Virginia Board of Housing and Community Development
STATEWIDE FIRE PREVENTION CODE DEVELOPMENT COMMITTEE
2018 CODE CHANGE CYCLE – BOOK 1
SEPTEMBER 16, 2019

Opening Statement

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DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
2018 Virginia Statewide Fire Prevention Code Base Document

Summary – This document is compiled by staff of the State Building Codes Office of the Division of Building and Fire Regulation. Its purpose is to convert the 2015 SFPC to the 2018 SFPC by comparing the language in the 2015 SFPC to the 2018 edition of the International Fire Code (IFC) which has amendments in the SFPC. It is not intended to create substantive changes to the 2015 SFPC. The base document is simply to make those necessary changes to the 2015 SFPC to bring in the 2018 International Fire Code (IFC) and standards and keep the existing state amendments. If the 2018 IFC includes construction related provisions that conflict with the USBC, that language is removed or amended. If the 2018 IFC includes language that is consistent with an existing state amendment, then the existing state amendment is no longer needed and is deleted. The staff document is intended to serve as the basis for the publishing of proposed regulations for the 2018 SFPC. Once the base document is approved by the Board of Housing and Community Development, if any code change proposals are considered and approved by the Board of Housing and Community Development to also go into the proposed regulations for the 2018 SFPC, those proposals would be correlated with this base document and brought back to the Board of Housing and Community Development as a separate "proposed regulations" document for review.

13VAC5-51-11. Chapter 1 Administration; Section 101 Scope.

Part I. General Regulations

A. 101.1 Title. These regulations shall be known as the Virginia Statewide Fire Prevention Code (SFPC), hereinafter referred to as "this code" or "SFPC." The term "chapter" means a chapter in the SFPC. The SFPC was cooperatively developed by the Virginia Fire Services Board and the Virginia Board of Housing and Community Development.

B. 101.2 Scope. The SFPC prescribes regulations affecting or relating to maintenance of structures, processes and premises and safeguards to be complied with for the protection of life and property from the hazards of fire or explosion and for the handling, storage and use of fireworks, explosives or blasting agents, and provides for the administration and enforcement of such regulations. The SFPC also establishes regulations for obtaining permits for the manufacturing, storage, handling, use, or sales of explosives. Inspections under the SFPC are a governmental responsibility.

C. 101.3 Purpose. The purposes of the SFPC are to provide for statewide standards to safeguard life and property from the hazards of fire or explosion arising from the improper maintenance of life safety and fire prevention and protection materials, devices, systems and structures, and the unsafe storage, handling, and use of substances, materials and devices, including explosives and blasting agents, wherever located.

D. 101.4 Validity. To the extent that any provisions of the SFPC or the referenced codes or standards are not within the scope of this chapter, those provisions are considered to be invalid. When any provision of the SFPC is found to be in conflict with the USBC, OSHA, or statute, that provision of the SFPC shall become invalid.

E. 101.5 Local regulations. Any local governing body may adopt fire prevention regulations that are more restrictive or more extensive in scope than the SFPC provided such regulations do not affect the manner of construction or materials to be used in the erection, alteration, repair, or use of a building or structure, as provided in the USBC, including the voluntary installation of smoke alarms and regulation and inspections thereof in commercial buildings where such smoke alarms are not required under the provisions of the SFPC.

F. 101.6 Nonresidential farm structures. Farm structures not used for residential purposes are exempt from the SFPC except when the inspection and enforcement provisions of the code are exercised by a warrant issued under the authority of §§ 27-98.2 through 27-98.5 of the Code of Virginia.

13VAC5-51-21. Section 102 Applicability.

A. 102.1 General. The provisions of the SFPC shall apply to all matters affecting or relating to structures, processes and premises as set forth in Section 101. The SFPC shall supersede any fire prevention regulations previously adopted by a local government or other political subdivision.

B. 102.1.1 Change of occupancy. No change of occupancy shall be made in any building or structure unless such building or structure is made to comply with the requirements of the USBC as determined by the building official.

C. 102.2 Application to pre-1973 buildings and structures. Buildings and structures constructed prior to the USBC (1973) shall comply with the maintenance requirements of the SFPC to the extent that equipment, systems, devices, and safeguards which were provided and approved when constructed shall be maintained. Such buildings and structures, if subject to the state fire and public building regulations (Virginia Public Building Safety Regulations, VR 394-01-05) in effect prior to March 31, 1986, shall also be maintained in accordance with those regulations.

D. 102.3 Application to post-1973 buildings and structures. Buildings and structures constructed under any edition of the USBC shall comply with the maintenance requirements of the SFPC to the extent that equipment, systems, devices, and safeguards which were provided and approved when constructed shall be maintained.

E. 102.4 Referenced codes and standards. The codes and standards referenced in the IFC shall be those listed in Chapter 80 and considered part of the requirements of the SFPC to the prescribed extent of each such reference. Where differences occur between the provisions of this code and the referenced standards, the provisions of this code shall apply.

F. 102.5 State-owned buildings and structures. The SFPC shall be applicable to all state-owned buildings and structures in the manner and extent described in § 27-99 of the Code of Virginia and the State Fire Marshal shall have the authority to enforce this code in state-owned buildings and structures as is prescribed in §§ 27-98 and 27-99 of the Code of Virginia.

G. 102.6 Relationship to USBC. In accordance with §§ 27-34.4, 36-105.1 and 36-119.1 of the Code of Virginia, the USBC does not supersede the provisions of this code that prescribe standards to be complied with in existing buildings and structures, provided that this code shall not impose requirements that are more restrictive than those of the USBC under which the buildings or structures were constructed. Subsequent alteration, enlargement, rehabilitation, repair or conversion of the occupancy classification of such buildings and structures shall be subject to the construction and rehabilitation provisions of the USBC. Inspection of buildings other than state-owned buildings under construction and the review and approval of building plans for these structures for enforcement of the USBC shall be the sole responsibility of the appropriate local building inspectors.

