1:13.3.1.2.3 **Underground Private Fire Service Mains supplying Automatic Fire Sprinkler Systems:** As defined in NFPA 24, standard for the Installation of Private Fire Service Mains and their Appurtenances, and in regards to this section, an underground private fire service main is the pipe and its appurtenances on private property between a source of water and the base of the system riser for a water based fire protection system. A contractor installing an underground private fire service main shall install, flush and test the piping, including completion of the "Contractor's Material and Test Certificate for Underground Piping", in accordance with NFPA 24.

A licensed professional engineer, or a person exempted under 26 V.S.A. 1163, shall design an underground private fire service main in accordance with NFPA 24 and witness the acceptance flushing and testing. The person designing and/or installing a fire sprinkler system under 1:1.13.1(10) or (11) shall verify the testing and flushing of the underground private fire service main and obtain a copy of the "Contractor's Material and Test Certificate for Underground Piping" prior to connecting to the piping.

Working plans for an underground private fire service main including the items specified under NFPA 24: 4 shall be submitted in accordance with section 4 of *this code* for a construction permit.

-add- section 1:13.3.1.2.4 **Backflow Prevention for New Fire Protection Systems**: A backflow prevention device, dedicated to a water based fire protection system, shall be sized, installed and tested by a TQP certified for design, installation and maintenance of water based fire protection systems. Annual testing shall be in accordance with NFPA 25 Section 13.6. On new installations a valved connection shall be provided to conduct the "forward Flow" test. Test forms can be found at www.nfpa.org, wwwnfsa.org, and wwwsprinklernet.org

-add- section 1:13.3.1.3.1 **Fire Department Connections for Existing Sprinkler Systems**: Where there is no fire department connection for an existing NFPA 13 or 13R sprinkler system, or the threads do not meet NFPA 13 section 6.8, it shall be listed as a deficiency under NFPA 25: 5.1.1 by the technically qualified person conducting the annual inspection and corrected by the owner or occupant in accordance with NFPA 25: 4.1.4.

-add- section 1:13.3.1.3.2 **Backflow Prevention for Existing Sprinkler Systems**: A backflow prevention device shall not be added to an existing fire sprinkler system that reduces the water supply or water pressure to a point lower than the minimum sprinkler system design. Sprinkler calculations verifying the modified sprinkler design shall be submitted to the AHJ.

-delete- section 1:13.3.2.20.1 Fire Sprinkler Protection for One and Two Family Dwellings

-add- section 1:13.3.3.1.2.5 **Seismic Protection of Fire Protection Systems**: Earthquake protection of building systems shall be limited to those buildings or structures that are categorized as essential. For purposes of this paragraph IBC Table 1604.5 IV shall be limited to hospitals; fire, rescue, & police stations; emergency vehicle garages, water storage & pumping structures and Emergency Operation Centers.

-delete & replace- section 1:13.5.1 **Water Supply**: Water supply for fire suppression systems shall be evaluated by an individual certified under section 1:1.13.1 for proper supply and pressure prior to plan review submittal in accordance with NFPA 13 and 24.

-add- section 1:13.5.3.1.1 **Backflow Testing**: The sprinkler system TQP (Technically Qualified Person) shall be certified to conduct annual forward flow test through the sprinkler system backflow device to ensure proper water flow rate.

-delete & replace- section 1:13.6.8.3.1.1 **Portable Fire Extinguishers**: Portable fire extinguishers inside individual apartment or condo units shall be permitted to be 2-1/2 pound dry chemical capacity. All other occupancy types or locations shall be provided with fire extinguishers in accordance with NFPA 1:13.6.

-add- section 1:13.7.1.5 **Carbon Monoxide Alarms**: Carbon Monoxide alarms shall be installed in accordance with NFPA 70, National Electrical Code, NFPA 720, Standard for the Installation of Carbon Monoxide Warning Equipment, and section 1:13.7, as amended under this code.

[Commentary: *Refer to page 42 in the index for carbon monoxide detector locations.]*

-add- section 1:13.7.1.4.5.1 **Fire Alarm Circuit Classification**: All newly installed fire alarm systems in healthcare, detention & correctional, residential board & care occupancies, assembly occupancies with more than 300 people, and all high rise buildings, shall be electrically wired as a Class A system.

-delete & replace- section 1:13.7.1.4.9.2 **Power for Smoke Alarms**: All newly installed (including replacement) smoke alarms in one & two family dwellings, multiple unit dwellings, lodging or rooming houses, hotels and dormitories shall be directly wired to a non-dedicated electrical branch circuit for the building and by battery, except where additional smoke alarms are added in sleeping rooms of existing apartment buildings 101:31.3.4.5.4 as amended.

-add- section 1:13.7.1.4.9.6 **Photoelectric Smoke Alarms**: All newly installed smoke alarms in dwelling units, lodging or rooming houses, hotels and dormitories, shall be the photoelectric-only-type.

-add- section 1:13.7.1.4.11.4 **Single Line DACT**: A digital alarm communicator transmitter (DACT) utilizing a single line, without a secondary transmission means as required by NFPA 72:26.6.3.2.1.4, shall be permitted where a fire alarm system is not required to provide emergency forces notification under this *Code when no other means is available.* A secondary transmission means, <u>ONLY when available</u>, shall be employed as listed in 72:26.6.3.2.1.4(A).

-add- 1:13.7.1.5.1 **Carbon Monoxide/Fire Alarm Interconnection**). Where desired, carbon monoxide alarms may be integrated into the fire alarm system control panel. Notification appliances installed as part of the fire alarm system may be used for CO alarm detection notification of the building occupants when the notification appliances have been installed in compliance with the appropriate sections of NFPA-72. The above requirements do not apply to single-station or multi-station Carbon Monoxide Alarm devices.

-add- section 1:14.10.2.3 **Snow Removal**: All portions of the means of egress, including outside stairs and fire escapes, shall be kept clear of any accumulation of snow and ice at all times that the building is occupied. For multi-family dwellings with direct exit access to the outside and one and two family dwellings snow and ice shall be removed as soon as practicable.

-add- section 1:14.10.2.4 Clearance for **Inclined Lifts on Stairways**: Where a platform or chair lift is installed on an exit stair in an existing building the minimum clear width on the stair when the inclined lift is in the down position shall be:

- 18" when the stair serves fewer than 10 people
- 22" where the stair serves fewer than 50 people
- as required by this *Code* when the stair serves 50 or more people.

Where a platform or chair lift is installed on an exit stair in a new building the minimum clear width on the stair when the inclined lift is in the down position shall be as required by this *Code.*

-delete- section 1:16.6.1 Permits for Torch Applied Roofing Systems

-delete- section 1:16.7.1.2 Permits for the Placement of Tar Kettles

-delete- section 1:16.8 Asbestos Removal*:* [*The Vermont Department of Health regulates the removal of asbestos containing materials, as well as the training for persons who remove asbestos containing materials. For additional information, contact the Vermont Department of Health, Health Protection Division (1-800-439-8550)*]

-delete- Chapter 17 Wildland Urban Interface

-delete- section 1:19.1.1 Commercial Rubbish-Handling Operations Permit

-delete & replace- section 1:20.2.4.2.3(1) **Emergency Egress and Relocation Drills**: Not less than one emergency egress and relocation drill, in accordance with the school's emergency preparedness plan, shall be conducted every month the facility is in session.

-delete & replace- sections 1:20.9.2.2, 1:20.10.2 & 1:20.11.2 **Unvented Fuel-fired Heaters**: Unvented fuel-fired heaters shall not be used. [*101: 30.5.2.2; 101:31.5.2.2; 101:26.5.2.2 and 101:24.5.1.2 are deleted and replaced by this section*]

-add- section 1:20.12.2.2.3 **Smoke Alarm & Carbon Monoxide Alarm – Consumer Information**: Information provided by the AHJ, on the type, placement and installation of smoke alarms and carbon monoxide alarms, shall be posted in the retail sales area where the alarms are sold.

-delete- section 1:22.2 Automobile Wrecking Yard Permit

-delete & replace- section 1:25.1.2 Permits for **Membrane Structures, Tents and Canopies**: Permits for an air-supported membrane structure, tent or canopy in excess of 1200 sq. ft. shall comply with 1.12.8.

-add- section 1:29.1.4 **Ventilation for Occupied Spaces Adjacent or Accessory to Parking Structures**: In addition to ventilation requirements under 88A:6.3 for enclosed parking structures, all connecting spaces or contained spaces such as offices, waiting areas, ticket booths and similar areas shall be maintained at a positive pressure.

-delete- section 1:41.1.5 Permits for **Welding, Cutting & other Hot Work**

-add- section 1:42.3.2.1.1 **Lighting**: Adequate lighting shall be provided for all fuel dispensing locations.

*-delete & replace- s*ection 1:42.3.3.2 **Aboveground Storage Tanks for Fuel Dispensing**: All aboveground storage tanks involved with fuel dispensing shall meet all applicable requirements of Chapter 22 and 27 of NFPA 30, Flammable and Combustible Liquids Code. All aboveground tanks storing Class I liquids shall be **fire resistant tanks** in accordance with Section 42.3.3.4. [*30A:4.3.2 is deleted & replaced by this section*]

-delete & replace- section 1:42.3.3.2.4 **Location of Aboveground Tanks for Fuel Dispensing**: Tanks involved with fuel dispensing storing Class I liquids shall be located in accordance with Table 42.3.3.2.4. Tanks containing other liquids regulated under this chapter shall be permitted to be located with minimum separation requirements ½ of the distances in Table 42.3.3.2.4. [*30A:4.3.2.4 is deleted & replaced by this section*]

-delete & replace - section 1:42.6.1.4.1 **Fire Suppression Systems**: Approved automatic fire suppression systems shall be required at all **unattended self-service fuel dispensing** facilities including **card-lock, key-lock and fleet-refueling facilities** where non-employee third parties are allowed to dispense Class 1 flammable liquids.

Approved automatic fire suppression systems shall also be required where unique and special circumstances constituting a serious risk to public safety require the use of such systems in order to adequately protect users, as determined by the authority having jurisdiction.

Approved automatic fire suppression systems shall not be required at any full-service or self-service fuel dispensing facility where an employee is on duty during all hours of operation, and where such employee is able to view and supervise all fuel dispensing operations, in accordance with 42.7.4.

-add- section 1:42.6.1.4.3 **Fire Suppression Systems – Alternative Design**: Where otherwise exempted under this code a fire suppression system shall be permitted to be installed in accordance with the appropriate NFPA standard and the manufacturers' instructions that do not meet the listing requirements of UL 1254.

-add- section 1:42.6.1.4.4 **Existing Fire Suppression Systems:** Systems currently in use that were installed prior to May 31, 2002, shall be inspected and certified annually and shall continue to meet the standards for installation and operation incorporated into the Vermont Fire & Building Safety Code. A system installed prior to May 31, 2002, that is no longer operable shall be removed and:

(a) be replaced with a system that meets the listing requirement of UL 1254, or

(b) be replaced by a previously listed system that does not meet the listing requirements of UL 1254, or.