Upon completion of such structures, responsibility for fire safety protection shall pass to the local fire marshal or official designated by the locality to enforce this code in those localities that enforce the SFPC or to the State Fire Marshal in those localities that do not enforce this code.

H. 102.7 Inspections for USBC requirements. The fire official shall require that existing structures subject to the requirements of the applicable retrofitting provisions relating to the fire protection equipment and system requirements of the USBC, Part ~~I~~ II, ~~Construction~~ Existing Buildings, Section ~~103.7~~ 1101, comply with the provisions located therein.

13VAC5-51-31. Section 103 Incorporation by Reference.

A. 103.1 General. The following document is adopted and incorporated by reference to be an enforceable part of the SFPC:

> The International Fire Code – ~~2015~~ 2018 Edition, hereinafter referred to as "IFC," published by the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001-2070, 1-888 422-7233.

B. 103.1.1 Deletion. Delete IFC Chapter 1.

C. 103.1.2 Appendices. The appendices in the IFC are not considered part of the IFC for the purposes of Section 103.1.

Note: Section 101.5 references authority contained in the Code of Virginia for local fire prevention regulations that may be evaluated by localities to determine whether provisions in the IFC appendices may be considered for local fire prevention regulations.

D. 103.2 Amendments. All requirements of the referenced codes and standards that relate to fees, non-operational permits not specifically required by Section 107.2, unsafe notices, disputes, condemnation, inspections, scope of enforcement and all other procedural, and administrative matters are deleted and replaced by the provisions of Chapter 1 of the SFPC.

Exception: The scope of referenced codes and standards referenced by the SFPC that relate to the maintenance, testing and inspection requirements or limitations shall be enforceable.

E. 103.2.1 Other amendments. The SFPC contains provisions adopted by the Virginia Board of Housing and Community Development (BHCD), some of which delete, change or amend provisions of the IFC and referenced standards. Where conflicts occur between such changed provisions and the unchanged provisions of the IFC and referenced standards, the provisions changed by the BHCD shall govern.

Note ~~1~~: The IFC and its referenced standards contain some areas of regulation outside of the scope of the SFPC, as established by the BHCD and under state law. Where conflicts have been readily noted, changes have been made to the IFC and its referenced standards to bring it within the scope of authority; however, in some areas, judgment will have to be made as to whether the provisions of the IFC and its referenced standards are fully applicable.

~~Note 2: Section numbers preceded by "(N)" indicate sections of the IFC that have been changed to remove construction-related provisions that are outside of the scope of the SFPC.~~

F. 103.3 International Fire Code. Retroactive fire protection system requirements contained in the IFC shall not be enforced unless specified by the USBC.

13VAC5-51-41. Section 104 Enforcement.

A. 104.1 Local enforcement. Any local government may enforce the SFPC following official action by such body. The official action shall (i) require compliance with the provisions of the SFPC in its entirety or with respect only to those provisions of the SFPC relating to open burning, fire lanes, fireworks, and hazardous materials and (ii) assign enforcement responsibility to the local agency or agencies of its choice. Any local governing body may establish such procedures or requirements as may be necessary for the administration and enforcement of this code. If a local governing body elects to enforce only those provisions of the SFPC relating to open burning, it may do so in all or in any designated geographic areas of its jurisdiction. The terms "enforcing agency" and "fire official" are intended to apply to the agency or agencies to which responsibility for enforcement of the SFPC has been assigned. The terms "building official" or "building department" are intended to apply only to the local building official or local building department.

B. 104.1.1 Enforcement of fireworks provisions by law-enforcement officers. In accordance with § 27-100.1 of the Code of Virginia, law-enforcement officers who are otherwise authorized to enforce certain provisions of this code shall not be subject to the certification requirements of Section 105.2 or 105.3.2.

C. 104.2 State enforcement. In accordance with § 27-98 of the Code of Virginia, the State Fire Marshal shall also have the authority, in cooperation with any local governing body, to enforce the SFPC. The State Fire Marshal shall also have authority to enforce the SFPC in those jurisdictions in which the local governments do not enforce the SFPC and may establish such procedures or requirements as may be necessary for the administration and enforcement of the SFPC in such jurisdictions.

D. 104.3 State structures. Every agency, commission or institution of this Commonwealth, including all institutions of higher education, shall permit, at all reasonable hours, the fire official reasonable access to existing structures or a structure under construction or renovation, for the purpose of performing an informational and advisory fire safety inspection. The fire official is permitted to submit, subsequent to performing such inspection, his findings and recommendations, including a list of corrective actions necessary to ensure that such structure is reasonably safe from the hazards of fire, to the appropriate official of such agency, commission, or institution and the State Fire Marshal. Such agency, commission or institution shall notify, within 60 days of receipt of such findings and recommendations, the State Fire Marshal and the fire official of the corrective measures taken to eliminate the hazards reported by the fire official. The State Fire Marshal shall have the same power in the enforcement of this section as is provided for in § 27-98 of the Code of Virginia. The State Fire Marshal may enter into an agreement as is provided for in § 9.1-208 of the Code of Virginia with any local enforcement agency that enforces the SFPC to enforce this section and to take immediate enforcement action upon verification of a complaint of an imminent hazard such as a chained or blocked exit door, improper storage of flammable liquids, use of decorative materials, and overcrowding.

13VAC5-51-51. Section 105 Enforcing Agency.

A. 105.1 Fire official. Each enforcing agency shall have an executive official in charge, hereinafter referred to as the "fire official."