(c) Be removed from service and not replaced after notification, inspection and approval from the AHJ.

-add- section 1:42.6.1.4.5 **Extinguishing Agent**: A copy of the Material Safety Data Sheet (MSDS) for the extinguishing agent shall be kept at all locations where automatic fire suppression systems are installed.

-add- section 1:42.7.4.3.2 **Training for Attendants**: All attendants for self-service fuel dispensing facilities shall receive initial and periodic training regarding the requirements of the Fire Code including preventing the dispensing of gasoline into unapproved portable containers, making sure that the portable container is on the ground while filling, controlling sources of ignition such as smoking and requiring the motor of the vehicle to be shut off, activating emergency controls and notifying the fire department of any fire, and handling accidental spills and fire extinguishers as needed. A poster listing the duties of this section and section 42.7.4.5, approved by the AHJ, shall be posted at the normal workstation of the attendant.

-add- section 1:42.7.4.5 **Power Disconnect:** An attendant for a self-service fuel dispensing facility shall disconnect the power to any pump when the attendant observes the dispensing of gasoline into an unapproved portable container, filling of a portable container that is not on the ground, the motor of the vehicle had not been stopped, smoking materials are being used within 20 ft. of the fuel dispensing, a person has blocked open the hose nozzle valve or a person has left the pump unattended, and the power shall not be restored until the violation is abated.

-add- section 1:50.2.1.10 **Isolated Cooking Operations**: The requirements for the hood, grease removal devices, duct and fixed fire extinguishing system may be modified by the AHJ 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.*

-add- Section 1:50.4.1.1 **Cooking Operations - Acceptance Testing Of a Suppression System**: An acceptance test shall be conducted by person(s) holding Vermont TQP status to ensure the system functions as designed. This test shall include of a "puff test" discharging nitrogen or other approved inert gas through the system's agent distribution piping to allow verification of piping continuity including verification of gas discharge to each of the discharge nozzle(s). In addition this test shall also include a demonstration of all critical functions of the system including but not limited to any required gas or electric shut down, any required make-up air shut down, any required building fire alarm connection, and visually provide confirmation of nozzle size and placement per the design plans when completed.

-delete & replace Section1:50.4.11.2.1 **Qualifications**: Only persons properly trained and certified (to include holding current Vermont TQP(1:1.13.1.(2)) status and meeting manufacturers training requirements if part of the system listings) shall be considered competent to design, install, inspect, and service pre-engineered wet chemical systems.

-delete & replace- section 1:51.1.2.1 **Permits for Industrial Ovens and Furnaces:** Permits for new installations, alterations or extensions to existing equipment shall comply with 1.12.

-add- section 1:53.1.3.1 **Permits for Mechanical Refrigeration:** A permit is not required for an existing facility that is in compliance with reporting requirements under the Vermont Community Right to Know Law, Title 20 V.S.A. Chapter 1.

-delete- Chapter 54 Ozone Gas–Generating Equipment

-add- section 1:60.1.2.3 **Permits for Hazardous Materials:** A permit is not required for an existing facility that is in compliance with reporting requirements under the Vermont Community Right to Know Law, Title 20 V.S.A. Chapter 1.

[*Information regarding chapter 65,* ***Explosives and Fireworks****- A license is required 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 Division of Fire Safety regulates the safekeeping, storage, use, manufacturing, sale, handling, and other disposition of explosive material under this Code.

The Division of Fire Safety also regulates the construction, manufacturing, storage, handling and use of fireworks for supervised public displays and pyrotechnic special effects under this Code.
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 public fireworks display.

Sparklers *less than 14 inches long with no more than 20 grams of pyrotechnic mixture and novelty sparkling items limited to snakes, party poppers, glow worms, smoke devices, string poppers, snappers, or drop pops with no more than 0.25 grains of explosive mixture, that are in compliance with United States Consumer Product Safety Commission regulations, are legal for sale and use in Vermont.*]

-delete & replace - section 1:65.2.3 **Permits for Public Fireworks Displays**: A permit for a supervised public display of fireworks shall be obtained from the chief of the fire department, or in towns where there is no fire department the board of selectmen, after determining the display would not be hazardous to property or endanger the public.

-delete & replace- section 1:65.10.1.1 **Consumer Fireworks**: The sale, handling and storage of consumer fireworks, including sparklers permitted for sale in Vermont, in both new and existing buildings, structures and facilities shall comply with NFPA 1124 and section 65.11.

-delete & replace- section 1:65.10.3.1 Exempt Amounts of **Consumer Fireworks**: Consumer fireworks retail sales facilities or stores where the fireworks and sparklers are in packages in accordance with the U. S. Consumer Product Safety Commission and where the total quantity of consumer fireworks and sparklers in the building does not exceed 125 lb (net) of pyrotechnic composition shall be exempt from the following sections:
-65.10.3.2[*1124:7.3.2*] Permits
-65.10.3.5[*1124:7.3.5*] Construction
-65.10.3.6[*1124:7.3.6*] Automatic Sprinkler System
-65.10.3.9[*1124:7.3.9*] Fire Alarms
-65.10.3.10[*1124:7.3.10*] Smoke Control
-65.10.3.12[*1124:7.3.12*] Separation distances

-delete & replace section 1:66.1.5 **Permits for Flammable & Combustible Liquids**: A permit is not required for an **underground storage tank** regulated by the Agency of Natural Resources, Department of Environmental Conservation, according to NFPA 30. [*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.]

-add- section 1:69.1.1.4 **Record of Installation for LP Gas Containers**: Installers shall maintain a record of all installations for which a permit is not required by section 69.1.1.3, but not including replacing of portable cylinders, available for inspection by the AHJ.

-delete & replace- section 1:69.3.6.1.2 **LP Gas Systems, Protection from Damage**: LP Gas containers or systems of which they are a part, shall be protected by physical protective barriers from damage from vehicles. [*58:6.6.1.2 is deleted & replaced by this section*]

-add- section 1:69.3.6.1.2.1 **Underground LP Gas Systems, Protection from Damage:** Where containers are installed underground within 10' of where vehicular traffic can be expected, 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 location of the housing cover. [*58:6.6.6.1(D) is deleted & replaced by this subsection*]

-delete & replace- Section 1:70.1.2. **Permits for Oxidizers and Organic Peroxides**: A permit is not required for an existing facility that is in compliance with reporting requirements under the Vermont Community Right to Know Law, Title 20 V.S.A. Chapter 1

Section 5

ICC, International Building Code (IBC)

2012 edition, including those standards referenced in Chapter 35 to the prescribed extent of each reference by adopted sections of the IBC.

The IBC is adopted to the extent necessary to ensure compliance with the performance requirements of this *Code* and the intent of this *Code* regarding safeguarding of people and property in case of fire, explosion, dangerous structural conditions and the generation of carbon monoxide.

-delete- chapter 1 Administration except for section 107 (Submittal Documents) & 110 (Inspections) as appropriate and the following sections:

-delete & replace- section 101.4 Referenced Codes: Where referenced under the IBC any reference to the:
* **ICC Electrical Code**, shall be to the National Electrical Code, NFPA 70, as adopted by the Electricians Licensing Board. The temperature and flame exposure ratings, resistance to the spread of fire, or flame spread, and the fire-resistant characteristics preventing the carrying of fire from floor to floor, shall be in accordance with the National Electrical Code as published.

* **International Fuel Gas Code**, shall be to the National Fuel Gas Code, NFPA 54, 2012 edition, as adopted under this *Code*
* **International Mechanical Code**, shall be to the Fire Code, NFPA 1, 2012 edition, including NFPA 90A, as adopted under this *Code*
* **International Plumbing Code** shall be as adopted by the Plumbers Examining Board
* **International Property Maintenance Code**, shall be to the Fire Code, NFPA 1, 2012 edition and the Life Safety Code, NFPA 101, 2012 edition, as adopted under this *Code*
* **International Fire Code**, shall be to the Fire Code, NFPA 1, 2012 edition, as adopted under this *Code*
* **International Energy Conservation Code**, shall be to the Vermont Building Energy Standards, as published by the Vermont Department of Public Service (802-828-3183).
http://publicservice.vermont.gov/energy/ee_commstandards.html, (Commercial)
http://publicservice.vermont.gov/energy/ee_resbuildingstandards.html, (Residential)
http://publicservice.vermont.gov/energy/ee_energyefficiency.html (Energy Code Information)

* **International Residential Code**, or to R-3 Occupancy Classification for one & two family dwellings, shall be to the Life Safety Code, NFPA 101, 2012 edition as adopted under this *Code.*

-delete & replace- section 105 **Construction Permits**: Permits shall be obtained in accordance with section 7 of the Vermont Fire & Building Safety Code.

-add- section 117 **Structural Failure or Collapse**: A building owner shall immediately report any structural failure or collapse that involves personal injury to the AHJ.

Where the structural failure or collapse does not involve personal injury the report shall be made within 48 hours. A registered design professional investigating an incident on behalf of the owner shall advise the owner of the requirement to report the incident.

[F*or AHJ emergency contact during normal business hours call 1-800-640-2106. Outside of normal business hours call The State Emergency Operations Center at 1-800-347-0488*]

delete & replace- section 308.3 Group I-1, **Residential Board & Care Facilities:** Assisted Living Facilities and similar use: Residential care facilities, assisted living facilities and similar use in which three or more clients receive care shall be classified and regulated in accordance with the Life Safety Code, NFPA 101, and the IBC for structural design.

-delete & replace- section 308.5 **Day Care Facilities:** Day care facilities in which four or more clients receive care shall be classified and regulated in accordance with the Life Safety Code, NFPA 101, and the IBC for structural design.

-delete & replace- section 310.5 R-3 Detached **One & Two Family Dwellings**: Detached one & two family dwellings shall be classified and regulated in accordance with the Life Safety Code, NFPA 101.

-delete & replace- section 415.10 Protection of **Semiconductor Fabrication Facilities**: In addition to requirements set elsewhere in this code semiconductor fabrication facilities shall be in accordance with NFPA 1, and NFPA 318.

-delete & replace- section 506.2.2 **Open Space for Area Increase**: Such open space shall be either on the same lot or dedicated for public use, clear and unobstructed at all times, usable for fire department operations and accessed from a street or fire department access road in accordance with NFPA 1: chapter 18.

-add- section 507.13 **Open Space for Unlimited Area Buildings**: Open space required under section 507 shall be either on the same lot or dedicated for public use, clear and unobstructed at all times, usable for fire department operations and accessed from a street or fire department access road in accordance with NFPA 1: chapter 18.

-delete & replace- IBC Section 706 **Fire Walls**: The design and construction of new Fire Walls and High Challenge Fire Walls shall be in accordance with NFPA 1 Section 12.3.1 and NFPA 221 and the following:

The minimum fire resistance rating for Fire Walls and High Challenge Fire Walls shall be three hours; for buildings with complete supervised automatic sprinkler systems on both sides of the fire wall, the minimum fire resistance rating shall be two hours.

High Challenge Fire Walls shall be utilized for buildings containing an occupancy in categories "III" or "IV" listed on Table 1604.5 IBC.

-delete & replace- chapter 8 **Interior Finishes**: Interior finishes shall be in accordance with the Life Safety Code, NFPA 101, as adopted under this *Code.*

.-delete & replace- chapter 10 **Means of Egress**: Means of Egress shall be in accordance with the Life Safety Code, NFPA 101, as adopted under this *Code.*

-delete & replace- chapter 11 **Accessibility**: All new construction and alterations shall be in accordance with the 2012 "Vermont Access Rules" as adopted by the Vermont Access Board.

-delete- chapter 12 **Interior Environment** except for section 1209.1 Crawl Spaces & 1209.2 Attic Spaces Access to Unoccupied Spaces.

-delete- & replace- chapter 13 **Energy Efficiency**: Certification, approved by the Department of Public Service, indicating compliance with the Vermont Guidelines for Energy Efficient Commercial Construction, for the design and construction of any public building, other than one & two family dwellings and multi-family dwellings three stories or less in height, shall be affixed in a visible location inside the building, in the vicinity of the heating or cooling equipment or the electrical service panel, as a condition for a final occupancy permit,

[Note: *The Department of Public Service provides technical assistance and expert advice regarding the energy standard requirements for new 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.*]

-delete & replace- IBC 1403.5 **Vertical and lateral flame propagation**: Exterior walls on buildings of Type I, II, III or IV construction that are greater than 40 feet (12 192 mm) in height above grade plane and contain a combustible water-resistive barrier shall have an evaluation report which provides details of the assemblies tested, in accordance with NFPA 285 and/or NFPA 285 test results extended via a third-party engineering analysis.

-add- section 1608.2 Local **Ground Snow Load**: The Minimum Ground Snow Load Map shall be used in determining the ground snow load. [*The snow load map and the Average Yearly Snowfall Map are located in the Annex to this Code and on the division website.*

-add- section 1608.2.1 **Minimum Roof Snow Load**: The total roof snow load, including additional loading effects due to drifting snow, sliding snow, unbalanced loading conditions and partial loading conditions, shall not be less than 40 psf for roofs with a slope less than or equal to 5 degrees, and shall not be less than the slope factor (C_s) times 40 psf for roofs with a slope greater than 5 degrees.

This minimum roof snow load shall not apply to the windward side for unbalanced loading conditions, or to the partially loaded spans for partial loading conditions. Note: Our Division web page has an "Average Yearly Snowfall Map" provided for informational purposes only.

-delete & replace- section 1612.3 Establishment of **Flood Hazard Area**: Where established by a municipality by ordinance or zoning standard the flood hazard area shall be identified by one of the following:

(1) Special flood hazard area designated by the Federal Emergency Management Agency (FEMA), or
(2) Most recent flood insurance rate map (FIRM), or
(3) Area subject to flooding during the design flood and shown on a municipal flood hazard map, or
(4) Most recent maps and studies adopted by a municipality for a flood with less than a 1 % chance of being equaled or exceeded in any given year.

-delete & replace- sections 2111 through 2113: **Masonry Fireplaces, Heaters and Chimneys**: Masonry fireplaces, heaters and chimneys shall be in accordance with the Standard for Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances, NFPA 211, as adopted under this *Code.*

-delete & replace- IBC 2603.5.5 **Vertical and lateral fire propagation**: The exterior wall assembly shall have an evaluation report which provides details of the assemblies tested, in accordance with NFPA 285 and/or NFPA 285 test results extended via a third-party engineering analysis. Exception: One-story buildings complying with Section 2603.4.1.4.

-delete & replace- chapter 27 **Electrical**: Electrical components, equipment and systems shall be in accordance with the National Electrical Code, NFPA 70, as adopted by the Electricians' Licensing Board

-delete & replace- chapter 28 **Mechanical Systems**: Mechanical equipment and systems shall be installed in accordance with the Fire Code, NFPA 1, including NFPA 90A as adopted under this *Code.*

-delete & replace- chapter 29 **Plumbing Systems**: Plumbing work is regulated under the Vermont Plumbing Rules as adopted by the Plumbers Examining Board.

-delete & replace- section 3001 **Elevators** and Conveying Systems: Elevator and conveyance work is regulated under the Elevator Safety Rules as adopted by the Elevator Safety Review Board.

-delete & replace- section 3002.4. Required Locations: An elevator car of such a size and arrangement to accommodate an **ambulance stretcher** (24" X 84") as specified in section 3002.4 shall be provided where a passenger elevator is newly installed in a building three or more stories in height above or below grade plane/grade level. This section shall not apply to the installation of a Limited-Use / Limited-Application elevator approved by the Vermont Access Board.

-delete & replace- section 3005.4 **Personnel and Material Hoists:** Personnel and Material Hoist work is regulated under the rules of the Vermont Occupational and Safety Administration.

-delete & replace- section 3006.5 **Shunt Trip:** The method to automatically disconnect electrical power for elevators prior to fire sprinkler activation in the elevator shaft or elevator mechanical room is regulated under the Elevator Safety Rules.

delete- section 3108 Telecommunication and Broadcast Towers

delete- section 3109 Swimming Pool Enclosures and Safety Devices

-delete- section 3110 Automatic Vehicular Gates

-delete- chapter 32 Encroachments into the Public Right-of-Way

-delete & replace – chapter 33 **Safeguards During Construction**: Safety during construction shall be in accordance with the Standard for Safeguarding Construction, Alteration and Demolition Operations, NFPA 241, as adopted under this *Code.*

-delete & replace- chapter 3401.1 **Scope**: Scope of application of *this code* for Existing Buildings and Structures is as follows:

-add- 3401.1.1 Existing buildings and structures shall be in maintained in accordance with the Life Safety Code and the Fire Code as amended under this *Code.*

-add- 3401.1.2 Rehabilitation work, classified as repair, alteration (further classified as renovation, modification or reconstruction), change of use or occupancy, or addition, for existing buildings and structures, shall be in accordance with the Life Safety Code, chapter 43, and the structural requirements of Chapter 34 of the International Building Code.

-add- 3401.1.3 An addition to any existing building or structure shall be in accordance with the Life Safety Code, the Fire Code and the International Building Code for new construction, as indicated in the matrix on page 5. An existing building plus additions shall comply with the height and area provisions of chapter 5 of the International Building Code and the structural requirements of Chapter 34 of the International Building Code.

-add- 3401.1.4 The remainder of chapter 34 is adopted only for purposes of structural provisions.

National Board of Boiler and Pressure Vessel Inspectors, National Board Inspection Code, Part RA – RE, Appendix 1-9 and A-K

(a) A boiler is defined as a closed vessel in which water is heated, steam is generated, steam is super- heated, or any combination thereof, under pressure or vacuum by the direct application of heat from the combustion of fuel or from electricity. The term includes a fired unit for the heating or vaporizing of liquids other than water where the unit is separate from a processing system and is complete within itself. An unfired pressure vessel is defined as a container of pressure obtained from an external source that exceeds 15 psi. This section shall apply to all boilers, and pressure vessels identified in the National Board Inspection Code (NBIC) except:

(1) A boiler or pressure vessel located on a common carrier subject to regulations under the Surface Transportation Board, Department of Transportation, Federal Railroad Administration or Nuclear Regulatory Commission.

(2) Pressure containers that are integral parts or components of rotating or reciprocating mechanical devices such as pumps, compressors, turbines, generators, engines and hydraulic or pneumatic cylinders where the primary design consideration and /or stress is derived from the functional requirements of the device.

(3) **Hot water heaters** and potable water storage tanks with a heat input of less than 200,000 BTU/HR, water temperature less than 210 degrees (F) and less than 120 gallons aggregate water capacity. Units otherwise exempted under this section shall be equipped with approved pressure/temperature safety relief devices in accordance with NBIC I 3837.

(4) Steam cleaners or coil type boilers without steam space where water flashes into steam when manually released through a nozzle for cleaning machinery, equipment, etc.; when the water capacity is less than 6 gallons and the water temperature less than 350 degrees

(F). Units otherwise exempted under this section shall be equipped with approved pressure/temperature safety relief devices in accordance with NBIC.

[*A system for heating a building or other processes using an open vessel (characterized by a continuously open vent or vents of adequate size designed so that the vessel will not operate above atmospheric pressure) are not regulated under the NBIC, but are subject to other requirements of this code and other rules and standards adopted by the Division, including obtaining all required permits and inspections.*]

(b) All boilers and pressure vessels shall be designed, manufactured, constructed and assembled in accordance with the relevant standards published by the:

(1) American Society of Mechanical Engineers,

(2) Canadian Standards Association, or

(3) European Committee for Standardization, for boilers with a maximum water jacket size of 60 gallons, a maximum input of 250,000 BTU, and a maximum relief valve setting of 30 PSIG.

(4) European Committee for Standardization, for boilers or pressure vessels with an input of greater than 250,000 BTU or a water jacket size of greater than 60 gallons as approved per Section 5 of these rules.

(c) All boilers and pressure vessels shall be installed in accordance with the National Board Inspection Code, as amended, including control, safety, and pressure relief devices in accordance with the relevant standards published by the American Society of Mechanical Engineers. **(ASME)**

(d) The manufacturer's design information, instructions, data plates and warning labels for all boilers and pressure vessels shall be in English.

(e) The owner or person installing a boiler or pressure vessel shall report to the AHJ the location, type, capacity, age and date of installation of any boiler or pressure vessel.

(f) Prior to being placed in service **any boiler or pressure vessel shall be inspected** by a commissioned inspector. When the boiler or pressure vessel is found to be in compliance with this *Code* the commissioned inspector shall attach an **identification number**, approved by the AHJ, and an **initial inspection certificate** in a format approved by the AHJ. The inspection certificate shall be posted at the site of operation. The identification number, initial inspection by a commissioned inspector and operating certificate shall not be required for boilers designed to heat individual dwelling units in buildings containing less than 6 dwelling units.

(g) The **periodic inspection of boilers and pressure vessels** shall be performed by a commissioned inspector at intervals listed in this section. A commissioned inspector may require additional external (an inspection made when a boiler or pressure vessel is fully intact so all safety features can be inspected) or internal (an inspection made when a boiler or pressure vessel is shut down and hand-holes, manholes or other inspection openings are opened for inspection of the interior) inspections when unsafe conditions or operations are

observed or suspected. The AHJ may order the owner or user to stop operation of a boiler or pressure vessel operating in violation of this *Code.*

(1) Each high pressure power boiler in which steam is generated at a pressure of more than 15 pounds per square inch shall be inspected both internally and externally while not under pressure on an annual basis, and externally, while under pressure, approximately six months from the internal inspection.