Note: Fire officials are subject to sanctions in accordance with the Virginia Certification Standards (13VAC5-21).

B. 105.1.1 Appointment. The fire official shall be appointed in a manner selected by the local government having jurisdiction. After permanent appointment, the fire official shall not be removed from office except for cause after having been afforded a full opportunity to be heard on specific and relevant charges by and before the appointing authority.

C. 105.1.2 Notification of appointment. The appointing authority of the local governing body shall notify the DHCD and the State Fire Marshal's Office (SFMO) within 30 days of the appointment or release of the permanent or acting fire official.

D. 105.1.3 Qualifications. The fire official shall have at least five years of fire-related experience as a firefighter, fire officer, licensed professional engineer or architect, fire or building inspector, contractor or superintendent of fire protection-related or building construction or at least five years of fire-related experience after obtaining a degree in architecture or engineering, with at least three years in responsible charge of work. Any combination of education and experience that would confer equivalent knowledge and ability shall be deemed to satisfy this requirement. The fire official shall have general knowledge of sound engineering practice with respect to the design and construction of structures, the basic principles of fire prevention and protection, the accepted requirements for means of egress and the installation of elevators and other service equipment necessary for the health, safety and general welfare of the occupants and the public. The local governing body may establish additional qualification requirements.

E. 105.2 Certification. The permanent or acting fire official shall obtain certification from the BHCD in accordance with the Virginia Certification Standards (13VAC5-21) within one year after permanent or acting appointment.

Exception: A fire official appointed prior to April 1, 1994, continuously employed by the same local governing body as the fire official shall comply with required DHCD training under the Virginia Certification Standards (13VAC5-21).

F. 105.2.1 Noncertified fire official. Except for a fire official exempt from certification under the exception to Section 105.2, any acting or permanent fire official who is not certified as a fire official in accordance with the Virginia Certification Standards (13VAC5-21) shall attend the core module of the Virginia Building Code Academy or an equivalent course in an individual or regional code academy accredited by DHCD within 180 days of appointment. This requirement is in addition to meeting the certification requirement in Section 105.2.

G. 105.3 Technical assistant. The local governing body or its designee may utilize one or more technical assistants who, in the absence of the fire official, shall have the powers and perform the duties of the fire official.

Note: Technical assistants are subject to sanctions in accordance with the Virginia Certification Standards (13VAC5-21).

H. 105.3.1 Notification. The fire official shall notify the DHCD within 60 days of the employment, contract or termination of all technical assistants for enforcement of the SFPC.

I. 105.3.2 Qualifications. A technical assistant shall have at least three years of experience and general knowledge in at least one of the following areas: fire protection, firefighting, electrical, building, plumbing or mechanical trades. Any combination of education and experience that would confer equivalent knowledge and ability shall be deemed to satisfy this requirement. The locality may establish additional qualification requirements.

J. 105.3.3 Certification. All technical assistants employed by or under contract to an enforcing agency for enforcing the SFPC shall be certified in the appropriate subject area in accordance with the Virginia

Certification Standards (13VAC5-21) within one and one-half years after permanent or acting appointment. When required by a locality to have two or more certifications, the remaining certifications shall be obtained within three years from the date of such requirement.

Exception: Any technical assistant continuously employed by or continuously under contract to the same enforcing agency for enforcing the SFPC since before April 1, 1994, shall be exempt from the provisions of this section; however, such exempt technical assistant shall comply with required DHCD training under Virginia Certification Standards (13VAC5-21).

Note: Continuing education and periodic training requirements for DHCD certifications are set out in the Virginia Certification Standards (13VAC5-21).

K. 105.4 Control of conflict of interest. The standards of conduct for officials and employees of the enforcing agency shall be in accordance with the provisions of the State and Local Government Conflict of Interests Act, Chapter 31 (§ 2.2-3100 et seq.) of Title 2.2 of the Code of Virginia.

13VAC5-51-61. Section 106 Duties and Powers of the Fire Official.

A. 106.1 General. The fire official shall enforce the provisions of the SFPC as provided herein and as interpreted by the State Review Board in accordance with § 36-118 of the Code of Virginia.

B. 106.2 Delegation of duties and powers. The fire official may delegate duties and powers subject to any limitations imposed by the local governing body. The fire official shall be responsible that any powers and duties delegated are carried out in accordance with this code.

C. 106.3 Inspections. The fire official is authorized to conduct such inspections as are deemed necessary to determine the extent of compliance with the provisions of this code and to approve reports of inspection by approved agencies or individuals in accordance with the fire official's written policy. All reports of such inspections by approved agencies or individuals shall be prepared and submitted in writing for review and approval. Inspection reports shall be certified by a responsible officer of such approved agency or by the responsible individual. The fire official is authorized to engage such expert opinion as deemed necessary to report upon unusual, detailed or complex technical issues in accordance with local policies.

D. 106.3.1 Observations. When, during an inspection, the fire official or an authorized representative observes an apparent or actual violation of another law, ordinance or code not within the official's authority to enforce, such official shall report the findings to the official having jurisdiction in order that such official may institute the necessary measures.

E. 106.4 Alternatives. The SFPC provisions are not intended to prevent the use of any safeguards used to protect life and property from the hazards of fire or explosion that are not specifically prescribed by the SFPC, provided that such alternative safeguards comply with the intent of the SFPC. The alternative safeguard offered shall be, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

F. 106.5 Modifications. The fire official may grant modifications to any provision of the SFPC upon application by the owner or the owner's agent provided the spirit and intent of the SFPC are observed and public health, welfare, and safety are assured.

Note: The current editions of many nationally recognized model codes and standards are referenced by the SFPC. Future amendments to such codes and standards do not automatically become part of the SFPC;

however, the fire official should consider such amendments in deciding whether a modification request should be granted.