(2) Each low-pressure hot water heating boiler installed to operate at pressures not to exceed 160 pounds per square inch and/or temperatures not exceeding 250 degrees (F), and each steam heating boiler operating at a pressure not exceeding 15 pounds per square inch, shall be inspected externally, and internally where construction permits, every two years. An inspection shall not be required for boilers designed to heat individual dwelling units in buildings containing less than 6 dwelling units.

(3) Each pressure vessel greater than 5 cubic feet and operating with a relieving pressure greater than 125 pounds per square inch shall be inspected externally, and internally where construction permits, every three years. An internal inspection is not required for a rubber lined pressure vessel.

(h) An employee of an insurance company, licensed to insure boilers and pressure vessels in Vermont, shall obtain a current Vermont commission to inspect boilers and pressure vessels prior to conducting any inspections. A current certification from the National Board of Boiler and Pressure Vessel Inspectors is required to obtain a Vermont commission.

A Vermont commission may be revoked or suspended for violation or misrepresentation of responsibilities established under this *Code*. A person who has a Vermont commission revoked or suspended shall be given written notification and the opportunity for a hearing following due process.

(i) An employee of an insurance company, licensed to insure boilers and pressure vessels in Vermont, who has obtained a Vermont commission, and/or the insurance company, licensed to insure boilers and pressure vessels in Vermont shall:

(1) Inspect all boilers and pressure vessels insured by the insurance company in accordance with this *Code* and at time frames established under this *Code.*

(2) Report the results of all inspections to the AHJ within 30 days of the inspection in a format approved by the AHJ.

(3) Notify the AHJ of new boilers or pressure vessels insured, insurance cancelled or not renewed or refused within 30 days.

(4) Participate in training as may be directed by the AHJ.

(5) Not engage in the sale of, or have any interest in, any appliance or device related in any way to the construction, operation or maintenance of boilers and pressure vessels covered under this *Code.*

(j) The owner, user or commissioned inspector shall immediately **report any accident, incident or explosion** involving a boiler or pressure vessel that involves personal injury to the AHJ at 1-800-347-0488 and secure the scene to prevent any change that would hamper the investigation of the incident. Where the accident, incident or explosion does not involve personal injury the report shall be made within 48 hours.

(k) The insurance company of record shall pay a fee of $30.00 to the Division of Fire Safety for each **inspection certificate** or periodic inspection sticker.

see NFPA 101 section 101:7.12.3 **Boiler Room Exit Requirements** (page 6)

-delete & replace- section I-3724(a) **Low Water Cutoff**: Each automatically fired low pressure hot water boiler shall have an automatic low-water fuel cutoff which has been designed for hot water service, and it shall be so located as to automatically cut off the fuel supply when the surface of the water falls to the level established in I-3724(b).

Section 7 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 fixed building equipment at the building site unless specifically waived by the AHJ.

(b) To obtain a construction permit the applicant shall:

(1). Complete a Construction Permit Application form and submit it along with the required construction permit fee to the Division of Fire Safety regional office.

(2) Provide construction documents relating to the construction work and equipment under consideration unless specifically waived by the AHJ based on the size, use, occupancy or complexity of the work.

(3) For buildings where the applicant is requesting special consideration for a **historic building, documentation** shall be included on the historic designation of the building, 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 be prepared by a registered designed professional, stamped and signed, where required by 26 V.S.A. chapters 3 & 20. [*Excerpts from the Architects & Professional Engineering Licensing and Registration Statutes are included in Annex II of this code*]

(d) Plans required under this *Code* shall be drawn to scale, using customary inch-pound units and English language, and shall be sufficiently clear, comprehensive, detailed and legible when submitted to the AHJ so that, together with any accompanying specifications and data, the AHJ can readily determine whether or not the proposed building, addition, or alteration, and all proposed building equipment will conform to this *Code.*

(e) The AHJ shall review the application for a construction permit and the construction documents where applicable and shall issue a permit, a conditional permit with specific terms and conditions, or deny the application. The AHJ may require additional information before issuing, or denying the application for a construction permit. Any conditions of the permit or reasons for denial of the permit shall be transmitted to the applicant in writing.

(f) The AHJ may provide consultation or preliminary plan review for proposed construction to identify high priority code issues when deemed warranted by the significance or complexity of the project.

(g) A **construction permit shall expire** if the work authorized under the permit is not commenced, or is suspended or abandoned, for a time period of **12 months**. When a project is resubmitted for review beyond the 12 months and where no extension was granted, and no major building design change has occurred a 50% plan review fee will be assessed.

(h) Construction permit fees are established by the Vermont Legislature under Title 20 V.S.A. section 2731. The current construction permit fees are available on the Division's website or by contacting any office of the Division.

(1) 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.

(2) 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 AHJ, prorated on construction work, services, reviews and inspections conducted prior to such abandonment. Such request shall be received within 12 months of the date that the construction permit was issued.

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

(j) The AHJ shall be authorized to require the owner to engage, and designate on the construction permit application, a registered design professional who shall act as the **design professional in responsible charge** in accordance IBC 106.3.4, who shall be responsible for reviewing and coordinating submittal documents prepared by others for compatibility with the approved design of the building.

(k) The AHJ shall be authorized to order all, or part of, work regulated under this *Code* to stop when the work is unsafe or being performed contrary to the provisions of this *Code.*

PERMIT & LICENSING REQUIREMENTS

When do you need a state permit or license?

	DFS State Construction Permit	DFS Electrical		DFS Plumbing		Notes
		State Permit	License	State Permit	License	
Projects within a **Single Family Owner- Occupied home** that includes: new construction, alterations, renovations or the installation of fixtures.	**NO**	**NO**	**NO**	**Yes**	**Yes**	Only if connected to a public water or sewer system
Projects within a **Rental Property or Apartment Buildings** having more than two units that includes: new construction, alterations, renovations or the installation of fixtures.	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	
Projects within a **Duplex or a Rental single family home** that includes: new construction, alterations, renovations or the installation of fixtures.	**Yes**	**Yes**	**NO**	**Yes**	**Yes**	
Maintenance projects with in a public building such as painting, replacement of broken fixtures with fixture that is an exact match.	**NO**	**NO**	**Yes**	**NO**	**Yes**	
Public Building Renovations, Additions, Alterations, Modifications and New Building Projects. See Annex I for definition of Public Building	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	Includes Fire protection systems, Fire alarm system, Fire sprinkler, Kitchen hood & suppression, Elevators Ect.
The erection of temporary tents greater than 1,200 square feet in a public location	**Yes**	**Yes**	**Yes**	x	x	

To obtain a construction permit the applicant shall:

(1) Complete a Construction Permit Application form and submit it to the DFS 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.

(4) Installation of fire or sprinkler system, kitchen hood system or elevator requires an electrical permit in addition to a construction permit.

[Updated October 2, 2012]

Section 8 Variance, Exemption and Reconsideration

(a) The Commissioner may grant a variance approving a different solution to compliance that meets the intent of this code, or may exempt a portion of a building, or equipment including non-standard boilers and pressure vessels, 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 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, computations, chemical and physical properties or other supporting information as prepared by licensed or certified professionals that is 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 or standard 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 Director 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 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 for justifying 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 to the deputy director no later than 30 days after receiving the decision.

(g) 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 20 V.S.A. chapter 174.

(h) A request for a variance from this *Code* for historical buildings that is not resolved under section 8(a) shall be determined by the **Historic Variance Appeals Board** as established by 20 V.S.A. 2732.

Section 9 Duty to Observe Rules

A request for variance, exemption, or reconsideration, or request for an appeal pursuant to the rules for Administrative Citations and Penalties, or request for an appeal of orders issued pursuant to 20 V.S.A. 2733, or request for an appeal of any finding of violation of this *Code* 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.

Section 10 Municipal Enforcement and Coordination

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

(b) The Commissioner may assign the responsibility for the enforcement of all or part of these rules to municipalities that meet the qualifications established in 20 V.S.A. sections 2736 and 2884.

(c) Any fire, building or similar code standards adopted by any municipality shall be consistent with the standards adopted under this *Code*.

Section 11 Effective Dates and Severability

(a) These rules shall take effect **November 5, 2012** and shall be known as the Vermont Fire & Building Safety Code - 2012.

(b) 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,* or as otherwise approved by the AHJ prior to submission of plans. Existing buildings or portions of shall meet or exceed requirements for the existing buildings under this *Code* to allow a 90 day grace period.

(c) 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. Under Sections 3-6 of this *code* certain Vermont amendments have been cross-referenced for clarity and ease of use. Failure to cross-reference an amendment does not affect the enforcement of that amendment.

Annex I — Excerpts from Vermont Law Pertaining to the Vermont Fire & Building Safety Code

Title 20 Chapter 173: PREVENTION AND INVESTIGATION OF FIRES

§ 2729. General provisions

(a) A person shall not build or cause to be built any structure that is unsafe or likely to be unsafe to other persons or property in case of fire or generation and leakage of carbon monoxide.

(b) A person shall not maintain, keep or operate any premises or any part thereof, or cause or permit to be maintained, kept, or operated, any premises or part thereof, under his or her control or ownership in a manner that causes or is likely to cause harm to other persons or property in case of fire or generation and leakage of carbon monoxide.

(c) On premises under a person's control, excluding single family owner-occupied houses and premises, that person shall observe rules adopted under this subchapter for the prevention of fires and carbon monoxide leakage that may cause harm to other persons or property.

(d) Any condominium or multiple unit dwelling using a common roof, or row houses so-called, or other residential buildings in which people sleep, including hotels, motels, and tourist homes, excluding single family owner-occupied houses and premises, whether the units are owned or leased or rented, shall be subject to the rules adopted under this subchapter and shall be provided with one or more carbon monoxide detectors, as defined in 9 V.S.A. section 2881(3), properly installed according to the manufacturer's requirements..

§ 2730. Definitions

(a) As used in this subchapter, "**public building**" means:

(1)(A) a building owned or occupied by a public utility; hospital; school; house of worship; convalescent center or home for the aged, infirm, or disabled; nursery; kindergarten; or day care;

(B) a building in which two or more persons is employed, or occasionally enter as part of their employment or are entertained, including private clubs and societies;

(C) a cooperative or condominium; [*A condominium is described as a building or complex in which units of property, such as apartments, are owned by individuals and common parts of the property, such as the grounds and building structure, are owned jointly by the unit owners. A unit in such a complex.*]

(D) a building in which people rent accommodations, whether overnight or for a longer term;

(E) a restaurant, retail outlet, office or office building, hotel, tent, or other structure for public assembly, including outdoor assembly, such as a grandstand;

(F) a building owned or occupied by the state of Vermont, a county, a municipality, a village, or any public entity, including a school or fire district.