G. 106.5.1 Supporting data. The fire official shall require that sufficient technical data be submitted to substantiate the proposed use of any alternative. If it is determined that the evidence presented is satisfactory proof of performance for the use intended, the fire official shall approve the use of such alternative subject to the requirements of this code. The fire official may require and consider a statement from a professional engineer, architect or other competent person as to the equivalency of the proposed modification.

H. 106.5.2 Decision. The application for modification and the final decision of the fire official shall be in writing and shall be recorded in the permanent records of the local enforcing agency.

I. 106.6 Notices and orders. The fire official shall issue all necessary notices or orders to ensure compliance with the SFPC.

J. 106.7 Department records. The fire official shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records or disposed of in accordance with General Schedule Number ~~Ten~~ Seventeen available from The Library of Virginia.

13VAC5-51-81. Section 107 Permits and Fees.

A. 107.1 Prior notification. The fire official may require notification prior to (i) activities involving the handling, storage or use of substances, materials or devices regulated by the SFPC; (ii) conducting processes which produce conditions hazardous to life or property; or (iii) establishing a place of assembly.

B. 107.2 Permits required. Operational permits may be required by the fire official as permitted under the SFPC in accordance with Table 107.2, except that the fire official shall require permits for the manufacturing, storage, handling, use, and sale of explosives. In accordance with Section 5601.2.3.1, an application for a permit to manufacture, store, handle, use, or sell explosives shall only be made by a designated individual.

Exception: Such permits shall not be required for the storage of explosives or blasting agents by the Virginia Department of State Police provided notification to the fire official is made annually by the Chief Arson Investigator listing all storage locations.

C. Add Table 107.2 as follows:

Table 107.2. OPERATIONAL PERMIT REQUIREMENTS (to be filled in by local jurisdiction).			
Description	Permit Required (yes or no)	Permit Fee	Inspection Fee
Aerosol products. An operational permit is required to manufacture, store or handle an aggregate quantity of Level 2 or Level 3 aerosol products in excess of 500 pounds (227 kg) net weight.			
Amusement buildings. An operational permit is required to operate a special amusement building.			
Aviation facilities. An operational permit is required to use a Group H or Group S occupancy for aircraft servicing or repair and aircraft fuel-servicing vehicles. Additional permits required by other sections of this code include, but are not limited to, hot work, hazardous materials and flammable or combustible finishes.			
Carnivals and fairs. An operational permit is required to conduct a carnival or fair.			
Cellulose nitrate film. An operational permit is required to store, handle or use cellulose nitrate film in a Group A occupancy.			
Combustible dust-producing operations. An operational permit is required to operate a grain elevator, flour starch mill, feed mill, or a plant pulverizing aluminum, coal, cocoa, magnesium, spices or sugar, or other operations producing combustible dusts as defined in Chapter 2.			
Combustible fibers. An operational permit is required for the storage and handling of combustible fibers in quantities greater than 100 cubic feet (2.8 m^3). Exception: An operational permit is not required for agricultural storage.			
Compressed gas. An operational permit is required for the storage, use or handling at normal temperature and pressure (NTP) of compressed gases in excess of the amounts listed below. Exception: Vehicles equipped for and using compressed gas as a fuel for propelling the vehicle. Permit Amounts for Compressed Gases Type of Gas — Amount (cubic feet at NTP) Corrosive — 200			

<table>
<tr><td>
<table>
<tr><td>Flammable (except cryogenic fluids and liquefied petroleum gases)</td><td>200</td></tr>
<tr><td>Highly toxic</td><td>Any Amount</td></tr>
<tr><td>Inert and simple asphyxiant</td><td>6,000</td></tr>
<tr><td>Oxidizing (including oxygen)</td><td>504</td></tr>
<tr><td>Pyrophoric</td><td>Any Amount</td></tr>
<tr><td>Toxic</td><td>Any Amount</td></tr>
</table>
For SI: 1 cubic foot = 0.02832 m^3.
</td><td></td><td></td><td></td></tr>
<tr><td>Covered and open mall buildings. An operational permit is required for:
1. The placement of retail fixtures and displays, concession equipment, displays of highly combustible goods and similar items in the mall.
2. The display of liquid-fired or gas-fired equipment in the mall.
3. The use of open-flame or flame-producing equipment in the mall.</td><td></td><td></td><td></td></tr>
<tr><td>Cryogenic fluids. An operational permit is required to produce, store, transport on site, use, handle or dispense cryogenic fluids in excess of the amounts listed below.
Exception: Operational permits are not required for vehicles equipped for and using cryogenic fluids as a fuel for propelling the vehicle or for refrigerating the lading.

Permit Amounts for Cryogenic Fluids
<table>
<tr><th>Type of Cryogenic Fluid</th><th>Inside Building (gallons)</th><th>Outside Building (gallons)</th></tr>
<tr><td>Flammable</td><td>More than 1</td><td>60</td></tr>
<tr><td>Inert</td><td>60</td><td>500</td></tr>
<tr><td>Oxidizing (includes oxygen)</td><td>10</td><td>50</td></tr>
<tr><td>Physical or health hazard not indicated above</td><td>Any Amount</td><td>Any Amount</td></tr>
</table>
For SI: 1 gallon = 3.785 L.
</td><td></td><td></td><td></td></tr>
</table>