(2) 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 an individual who is directly related to the employer and who resides in the employment-related building.

(b) 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 subdivision 3502(b)(1) of Title 33;

(3) farm buildings on a working farm or farms. For purposes of this subchapter and subchapter 3 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 considered a public building.

(4) a single family residence with an **accessory dwelling unit** as permitted under subdivision 4406(4)(D) of Title 24. [*reference 24 VSA 4412(E) An accessory dwelling unit is an efficiency or one-bedroom apartment that is clearly subordinate to a single-family dwelling, and has facilities and provisions for independent living, including sleeping, food preparation, and sanitation, and does not exceed 30 percent of the total habitable floor area of the single-family dwelling. An accessory dwelling may be contained within the single-family dwelling, or detached, but cannot be located across a public way. A common driveway, shared water and waste water systems, and a common electrical service entrance are examples of an accessory dwelling unit being clearly subordinate to a single-family dwelling.*]

(c) For the purpose of this subchapter, subchapter 3 of this chapter, and chapter 174 of Title 20, the words "premises," "building," and "structure," or any part thereof shall mean "public building" as defined in this section.

[*Buildings classified as public buildings and owned by **a federal agency** are not exempt from state and municipal codes but there are limitations on how this Code is applied. 40 U.S.C.A, section 3312 requires that a federal agency consult with local code officials, submit plans for review and permit inspection of the construction project. The federal agency is required to give due consideration to any recommendations made by the local code official and build in compliance with nationally recognized building, electrical, fire, life safety and plumbing codes. A federal agency is exempt from any fees and no enforcement action can be brought against the federal agency for failure to comply with the law.*]

(d) "**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 subsection 723(a) of Title 22.

(e) The phrase "damage or destroy the historic architectural integrity of the historic building or structure" means to have an undue adverse impact on historically significant features of the historic architectural integrity of the building.

§ 2731. Rules; inspections; variances

(a) The commissioner is authorized to adopt rules regarding the construction of buildings, maintenance, and operation of premises, and prevention of fires and removal of fire hazards, and to prescribe standards necessary to protect the public, employees, and property against harm arising out of or likely to arise out of fire.

(b) The commissioner shall conduct inspections of premises to assure that the rules adopted under this subchapter are being observed and may establish priorities for enforcing these rules and standards based on the relative risks to persons and property from fire of particular types of premises. The commissioner may also conduct inspections to assure that buildings are constructed in accordance with approved plans and drawings.

(c) The following fire prevention and building code fees are established:

(1) The permit application fee for a construction plan approval shall be:

(A) The **permit application fee** for a construction plan approval shall be based on $5.50 per each $1,000.00 of the total valuation of the construction work proposed to be done for all buildings, but in no event shall the permit application fee exceed $185,000.00 nor be less than $50.00. (2) When an inspection is required due to the **change in use** of a public building, the fee shall be $125.00.

(3) The **proof of inspection fee** for fire suppression, alarm, detection, and any other fire protection systems shall be $30.00.

(d) The commissioner shall make all practical efforts to process permits in a prompt manner. The commissioner shall establish time limits for permit processing as well as procedures and time periods within which to notify applicants whether an application is complete.

(e) The commissioner may grant **variances or exemptions** from rules adopted under this subchapter where strict compliance would entail practical difficulty, unnecessary hardship, or is otherwise found unwarranted, provided that:

(1) Any such variance or exemption secures the public safety and health; and

(2) any petitioner for such a variance or exemption can demonstrate that the methods, means, or practices proposed to be taken in lieu of compliance with the rule or rules provide, in the opinion of the commissioner, equal protection of the public safety and health as provided by the rule or rules; and

(3) the rule or rules from which the variance or exemption is sought has not also been adopted as a rule or standard under subchapters 4 and 5 of chapter 3 of Title 21; and

(4) any such variance or exemption does not violate any of the provisions of chapters 3 and 20 of Title 26 or any rules adopted thereunder.

(f) The commissioner shall, in state-funded buildings or new additions to state-funded buildings on which construction is begun after June 30, 2001, meet the standards contained in "**The Vermont Guidelines for Energy Efficient Commercial Construction**" as published in its most recent edition by the department of public service.

(h) A building owner or contractor engaged in an older and historic renovation project may propose innovative, performance-based alternatives in lieu of strict fire and building code compliance. The commissioner shall consider such alternatives and shall accept those that provide equivalent protection of the public safety and health. A decision to accept or deny a proposed alternative shall be in writing and explain the reasons for accepting or denying the alternative.

(i)(1) The department approves stamped architectural plans by issuing a plan review letter. If, upon final inspection, the department requires structural changes, additional life safety modifications, or state-mandated accessibility modifications, and the modifications or changes are not the result of design or construction changes by the owner, the owner or architect:

(A) May apply for a variance or exemption as provided in subsection (e) of this section, section 2732 of this title, and section 2902 of this title; and

(B) If the variance or exemption request is denied, upon the completion of the structural changes or additional life safety, or state-mandated accessibility modifications, as the case may be, may apply to the commissioner for a reimbursement of some or all of the plan review fee paid for the project.

(2) The decisions of the commissioner, pursuant to this subsection, shall be final. The commissioner shall adopt rules to carry out the provisions of this subsection. This subsection shall not apply to design or construction changes necessary to comply with an alternative method of life safety code or state-mandated accessibility compliance requested by the owner after the plan review.

(j) Rules adopted under this section shall require that information, written, approved, and distributed by the commissioner, on the type, placement, and installation of photoelectric smoke detectors and carbon monoxide detectors be conspicuously posted in the retail sales area where the detectors are sold.

§ 2732. Historic variance appeals board; variances; exemptions

(a) An historic variance appeals board is created. The board shall consist of the following three members: the commissioner of public safety or designee, who shall be chair; the state historic preservation officer or designee; and a representative of the Vermont historic preservation community appointed by the governor. A board member who is not a state employee shall be entitled to compensation and expenses as provided by section 1010 of Title 32.

(b) The board shall hear and determine all requests for variances or exemptions from the rules adopted by the commissioner under this subchapter for historic buildings and structures. A request for a variance or exemption may be granted where an applicant has demonstrated that strict compliance would entail practical difficulty, or unnecessary hardship, or would damage or destroy the historic architectural integrity of the historic building or structure, or is otherwise found unwarranted, provided that:

(1) Any such variance or exemption secures the public safety and health;

(2) Any petitioner for such a variance or exemption can demonstrate that the methods, means, or practices proposed to be taken in lieu of compliance with the rule or rules provide, in the opinion of the board, equal protection of the public safety and health as provided by rule or rules;

(3) The rule or rules from which the variance or exemption is sought have not also been adopted as a rule or standard under subchapters 4 and 5 of chapter 3 of Title 21; and

(4) Any such variance or exemption does not violate any of the provisions of chapters 3 and 20 of Title 26 or any rules adopted thereunder.

(c) The board may permit a person seeking a variance or exemption to phase in compliance with the rules adopted under this subchapter in lieu of or in addition to granting the variance or exemption requested. The period of phased in compliance shall be reasonable but shall state a date by which compliance shall be achieved.

(d) Any person seeking a variance or exemption for work involving an historic building shall file a written request with the commissioner. The request shall describe the rule or rules from which the variance or exemption is sought, the reasons why a variance or exemption is sought, and a description as to how any alternative means of protecting the public safety and health is to be provided. The board shall meet and consider such requests within 15 working days of the request being filed with the commissioner. In deciding whether to grant or deny the request, the board shall take testimony or receive information from the applicant or his or her representatives, and from fire safety division staff. A decision of the board based on a majority vote of those members present shall be binding. The board shall issue a written determination granting or denying, in whole or in part, any variance or exemption request, or permission to phase in compliance, within 60 days of hearing the request. If a grant is conditional, the condition shall be clearly stated in writing. Failure to act on a request within 60 days shall be deemed approval of the request, provided that the public safety and health is not imminently threatened.

(e) The board may adopt, amend, or repeal procedural rules to carry out the provisions of this section.

(f) The board is attached to the department of public safety for administrative purposes.

(g) The board shall be subject to the requirements of subchapters 2 and 3 of chapter 5 of Title 1.

§ 2733. Orders to repair, rehabilitate, or remove structure

(a) Whenever the commissioner finds that premises or any part of them does not meet the standards adopted under this subchapter, the commissioner may order it repaired or rehabilitated. If it is not repaired or rehabilitated within a reasonable time as specified by the commissioner in his or her order, the commissioner may order the premises or part of them closed, if by doing so the public safety will not be imperiled; otherwise he or she shall order demolition and removal of the structure, or fencing of the premises. Whenever a violation of the rules is deemed to be imminently hazardous to persons or property, the commissioner shall order the violation corrected immediately. If the violation is not corrected, the commissioner may then order the premises or part of them immediately closed and to remain closed until the violation is corrected.

(b) Whenever a structure, by reason of age, neglect, want of repair, action of the elements, destruction, either partial or total by fire or other casualty or other cause, is so dilapidated, ruinous, decayed, filthy, unstable, or dangerous as to constitute a material menace or damage in any way to adjacent property, or to the public, and has so remained for a period of not less than one week, the commissioner may order such structure demolished and removed.

(c) Orders issued under this section shall be served by certified mail with return receipt requested or in the discretion of the commissioner, shall be served in the same manner as summonses are served under the Vermont Rules of Civil Procedure promulgated by the supreme court, to all persons who have a recorded interest in the property recorded in the place where land records for the property are recorded, including owners, tenants, mortgagees, attaching creditors, lien holders, and public utilities or water companies serving the premises.

§ 2734. Penalties

(a) A person who violates any provision of this subchapter or any order or rule issued pursuant thereto shall be fined not more than $10,000.00. The state's attorney of the county in which such violation occurs shall prosecute the violation and may commence a proceeding in the superior court to compel compliance with such order or rule, and such court may make orders and decrees therein by way of writ of injunction or otherwise.

(b) A person who fails to comply with a lawful order issued under authority of this subchapter in case of sudden emergency shall be fined not more than $20,000.00. A person who fails to comply with an order requiring notice shall be fined $200.00 for each day's neglect commencing with the effective date of such order or the date such order is finally determined if an appeal has been filed.

(c) The commissioner may, after notice and opportunity for hearing, assess an administrative penalty of not more than $1,000.00 for each violation of this subchapter or any rule adopted under this subchapter. Penalties assessed pursuant to this subsection shall be based on the severity of the violation. An election by the commissioner to proceed under this subsection shall not limit or restrict the commissioner's authority under subsection (a) of this section.

(d) Violation of any rule adopted under this subchapter shall be prima facie evidence of negligence in any civil action for damage or injury which is the result of the violation.