Cutting and welding. An operational permit is required to conduct cutting or welding operations within the jurisdiction.			
Dry cleaning plants. An operational permit is required to engage in the business of dry cleaning or to change to a more hazardous cleaning solvent used in existing dry cleaning equipment.			
Exhibits and trade shows. An operational permit is required to operate exhibits and trade shows.			
Explosives, fireworks, and pyrotechnics. An operational permit is required for the storage, handling, sale or use of any quantity of explosive, explosive materials, fireworks, pyrotechnic special effects, or pyrotechnic special effects material within the scope of Chapter 56. Exception: Storage in Group R-3 or R-5 occupancies of smokeless propellant, black powder and small arms primers for personal use, not for resale, and in accordance with the quantity limitations and conditions set forth in Section 5601.1, exception numbers four and 12.			
Explosives, restricted manufacture. An operational permit is required for the restricted manufacture of explosives within the scope of Chapter 56.			
Explosives, unrestricted manufacture. An operational permit is required for the unrestricted manufacture of explosives within the scope of Chapter 56.			
Fire hydrants and valves. An operational permit is required to use or operate fire hydrants or valves intended for fire suppression purposes that are installed on water systems and accessible to a fire apparatus access road that is open to or generally used by the public. Exception: An operational permit is not required for authorized employees of the water company that supplies the system or the fire department to use or operate fire hydrants or valves.			
Flammable and combustible liquids. An operational permit is required: 1. To use or operate a pipeline for the transportation within facilities of flammable or combustible liquids. This requirement shall not apply to the offsite transportation in pipelines regulated by the U.S. Department of Transportation (DOTn) nor does it apply to piping systems. 2. To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:			

2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, unless such storage, in the opinion of the fire official, would cause an unsafe condition. 2.2. The storage or use of paints, oils, varnishes or similar flammable mixtures when such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days. 3. To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil-burning equipment. 4. To remove Class I or Class II liquids from an underground storage tank used for fueling motor vehicles by any means other than the approved, stationary on-site pumps normally used for dispensing purposes. 5. To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and combustible liquids are produced, processed, transported, stored, dispensed or used. 6. To install, alter, remove, abandon, place temporarily out of service (for more than 90 days) or otherwise dispose of an underground, protected above-ground or above-ground flammable or combustible liquid tank. 7. To change the type of contents stored in a flammable or combustible liquid tank to a material that poses a greater hazard than that for which the tank was designed and constructed. 8. To manufacture, process, blend or refine flammable or combustible liquids.			
Floor finishing. An operational permit is required for floor finishing or surfacing operations exceeding 350 square feet (33 m^2) using Class I or Class II liquids.			
Fruit and crop ripening. An operational permit is required to operate a fruit- ripening or crop-ripening facility or conduct a fruit-ripening process using ethylene gas.			

<table>
<tr><td>Fumigation, thermal, and insecticidal fogging. An operational permit is required to operate a business of fumigation, thermal, or insecticidal fogging and to maintain a room, vault or chamber in which a toxic or flammable fumigant is used.</td><td></td><td></td><td></td></tr>
<tr><td>Hazardous materials. An operational permit is required to store, transport on site, dispense, use or handle hazardous materials in excess of the amounts listed below.

Permit Amounts for Hazardous Materials</td><td></td><td></td><td></td></tr>
<tr><td><table>
<tr><th>Type of Material</th><th>Amount</th></tr>
<tr><td>Combustible liquids</td><td>See flammable and combustible liquids</td></tr>
<tr><td>Corrosive materials</td><td></td></tr>
<tr><td>Gases</td><td>See compressed gases</td></tr>
<tr><td>Liquids</td><td>55 gallons</td></tr>
<tr><td>Solids</td><td>1000 pounds</td></tr>
<tr><td>Explosive materials</td><td>See explosives</td></tr>
<tr><td>Flammable materials</td><td></td></tr>
<tr><td>Gases</td><td>See compressed gases</td></tr>
<tr><td>Liquids</td><td>See flammable and combustible liquids</td></tr>
<tr><td>Solids</td><td>100 pounds</td></tr>
<tr><td>Highly toxic materials</td><td></td></tr>
<tr><td>Gases</td><td>See compressed gases</td></tr>
<tr><td>Liquids</td><td>Any amount</td></tr>
<tr><td>Solids</td><td>Any amount</td></tr>
<tr><td>Oxidizing materials</td><td></td></tr>
<tr><td>Gases</td><td>See compressed gases</td></tr>
</table></td><td></td><td></td><td></td></tr>
</table>

Liquids				
Class 4	Any amount			
Class 3	1 gallon [a]			
Class 2	10 gallons			
Class 1	55 gallons			
Solids				
Class 4	Any amount			
Class 3	10 pounds [b]			
Class 2	100 pounds			
Class 1	500 pounds			
Organic peroxides				
Liquids				
Class I	Any amount			
Class II	Any amount			
Class III	1 gallon			
Class IV	2 gallons			
Class V	No permit required			
Solids				
Class I	Any amount			
Class II	Any amount			
Class III	10 pounds			
Class IV	20 pounds			
Class V	No permit required			

Pyrophoric materials				
Gases	See compressed gases			
Liquids	Any amount			
Solids	Any amount			
Toxic materials				
Gases	See compressed gases			
Liquids	10 gallons			
Solids	100 pounds			
Unstable (reactive) materials				
Liquids				
Class 4	Any amount			
Class 3	Any amount			
Class 2	5 gallons			
Class 1	10 gallons			
Solids				
Class 4	Any amount			
Class 3	Any amount			
Class 2	50 pounds			
Class 1	100 pounds			
Water reactive materials				
Liquids				
Class 3	Any amount			
Class 2	5 gallons			
Class 1	55 gallons			

Solids Class 3 Any amount Class 2 50 pounds Class 1 500 pounds For SI: 1 gallon = 3.785 L, 1 pound = 0.454 kg. a. Twenty gallons when Table 5003.1.1(1) Note k applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 20 gallons or less. b. Two hundred pounds when Table 5003.1.1(1) Note k applies and hazard identification signs in accordance with Section 5003.5 are provided for quantities of 200 pounds or less.			
HPM facilities. An operational permit is required to store, handle or use hazardous production materials.			
High piled storage. An operational permit is required to use a building or portion thereof as a high-piled storage area exceeding 500 square feet (46 m^2).			
Hot work operations. An operational permit is required for hot work including, but not limited to: 1. Public exhibitions and demonstrations where hot work is conducted. 2. Use of portable hot work equipment inside a structure. Exception: Work that is conducted under a construction permit. 3. Fixed-site hot work equipment such as welding booths. 4. Hot work conducted within a hazardous fire area. 5. Application of roof coverings with the use of an open-flame device. 6. When approved, the fire official shall issue a permit to carry out a Hot Work Program. This program allows approved personnel to regulate their facility's hot work operations. The approved personnel shall be trained in the fire safety aspects denoted in this chapter and shall be responsible for issuing permits requiring compliance with the requirements found in this chapter. These permits shall be issued only to their employees or hot work operations under their supervision.			
Industrial ovens. An operational permit is required for operation of industrial ovens regulated by Chapter 30.			
Lumber yards and woodworking plants. An operational permit is required for the storage or processing of lumber exceeding 100,000 board feet (8,333 ft^3) (236 m^3).			

Liquid-fueled or gas-fueled vehicles or equipment in assembly buildings. An operational permit is required to display, operate or demonstrate liquid-fueled or gas-fueled vehicles or equipment in assembly buildings.			
LP-gas. An operational permit is required for: 1. Storage and use of LP-gas. Exception: An operational permit is not required for individual containers with a 500-gallon (1893 L) water capacity or less or multiple container systems having an aggregate quantity not exceeding 500 gallons (1893 L), serving occupancies in Group R-3. 2. Operation of cargo tankers that transport LP-gas.			
Magnesium. An operational permit is required to melt, cast, heat treat or grind more than 10 pounds (4.54 kg) of magnesium.			
Miscellaneous combustible storage. An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet (71 m^3) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork or similar combustible material.			
Mobile food preparation vehicles. A permit is required for mobile food preparation vehicles equipped with appliances that produce smoke or grease laden vapors. Exception: Recreational vehicles used for private recreation.			
Open burning. An operational permit is required for the kindling or maintaining of an open fire or a fire on any public street, alley, road, or other public or private ground. Instructions and stipulations of the permit shall be adhered to. Exception: Recreational fires.			
Open flames and candles. An operational permit is required to use open flames or candles in connection with assembly areas, dining areas of restaurants or drinking establishments.			
Open flames and torches. An operational permit is required to remove paint with a torch, or to use a torch or open-flame device in a wildfire risk area.			
Organic coatings. An operational permit is required for any organic-coating manufacturing operation producing more than 1 gallon (4 L) of an organic coating in one day.			
Places of assembly. An operational permit is required to operate a place of assembly.			

Private fire hydrants. An operational permit is required for the removal from service, use or operation of private fire hydrants. Exception: An operational permit is not required for private industry with trained maintenance personnel, private fire brigade or fire departments to maintain, test and use private hydrants.			
Pyrotechnic special effects material. An operational permit is required for use and handling of pyrotechnic special effects material.			
Pyroxylin plastics. An operational permit is required for storage or handling of more than 25 pounds (11 kg) of cellulose nitrate (pyroxylin) plastics and for the assembly or manufacture of articles involving pyroxylin plastics.			
Refrigeration equipment. An operational permit is required to operate a mechanical refrigeration unit or system regulated by Chapter 6.			
Repair garages and service stations. An operational permit is required for operation of repair garages and automotive, marine and fleet service stations.			
Rooftop heliports. An operational permit is required for the operation of a rooftop heliport.			
Spraying or dipping. An operational permit is required to conduct a spraying or dipping operation utilizing flammable or combustible liquids or the application of combustible powders regulated by Chapter 24.			
Storage of scrap tires and tire byproducts. An operational permit is required to establish, conduct or maintain storage of scrap tires and tire byproducts that exceeds 2,500 cubic feet (71 m^3) of total volume of scrap tires and for indoor storage of tires and tire byproducts.			
Temporary membrane structures and tents. An operational permit is required to operate an air-supported temporary membrane structure or a tent. Exceptions: 1. Tents used exclusively for recreational camping purposes. 2. Tents and air-supported structures that cover an area of 900 square feet (84 m^2) or less, including all connecting areas or spaces with a common means of egress or entrance and with an occupant load of 50 or less persons.			
Tire-rebuilding plants. An operational permit is required for the operation and maintenance of a tire-rebuilding plant.			
Waste handling. An operational permit is required for the operation of wrecking yards, junk yards and waste material-handling facilities.			
Wood products. An operational permit is required to store chips, hogged material, lumber or plywood in excess of 200 cubic feet (6 m^3).			

D. 107.3 Application for permit. Application for a permit shall be made on forms prescribed by the fire official.

E. 107.4 Issuance of permits. Before a permit is issued, the fire official shall make such inspections or tests as are necessary to assure that the use and activities for which application is made comply with the provisions of this code.

F. 107.5 Conditions of permit. A permit shall constitute permission to store or handle materials or to conduct processes in accordance with the SFPC and shall not be construed as authority to omit or amend any of the provisions of this code. Permits shall remain in effect until revoked or for such period as specified on the permit. Permits are not transferable.

G. 107.6 Annual. The enforcing agency may issue annual permits for the manufacturing, storage, handling, use, or sales of explosives to any state regulated public utility.

H. 107.7 Approved plans. Plans approved by the fire official are approved with the intent that they comply in all respects to this code. Any omissions or errors on the plans do not relieve the applicant of complying with all applicable requirements of this code.