§ 2736. Municipal enforcement

(a) The legislative body of a municipality may appoint one or more trained and qualified officials and may establish procedures to enforce rules and standards adopted under subsection 2731(a) of this title. After considering the type of buildings within the municipality, if the commissioner determines that the training, qualifications and procedures are sufficient, he or she may assign responsibility to the

municipality for enforcement of some or all of these rules and standards. The commissioner may also assign responsibility for enforcement of the rules of the access board adopted under section 2902 of this title. The commissioner shall provide continuing review, consultation, and assistance as may be necessary. The assignment of responsibility may be revoked by the commissioner after notice and an opportunity for hearing if the commissioner determines that the training, qualifications, or procedures are insufficient. The assignment of responsibility shall not affect the commissioner's authority under this subchapter.

(b) If a municipality assumes responsibility under subsection (a) of this section for performing any functions that would be subject to a fee established under subsection 2731(a) of this title, the municipality may establish and collect reasonable fees for its own use, and no fee shall be charged for the benefit of the state.

(c) Subject to rules adopted under section 2731 of this title, municipal officials appointed under this section may enter any premises in order to carry out the responsibilities of this section. The officials may order the repair, rehabilitation, closing, demolition, or removal of any premises to the same extent as the commissioner may under section 2732 of this title.

(d) Upon a determination by the commissioner that a municipality has established sufficient procedures for granting variances and exemptions, such variances and exemptions may be granted to the same extent authorized under subsection 2731(b) of this title.

(e) The results of all activities conducted by municipal officials under this section shall be reported to the commissioner periodically upon request.

(f) Nothing in this section shall be interpreted to decrease the authority of municipal officials under other laws, including laws concerning building codes and laws concerning housing codes.

Current cooperative municipal inspection agreements include:

Barre *- Responsibility for the enforcement of the Code for all existing public buildings except federally certified health care facilities, high-rise buildings, state owned buildings, and the testing and reporting of fire protection systems by technically qualified people.*
Bellows Falls *- Responsibility for the enforcement of the Code for all existing public buildings except federally certified health care facilities, high-rise buildings, state owned buildings, and the testing and reporting of fire protection systems by technically qualified people.*
Bennington *- Responsibility for the enforcement of the Code for all new & existing public buildings except federally certified health care facilities, high-rise buildings, state owned buildings, and the testing and reporting of fire protection systems by technically qualified people.*
Brattleboro *- Responsibility for the enforcement of the Code for all existing public buildings except federally certified health care facilities, high-rise buildings, state owned buildings, and the testing and reporting of fire protection systems by technically qualified people.*
Burlington *- Responsibility for the enforcement of the Code for all new and existing public buildings except federally certified health care facilities, state owned buildings, and the testing and reporting of fire protection systems by technically qualified people.*
Hartford *- Responsibility for the enforcement of the Code for all new and existing public buildings except day-care, health care, detention and correctional and residential board and care facilities, state owned buildings, high-rise buildings and the testing and reporting of fire protection systems by technically qualified people.*
Montpelier *- Responsibility for the enforcement of the Code for all new and existing public buildings except day-care, health care, detention and correctional and residential board and care facilities, state owned buildings, high-rise buildings and the testing and reporting of fire protection systems by technically qualified people*
Putney - *Responsibility for the enforcement of the Code for all existing public buildings except federally certified health care facilities, state owned building, and the testing and reporting of fire protection systems by technically qualified people.*
St. Albans - *Responsibility for the enforcement of the Code for all existing public buildings except assembly, business, educational, day-care, health care, detention and correctional, mercantile, and residential board and care facilities, state owned buildings, high-rise buildings and the testing and reporting of fire protection systems by technically qualified people.*
Winooski - *Responsibility for the enforcement of the Code for all existing public buildings except educational, day-care, health care, detention and correctional and residential board and care facilities, state owned buildings, high-rise buildings and the testing and reporting of fire protection systems by technically qualified people.*

§ 2737. Building permits

Each municipality shall provide to the commissioner upon request information regarding building permits issued by the municipality.

§ 2799. Definitions

As used in this subchapter:

(1) "Explosive material" includes "explosives," "explosive material," "blasting agents," and "detonators," as defined in section 841 of Title 18 of the United States Code, as

amended at any time, and regulations promulgated thereunder.

(2) "Flammable material" means, in addition to its ordinary meaning, motion picture film.

(3) "Hazardous material" means any substance having such properties that it may spontaneously or acting under the influence of anything contiguous or of any chemical or physical agency ignite or generate flammable or explosive vapors or gases to a dangerous extent.

(4) "Petroleum product" includes without limitation liquid petroleum gas, explosive flammable gases, and flammable fluids, compounds, or tablets, derived in whole or in part from petroleum.

§ 2800. Rules and standards

The commissioner may adopt rules and standards for 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. The commissioner may prescribe the location, materials, and construction of buildings and other facilities to be used for these purposes.

§ 2801. Seizure of materials

Without warrant, the commissioner, a member of the state police, a sheriff, a deputy sheriff, a police officer, or a constable may seize materials held by a person in violation of rules adopted under this subchapter and hold the same subject to the order of the court taking jurisdiction of the offense.

§ 2802. Orders

After an inspection, the commissioner may issue an appropriate order to remove or abate a condition dangerous to persons or property involving explosive materials, flammable materials, or hazardous materials. This order shall be served on the owner or occupant of the premises on which the condition exists.

§ 2685. Record of fires

The fire marshal shall keep in his office a record of every fire occurring in this state which causes serious injury to any person or loss or damage to property in excess of $200.00. He shall record all the facts concerning these fires, including statistics as to their extent and the damage caused thereby, and whether the losses were covered by insurance and, if so, in what amount. The record shall be made daily from the reports made to him under the provisions of this chapter. All such records shall be public, except information and testimony taken where arson is suspected.

§ 2833. Reports to fire marshal

(a) The chief of a volunteer or paid fire department or, if there is no fire department, the first selectman of a town, shall within five days of the occurrence of a fire within his jurisdiction which causes serious injury to any person or loss or damage to property which exceeds $200.00, forward a report of the fire to the state fire marshal on forms to be furnished by him. If the reporting officer has reason to believe that a fire is of suspicious origin, he shall report that fact to the state fire marshal immediately. No fee shall be paid or allowed any officer for rendering the report required by this subsection.

(b) An officer referred to in subsection (a) of this section who willfully neglects to comply with any of the requirements of this subchapter shall be fined not more than $100.00.

§ 2881. General provisions

(a) A person shall not install or maintain a boiler or pressure vessel which is unsafe or likely to be unsafe to other persons or property.

(b) A person shall not operate, cause to be operated, or permit to be operated any boiler or pressure vessel under his or her control or ownership, in a manner which causes or is likely to cause harm to other persons or property.

§ 2882. Rules

The commissioner may adopt rules pertaining to boilers and pressure vessels, and standards to be observed, necessary for the safety and protection of the public, employees and property. All standards adopted by the commissioner shall conform to the codes of the American Society of Mechanical Engineers and the National Board of Boiler and Pressure Vessel Inspectors. The commissioner may provide for operating certificates to be issued before a boiler or pressure vessel may be used.

§ 2883. Boiler inspections

The commissioner has authority to obtain specific information from boiler inspectors on forms which shall first be approved by the commissioner. The commissioner may authorize qualified inspectors to conduct inspections under such rules as the commissioner may prescribe. If a boiler or pressure vessel is insured, the inspection may be conducted by a qualified inspector who is employed, or contractually authorized, by the insurer. If a boiler or pressure vessel is not insured, the inspection may be

conducted by any qualified inspector authorized by the commissioner. In case the inspection is made by such an inspector, no fee shall be charged by the division, except a process fee of $30.00 for issuance of an operating certificate. The fee for a person requesting a three-year authorization to conduct inspections shall be $150.00. A licensed boiler inspector shall carry liability insurance in an amount determined by the department. (Added 2003, No. 141 (Adj. Sess.), § 4a, eff. April 1, 2005; amended 2009, No. 134 (Adj. Sess.), § 4.)

§ 2884. Qualifications of inspectors

All boiler inspectors, employed by the state and insurance companies, shall have passed the examination required by the National Board of Boiler and Pressure Vessel Inspectors, and hold annual certification from such board.

§ 2885. Penalties

The commissioner may assess penalties pursuant to section 2734 of this title against a person who violates this subchapter or any rule adopted under this subchapter.

Chapter 177 § 3131. Definitions

The term **"fireworks"** means any combustible or explosive composition, or any substance or combination of substances, or article prepared for the purpose of producing a visible or an audible effect by combustion, explosion, deflagration or detonation, including blank cartridges, toy pistols, toy cannons, toy canes, or toy guns in which explosives are used, balloons that are propelled by explosives, firecrackers, torpedoes, sky rockets, Roman candles, cherry bombs, or other fireworks of like construction and any fireworks containing any explosive or flammable compound, or any tablets or other device containing any explosive substance, except sparklers. The term "fireworks" does not include toy pistols, toy canes, toy guns, or other devices in which paper caps containing 0.25 grains or less of explosive compound are used, providing they are so constructed that the hand cannot come in contact with the cap when in place for use, and toy pistol paper caps that contain less than 0.2 grains of explosive mixture. The term "fireworks" does not include fixed ammunition for firearms, or primers for firearms. The term "sparkler" means a sparkling item that is in compliance with the United States Consumer Product Safety Commission regulations and is one of the following:

3132. Prohibitions; permits

(a) Except as provided in this section, it shall be unlawful for any person, firm, co-partnership, or corporation to do any of the following:

(1) Offer for sale, expose for sale, sell at retail or wholesale, or possess fireworks unless the person has been issued a permit by both the U.S. Bureau of Alcohol, Tobacco, and Firearms and the municipality in which the person offers for sale and stores the fireworks.

(2) Use, possess, or explode any fireworks unless the person has been issued a permit to display fireworks pursuant to subsection (c) of this section.

(3) Transport fireworks except in interstate commerce.

(4) Offer for sale or sell hand-held sparklers as described in subdivision 3131(1) of this title to a minor.

(5) Offer for sale or sell sparklers that are not in compliance with the United States Consumer Product Safety Commission regulations.

(b) The state fire marshal shall have power to adopt reasonable rules and regulations for granting permits for supervised public displays of fireworks by municipalities, fair associations, amusement parks, and other organizations or groups of individuals.

(c) Any display for which a permit is issued shall be handled by a competent operator to be approved by the chiefs of police and fire departments of the municipality in which the display is to be held and shall be of a character, and so located, discharged or fired as, in the opinion of the chief of the fire department, or in a municipality with no fire department, the selectboard, after proper inspection, shall not be hazardous to property or endanger any person or persons.

(d) Application for permits shall be made to the chief of the fire department, or in municipalities with no fire department, the selectboard, in writing, at least **15 days in advance** of the date of the display. After the permit has been granted, sales, possessions, use and distribution of fireworks for the display shall be lawful for that purpose only. No permit granted under this section shall be transferable.