I. 107.8 Posting. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire official.

J. 107.9 Suspension of permit. A permit shall become invalid if the authorized activity is not commenced within six months after issuance of the permit or if the authorized activity is suspended or abandoned for a period of six months after the time of commencement.

K. 107.10 Local fees. In accordance with § 27-98 of the Code of Virginia, fees may be levied by the local governing body in order to defray the cost of enforcement and appeals under the SFPC. However, for the city of Chesapeake no fee charged for the inspection of any place of religious worship designated as Assembly Group A-3 shall exceed $50. For purposes of this section, "defray the cost" may include the fair and reasonable costs incurred for such enforcement during normal business hours but shall not include overtime costs, unless conducted outside of the normal working hours established by the locality. A schedule of such costs shall be adopted by the local governing body in a local ordinance. A locality shall not charge an overtime rate for inspections conducted during the normal business hours established by the locality. Nothing herein shall be construed to prohibit a private entity from conducting such inspections, provided the private entity has been approved to perform such inspections in accordance with the written policy of the fire official for the locality.

L. 107.11 State Fire Marshal's office permit fees for explosives, blasting agents, theatrical flame effects, and fireworks. Complete permit applications shall be submitted to and received by the State Fire Marshal's Office not less than 15 days prior to the planned use or event. A $500 expedited handling fee will be assessed on all permit applications submitted less than 15 days prior to the planned use or event. Inspection fees will be assessed at a rate of $60 per staff member per hour during normal business hours (Monday through Friday, 8:30 a.m. to 4:30 p.m.) and at a rate of $90 per hour at all other times (nights, weekends, holidays). State Fire Marshal's Office permit fees shall be as follows:

1. Storage of explosives and blasting agents, 12-month permit $250 first magazine, plus $150 per each additional magazine on the same site.

2. Use of explosives and blasting agents, nonfixed site, 6-month permit $250 per site, plus inspection fees.

3. Use of explosives and blasting agents, fixed site, 12-month permit $250 per site.

4. Sale of explosives and blasting agents, 12-month permit $250 per site.

5. Manufacture explosives (unrestricted), blasting agents, and fireworks, 12-month permit $250 per site.

6. Manufacture explosives (~~Restricted~~ restricted), 12-month permit $20 per site.

7. Fireworks display in or on state-owned property $300 plus inspection fees.

8. Pyrotechnics or proximate audience displays in or on state-owned property $300 plus inspection fees.

9. Flame effects in or on state-owned property $300 plus inspection fees.

10. Flame effects incidental to a permitted pyrotechnics display $150 (flame effects must be individual or group effects that are attended and manually controlled).

Exception: Permit fees shall not be required for the storage of explosives or blasting agents by state and local law enforcement and fire agencies.

M. 107.12 State annual compliance inspection fees. Fees for compliance inspections performed by the State Fire Marshal's office shall be as follows:

1. Nightclubs.

1.1. $350 for occupant load of 100 or less.

1.2. $450 for occupant load of 101 to 200.

1.3. $500 for occupant load of 201 to 300.

1.4. $500 plus $50 for each 100 occupants where occupant loads exceed 300.

2. Private college dormitories with or without assembly areas. If containing assembly areas, such assembly areas are not included in the computation of square footage.

2.1. $150 for 3500 square feet or less.

2.2. $200 for greater than 3500 square feet up to 7000 square feet.

2.3. $250 for greater than 7000 square feet up to 10,000 square feet.

2.4. $250 plus $50 for each additional 3000 square feet where square footage exceeds 10,000.

3. Assembly areas that are part of private college dormitories.

3.1. $50 for 10,000 square feet or less provided the assembly area is within or attached to a dormitory building.

3.2. $100 for greater than 10,000 square feet up to 25,000 square feet provided the assembly area is within or attached to a dormitory building, such as gymnasiums, auditoriums or cafeterias.

3.3. $100 for up to 25,000 square feet provided the assembly area is in a separate or separate buildings such as gymnasiums, auditoriums or cafeterias.

3.4. $150 for greater than 25,000 square feet for assembly areas within or attached to a dormitory building or in a separate or separate buildings such as gymnasiums, auditoriums or cafeterias.

4. Hospitals.

4.1. $300 for 1 to 50 beds.

4.2. $400 for 51 to 100 beds.

4.3. $500 for 101 to 150 beds.

4.4. $600 for 151 to 200 beds.

4.5. $600 plus $100 for each additional 100 beds where the number of beds exceeds 200.

5. Facilities licensed by the Virginia Department of Social Services based on licensed capacity as follows:

5.1. $50 for 1 to 8.

5.2. $75 for 9 to 20.

5.3. $100 for 21 to 50.

5.4. $200 for 51 to 100.

5.5. $300 for 101 to 150.

5.6. $400 for 151 to 200.

5.7. $500 for 201 or more.

Exception: Annual compliance inspection fees for any building or groups of buildings on the same site may not exceed $2500.

6. Registered complaints.

6.1. No charge for first visit (initial complaint), and if violations are found.

6.2. $51 per hour for each State Fire Marshal's office staff for all subsequent visits.

7. Bonfires (small and large) on state-owned property.

7.1. For a small bonfire pile with a total fuel area more than 3 feet in diameter and more than 2 feet in height, but not more than 9 feet in diameter and not more than 6 feet in height, the permit fee is $50. If an application for a bonfire permit is received by the State Fire Marshal's office less than 15 days prior to the planned event, the permit fee shall be $100. If an application for a bonfire permit is received by the State Fire Marshal's office less than seven days prior to the planned event, the permit fee shall be $150.

7.2. For a large bonfire pile with a total fuel area more than 9 feet in diameter and more than 6 feet in height, the permit fee is $150. If an application for a bonfire permit is received by the State Fire Marshal's office less than 15 days prior to the planned event, the permit fee shall be $300. If an application for a bonfire permit is received by the State Fire Marshal's office less than seven days prior to the planned event, the permit fee shall be $450.