§ 3136. Construction

Being in the interest of public safety the provisions of this subchapter shall be liberally construed.

Title 20 CHAPTER 201. PUBLIC ASSEMBLIES

*A **commercial public assembly permit** issued by the Vermont State Police is required for an **outdoor gathering of two thousand or more people** in a public place when payment is required for admission. A permanent stadium used for sporting events, or a fairground having permanent seats for patrons, does not require a commercial public assembly permit. An application for a commercial public assembly permit must be filed with Vermont State Police Headquarters, 103 South Main St., Waterbury, VT 05671-2101, at least 30 days prior to the event.*

For additional information contact (802) 241-5270, or online at
http://vsp.vermont.gov/about_us/divisions/field_force/assembly_permits

Annex II — *Excerpts from the Architects and Professional Engineering Licensing and Registration Laws*

Title 26 Professions and Occupations *Chapter 3: ARCHITECTS*

§ 121. 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.

§ 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 the appropriate field.

(b) 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.

(c) This chapter shall not be construed to limit or restrict in any manner the right of a practitioner of another profession or occupation from carrying on in the usual manner any of the functions incidental to that profession or occupation.

§ 208. Seal

Each licensee 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.

Chapter 20 § 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 engineering works and systems, planning the use of land and water and accomplishing engineering 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.

(6) "Professional engineer" means a person licensed under this chapter.

§ 1163. 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) Certain classes of licensed potable water supply and wastewater system designers, as designated by rule of the secretary of the agency of natural resources, who design supplies or systems with a design flow of up to 1,350 gallons per day and who are licensed under chapter 64 of Title 10.

(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 communications 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 professional engineer.

(b) Other professions. Section 1162 of this title does not prohibit acts constituting the practice of any other legally recognized profession or occupation.

(c) Purposes exempt. Section 1162 does not prohibit any person from performing acts constituting the practice of engineering for the purpose 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 outbuildings.

(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.

(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.

§ 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.

Annex III — Smoke & Carbon Monoxide Detection for Single-Family Owner Occupied Dwellings

Title 9: Commerce and Trade

Chapter 77 SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS

§ 2881. Definitions

For the purpose of this chapter:

(1) "Single-family dwelling" means any building or structure in which a family, families or households reside that contains sleeping facilities and is not otherwise classified as a "public building" as defined in section 20 V.S.A. section 2730 or as a "condominium" or "multiple unit dwelling" as defined in section 20 V.S.A. section 2729(d).

(2) "Smoke detector" means a device that detects visible or invisible particles of combustion and sounds a warning alarm, is operated from a power supply, within the unit or wired to it from an outside source, and is approved or listed for the purpose by Underwriters Laboratory or by another nationally recognized independent testing laboratory.

(3) “Carbon monoxide detector” means a device with an assembly that incorporates a sensor control component and an alarm notification that detects elevations in carbon monoxide levels and sounds a warning alarm, is operated from a power supply within the unit or wired to it from an outside source, and is approved or listed for the purpose by Underwriters Laboratory or by another nationally recognized independent testing laboratory.

§ 2882. Installation

(a) A person who constructs a single-family dwelling shall install photoelectric-only-type smoke detectors in the vicinity of any bedrooms and on each level of the dwelling, and one or more carbon monoxide detectors in the vicinity of any bedrooms in the dwelling in accordance with the manufacturer’s instructions. In a dwelling provided with electrical power, the detectors shall be powered by the electrical service in the building and by battery.

(b) Any single-family dwelling when transferred by sale or exchange shall contain photoelectric-only-type smoke detectors in the vicinity of any bedrooms and on each level of the dwelling installed in accordance with the manufacturer’s instructions and one or more carbon monoxide detectors installed in accordance with the manufacturer's instructions. A single-family dwelling constructed before January 1, 1994 may contain smoke detectors powered by the electrical service in the building or by battery, or by a combination of both. In a single-family dwelling newly constructed after January 1, 1994 that is provided with electrical power, smoke detectors shall be powered by the electrical service in the building and by battery. In a single-family dwelling newly constructed after July 1, 2005 that is provided with electrical power, carbon monoxide detectors shall be powered by the electrical service in the building and by battery.

(c) Nothing in this section shall require an owner or occupant of a single-family dwelling to maintain or use a smoke detector or a carbon monoxide detector after installation.

§ 2883. Requirements for transfer of dwelling

(a) The seller of a single-family dwelling, including one constructed for first occupancy, whether the transfer is by sale or exchange, shall certify to the buyer at the closing of the transaction that the dwelling is provided with photoelectric-only-type smoke detectors and carbon monoxide detectors in accordance with this chapter. This certification shall be signed and dated by the seller.

(b) If the buyer notifies the seller within ten days by certified mail from the date of conveyance of the dwelling that the dwelling lacks any photoelectric-only-type smoke detectors or any carbon monoxide detectors or that any detector is not operable, the seller shall comply with this chapter within ten days after notification.

(c) Violation of this section or of the installation requirements of section 2882 shall not create a defect in title.

Residential Single Station Smoke Alarm (Detector) Installation Guidelines

		Occupancy	Type	Required Power Supply	Required Locations	Reference	Notes
1	**NEW** Building	**OWNER – OCCUPIED Single Free Standing Dwelling**	Photoelectric only alarms required to be installed	Hardwired into the building electric system with battery backup.	In the immediate vicinity of sleeping rooms and on all floor levels including the basement.	VSA Title 9 Chapter 77	
		ALL OTHER DWELLING UNITS	Photoelectric only alarms required to be installed	Hardwired into the building electric system with battery backup.	In the immediate vicinity of sleeping rooms, inside each sleeping room and on all floor levels including the basement.	NFPA 101 Section 24.3.4.1 Section 30.3.4.5	All smoke alarms within the dwelling unit must be interconnected.
2	**EXISTING** Building	**OWNER – OCCUPIED Single Free Standing Dwelling**	Photoelectric only alarms required to be installed at time of transfer by sale or exchange	Built before **01/01/1994:** Hardwired into the building electric system OR by Battery. Built after **01/01/1994:** Hardwired into the building electric system with battery backup.	In the immediate vicinity of sleeping rooms and on all floor levels including the basement.	VSA Title 9 Chapter 77	The seller of a single-family dwelling shall certify to the buyer that smoke and CO alarms are installed using the DFS form. See General Note # 3
		1 & 2 DWELLING UNITS IN THE SAME BUILDING	All alarms newly installed or replaced alarms are required to be Photoelectric	All Newly installed and Replacement smoke alarms must be Hardwired into the building electric system with battery backup. By a battery when existing smoke alarm/s is less then ten (10) years from the date of manufacture and is installed in approved locations.	In the immediate vicinity of sleeping rooms, inside each sleeping room and on all floor levels including the basement.	NFPA 101 Section 24.3.4.1.1 Section 9.6.2 And VT Code Amendments Section 9.6.2.11 Section 9.6.2.9.2	Hardwired into the building electric system with battery backup will be required if alarms are not being maintained.
		3 OR MORE DWELLING UNITS IN THE SAME BUILDING	All alarms newly installed or replaced alarms are required to be Photoelectric	Hardwired into the building electric system with battery backup.	In the immediate vicinity of sleeping rooms, on all floor levels including the basement. Alarms shall be installed in side of all sleeping rooms by 11/1/15	NFPA 101 Section 31.3.4 Section 31.3.4.5.3 NFPA 72 Section 11.5.4 Section 31.3.4.5.3	See General Note # 5

3 **General Smoke Alarm**

Notes:

1. Combination photoelectric smoke and CO alarms are acceptable for new installations or replacements. Combination smoke alarms that include Ionization and photoelectric sensors in the same alarm are not permitted to be used for new installations or replacements.

2. Lodging and Rooming Houses or Bed & Breakfast establishments that provide sleeping accommodations for 6 - 16 persons on a transient or permanent basis shall have smoke alarms installed in every sleeping room. Existing battery-powered smoke alarms, shall be permitted where the facility demonstrates that the testing, maintenance, and battery replacement programs will ensure reliability of the smoke alarms. Smoke alarms shall not remain in service longer than 10 years from the date of manufacture. All Newly installed and Replacement smoke alarms must be Hardwired into the building electric system with battery backup.

Bed and Breakfast establishments that provide sleeping accommodations for less than 6 people and is occupied by the proprietor may be classified as a single free standing dwelling.

3. Smoke alarms shall not remain in service longer than 10 years from the date of manufacture.

4. One and Two family dwellings used as a licensed family day care home (3-12 clients) shall also include single station smoke alarms in each room used for sleeping.

5. All smoke alarms within the dwelling unit must be interconnected in new buildings or existing buildings undergoing reconstruction or extensive modification. Smoke alarms required by 31.3.4.5.3 shall be installed in all sleeping rooms by 11/1/2015 at which time all smoke alarms must be electrically wired.

6. For stairways leading up from a basement, smoke alarms shall be located on the basement ceiling near the entry to the stairs.

7. Existing smoke alarms installed within 20 ft of a cooking appliance shall be photoelectric type.

8. Smoke alarms shall not be installed within 36 in. of a door to a bathroom containing a shower or tub.

9. Smoke alarms shall not be installed within 36 in of forced air heating or cooling system registers or smoke alarms may not be installed within 36 in. from the tip of the blade of a ceiling-suspended (paddle) fan.

[Updated October 1, 2012]

CARBON MONOXIDE ALARM REQUIREMENTS

	Occupancy	Power Supply	Code Reference	Location	** Notes
1.	Existing 1&2 family dwellings	Battery, directly hardwired into the building's electrical circuit, or plug in type. **No transition period to require upgrade to electric power**	(VFBSC) Vermont Fire & Building Safety Code Page 9 – add section 24.3.4.4 to NFPA 101, 2012	Outside each sleeping area in the immediate vicinity of the bedrooms. An additional detector shall be installed in each sleeping room that contains a fuel- burning appliance. ** See Note	** Detectors required only on floor levels where sleeping rooms are provided. ** Have your heating appliance serviced by a certified fuel service technician.
2.	*New 1 & 2 Family Dwelling constructed after October 22, 2005*	Directly hardwired into the building's electrical circuit with battery back up. Plug in type not considered direct wired	(VFBSC) Page 9 – add section 24.3.4.4 to NFPA 101, 2012	Outside each sleeping area in the immediate vicinity of the bedrooms. An additional detector shall be installed in each sleeping room that contains a fuel- burning appliance. ** See Note	** Detectors required only on floor levels where sleeping rooms are provided. ** Have your heating appliance serviced by a certified fuel service technician.
3.	Existing Apartment Buildings/Condos (3 or more units)	Effective Oct. 22, 2005 - Battery, directly hardwired into the building's electrical circuit, or plug in type. ** See Note	(VFBSC) Page 10 –Add section 31.3.4.6 to NFPA 101, 2012	Outside each sleeping area in the immediate vicinity of the bedrooms. An additional detector shall be installed in each sleeping room that contains a fuel- burning appliance. ** See Note	** Effective October 1, 2007 the detectors are required to be directly hardwired with battery back up. ** Detectors required only on floor levels where sleeping rooms are provided.
4.	New Apartment Buildings/Condos (3 or more units)	Effective Oct. 22, 2005- Directly hardwired into the building's electrical circuit with battery back up.	(VFBSC) Page 10 –Add section 30.3.4.6 to NFPA 101, 2012	Outside each sleeping area in the immediate vicinity of the bedrooms. An additional detector shall be installed in each sleeping room that contains a fuel- burning appliance. ** See Note	** Detectors required only on floor levels where sleeping rooms are provided. ** Have your heating appliance serviced by a certified fuel service technician.
5.	Existing Hotels, Motels, Dormitories, and Rooming and Lodging	Effective Oct. 22, 2005 the power may originate from battery, direct wire, or plug in type. ** See Note	(VFBSC) Page 9–Add section 29.3.4.6 to NFPA 101, 2012	Outside the guest rooms in the corridor spaced in accordance with the manufacturer's installation instructions. Inside each bedroom where there is no corridor, and in each sleeping room provided with a fuel-burning appliance. ** See Note	** Detectors must be installed in accordance with the manufacturer's installation instructions. Effective October 1,07 battery detectors shall be up - graded to direct wire with battery back up.
6.	New Hotels, Motels, Dormitories, and Rooming and Lodging built after Oct. 22, 2005	Effective Oct. 22, 2005- Directly hardwired into the building's electrical circuit with battery back up. ** See Note	(VFBSC) Hotels & Dorms- Page 9 (28.3.4.6) Rooming & Lodging Page 9 (26.3.3.5.4)	Outside the guest rooms in the corridor spaced in accordance with the manufacturer. Inside each bedroom where there is no corridor, and in each sleeping room provided with a fuel - burning appliance.	** Detectors must be installed in accordance with the manufacturer's installation instructions.
7.	Single-family owner occupied home	Effective 7-01-05, new homes directly wired into the house electrical circuit. Existing homes battery, directly wired into house circuit, or plug-in.	9 VSA Chapter 77 VFBSC – page 39	Outside each sleeping area in the immediate vicinity of the bedrooms. An additional detector is recommended in any sleeping room that contains a fuel-burning appliance. **See Note	** Detectors required only on floor levels where sleeping rooms are provided. ** Have your heating appliance serviced by a certified fuel service technician.

"Install and maintain detectors in accordance with the manufacturer's installation instructions and NFPA 720"

[Updated October 1, 2012]

Vermont has an unusually high proportion of older buildings. These buildings contribute substantially to the sense of community and place that makes Vermont unique. At the same time, these buildings may be particularly challenging to adaptively reuse. Owners of older and historic buildings should seek the assistance of experienced designers specializing in the preservation of these structures. Division for Historic Preservation and Division of Fire Safety staff will assist in using the features of this *Code* to preserve and enhance historic buildings. Clear and comprehensive information on the significant historic features needs to be provided to the Division to facilitate review.

There are a number of codes that are part of this *Cod*e 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, Code for Fire Protection of Historic Structures, addresses the identification of existing conditions, planning and fire protection practices for historic buildings.

The regional offices of the Division of Fire Safety 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 that 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 10.3 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 that provide options and flexibility for sympathetic installation in historic buildings.

(See NFPA 914, Appendix F or NFPA 909, Appendix C for a general discussion of fire alarm systems and NFPA 101 Section 9.6)

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 D or NFPA 909 Appendix C for a general discussion of fire extinguishing systems and NFPA 101 Section 9.7)

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 that 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.

Vermont tax credits are also available for the installation of sprinkler systems and elevators in designated downtown areas, contact the Agency of Commerce & Community Development at 800-622-4553.

Maintenance and Testing of Fire Protection Systems

To help assure that fire protection systems will function properly when needed, all fire protection systems such as a fire alarm, sprinkler or kitchen hood exhaust systems are required to be tested periodically by a technically qualified person who is certified by the Division of Fire Safety. Upon completion of the test, the technically qualified person will affix an inspection sticker and notify the Division of Fire Safety of the results of the inspection.

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.

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 that 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 explaining the code requirements and listing sources for further referencing, this guide also encourages and outlines the early and continued cooperation between those directly involved in the project with local code and preservation officials.

For a downloadable copy go to:

http://accd.vermont.gov/strong_communities/preservation/education/accessibility

Annex V — *Contact Information:*

The Division of Fire Safety's four Regional Offices are located in:

Barre	**Rutland**
1311 U. S. Route 302 – Suite 500 Barre, VT 05641 802.479.4434 Toll free: 888.870.7888 Fax: 802.479.4446	56 Howe Street Building A – Suite 200 Rutland, VT 05701 802.786.5867 Toll free: 888.370.4834 Fax: 802.786.5872
Springfield	**Williston**
100 Mineral Street, Suite 307 Springfield, VT 05156 802.885.8883 Toll free: 866.404.8883 Fax: 802.885.8885	372 Hurricane Lane, Suite 102 Williston, VT 05495 802.879.2300 Toll free: 800.366.8325 Fax: 802.879.2312
The Vermont Fire Academy	**The Division of Fire Safety Main Office**
93 Davison Drive Pittsford, VT 05763 802.483.2755 Toll Free 800.615.3473 Fax: 802.483.2464	1311 U. S. Route 302 – Suite 600 Barre, Vermont 05641-2351 802.479.7561 Toll Free 800.640.2106 Fax: 802.479.7562

Codes and Standards Adopted and referenced under this ***Code*** are available at:

National Fire Protection Association

1 Batterymarch Park
Quincy Mass 02169-9101
1-800-344-3555

www.nfpa.org/

International Code Council, Publications

4051 West Flossmoor Road
Country Club Hills
Illinois, 60478-5795
888-422-7233 800-786-4452

www.iccsafe.org

American Society for Testing and Materials

100 Barr Harbor Drive
West Conshohocken PA 19428-2959
610-832-9585

www.astm.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 Welding Society, Inc.

550 N.W. Lejunne Road
P.O. Box 351040
Miami FL 33135
1-800-443-9353

www.aws.com

Compressed Gas Association, Inc.

4221 Walney Road, 5th Floor
Chantilly, VA 20151-2923
703-788-2700

www.cganet.com/default.html

American Society of Mechanical Engineers

22 Law Drive, Box 2900
Fairfield, NJ 07007
1-800-843-2763

www.asme.org/

National Board of Boiler & Pressure Vessel Inspectors

1055 Crupper Ave.
Columbus, Ohio 43229-1183
614-888-8320

www.nationalboard.org

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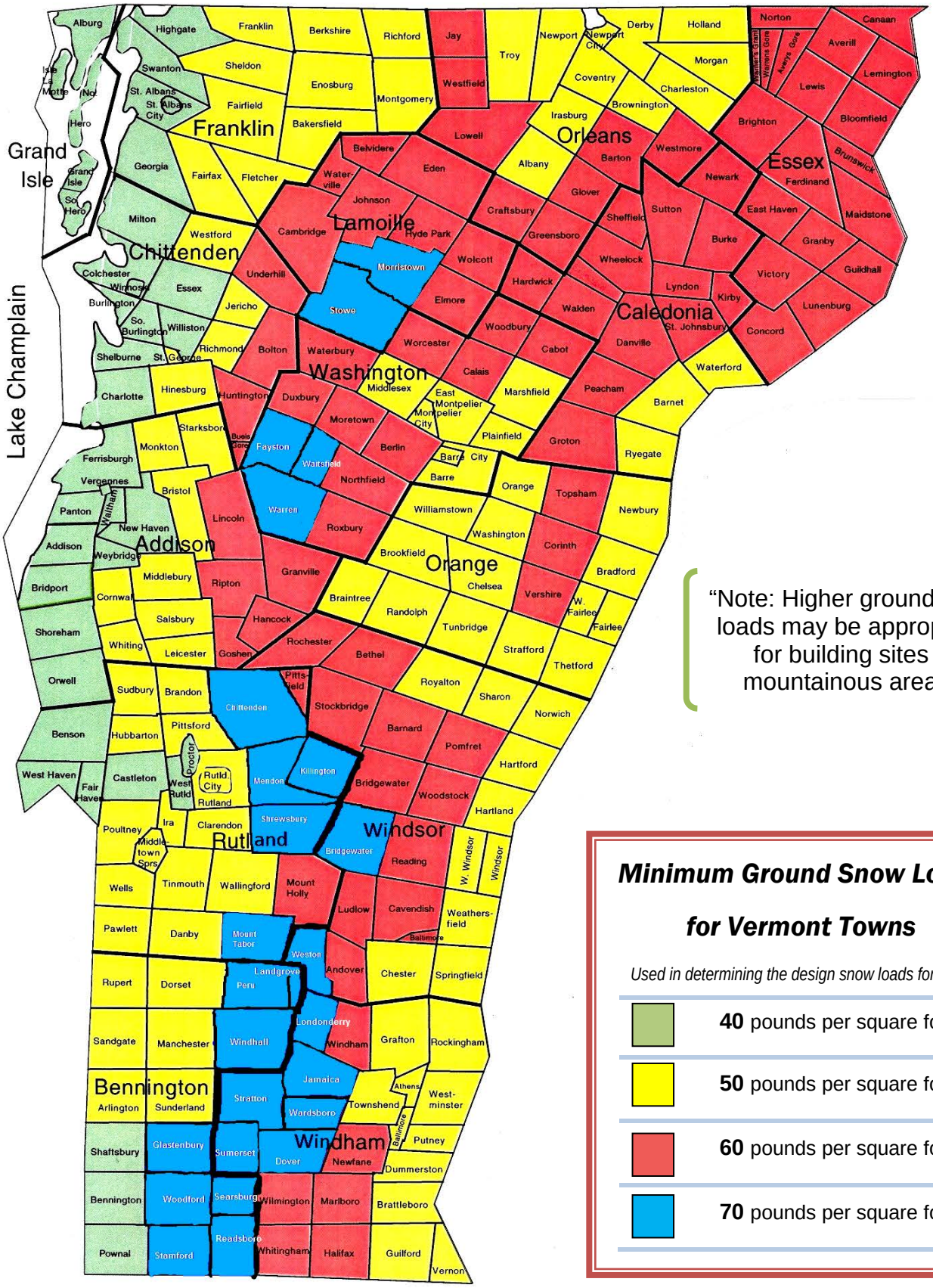
Annex VII

Ground Snow Loads, Pg, for Vermont by Town or City



"Note: Higher ground snow loads may be appropriate for building sites in mountainous areas."

Minimum Ground Snow Loads for Vermont Towns

Used in determining the design snow loads for roofs

- **40** pounds per square foot
- **50** pounds per square foot
- **60** pounds per square foot
- **70** pounds per square foot