N. 107.13 Fee schedule. The local governing body may establish a fee schedule. The schedule shall incorporate unit rates, which may be based on square footage, cubic footage, estimated cost of inspection or other appropriate criteria.

O. 107.14 Payment of fees. A permit shall not be issued until the designated fees have been paid.

Exception: The fire official may authorize delayed payment of fees.

P. 107.14.1 State Fire Marshal's office certification and permit fees not refundable. No refund of any part of the amount paid as a permit or certification fee will be made where the applicant, permit or certification holder, for any reason, discontinued an activity, changed conditions, or changed circumstances for which the permit or certification was issued. However, the permit or certification fee submitted with an application will be refunded if the permit or certification is canceled, revoked, or suspended subsequent to having been issued through administrative error, or if a permit being applied for is to be obtained from a locally appointed fire official.

13VAC5-51-85. Section 108 Operational Permits.

A. 108.1 General. Operational permits shall be in accordance with Section 108. The fire official may require notification prior to (i) activities involving the handling, storage or use of substances, materials or devices regulated by the SFPC; (ii) conducting processes which produce conditions hazardous to life or property; or (iii) establishing a place of assembly.

B. 108.1.1 Permits required. Operational permits may be required by the fire official in accordance with Table 107.2. The fire official shall require operational permits for the manufacturing, storage, handling, use and sale of explosives. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire official.

Exceptions:

1. Operational permits will not be required by the State Fire Marshal except for the manufacturing, storage, handling, use and sale of explosives in localities not enforcing the SFPC.

2. Operational permits will not be required for the manufacturing, storage, handling or use of explosives or blasting agents by the Virginia Department of State Police provided notification to the fire official is made annually by the Chief Arson Investigator listing all storage locations.

C. 108.1.2 Duration of operational permits.

An operational permit allows the applicant to conduct an operation or a business for which a permit is required by Section 108.1.1 for either:

1. A prescribed period.

2. Until renewed, suspended, or revoked.

D. 108.1.3 Operational permits for the same location. When more than one operational permit is required for the same location, the fire official is authorized to consolidate such permits into a single permit provided that each provision is listed in the permit.

E. 108.2 Application. Application for an operational permit required by this code shall be made to the fire official in such form and detail as prescribed by the fire official. Applications for permits shall be accompanied by such plans as prescribed by the fire official.

F. 108.2.1 Refusal to issue permit. If the application for an operational permit describes a use that does not conform to the requirements of this code and other pertinent laws and ordinances, the fire official shall not issue a permit, but shall return the application to the applicant with the refusal to issue such permit. Such refusal shall, when requested, be in writing and shall contain the reasons for refusal.

G. 108.2.2 Inspection authorized. Before a new operational permit is approved, the fire official is authorized to inspect the receptacles, vehicles, buildings, devices, premises, storage spaces or areas to be used to determine compliance with this code or any operational constraints required.

H. 108.2.3 Time limitation of application. An application for an operational permit for any proposed work or operation shall be deemed to have been abandoned six months after the date of filing, unless such application has been diligently prosecuted or a permit shall have been issued; except that the fire official is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each if there is reasonable cause.

I. 108.2.4 Action on application. The fire official shall examine or cause to be examined applications for operational permits and amendments thereto within a reasonable time after filing. If the application does not conform to the requirements of pertinent laws, the fire official shall reject such application in writing, stating the reasons. If the fire official is satisfied that the proposed work or operation conforms to the requirements of this code and laws and ordinances applicable thereto, the fire official shall issue a permit as soon as practicable.

J. 108.3 Conditions of a permit. An operational permit shall constitute permission to maintain, store or handle materials; or to conduct processes in accordance with the SFPC, and shall not be construed as authority to omit or amend any of the provisions of this code.

Note: The building official issues permits to install equipment utilized in connection with such activities or to install or modify any fire protection system or equipment or any other construction, equipment installation or modification.

K. 108.3.1 Expiration. An operational permit shall remain in effect until reissued, renewed, or revoked for such a period of time as specified in the permit. Permits are not transferable and any change in occupancy, operation, tenancy or ownership shall require that a new permit be issued.

L. 108.3.2 Extensions. A permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced within the time required by this section for good and satisfactory reasons. The fire official is authorized to grant, in writing, one or more extensions of the time period of a permit for periods of not more than 90 days each. Such extensions shall be requested by the permit holder in writing and justifiable cause demonstrated.

M. 108.3.3 Annual. The enforcing agency may issue annual operational permits for the manufacturing, storage, handling, use, or sales of explosives to any state regulated public utility.

N. 108.3.4 Suspension of permit. An operational permit shall become invalid if the authorized activity is not commenced within six months after issuance of the permit, or if the authorized activity is suspended or abandoned for a period of six months after the time of commencement.

O. 108.3.5 Posting. Issued operational permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire official.

P. 108.3.6 Compliance with code. The issuance or granting of an operational permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Operational permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on other data shall not prevent the fire official from requiring the correction of errors in the provided documents and other data. Any addition to or alteration of approved provided documents shall be approved in advance by the fire official, as evidenced by the issuance of a new or amended permit.

Q. 108.3.7 Information on the permit. The fire official shall issue all operational permits required by this code on an approved form furnished for that purpose. The operational permit shall contain a general description of the operation or occupancy and its location and any other information required by the fire official. Issued permits shall bear the original or electronic signature of the fire official or other designee approved by the fire official.

R. 108.4 Revocation. The fire official is authorized to revoke an operational permit issued under the provisions of this code when it is found by inspection or otherwise that there has been a false statement or misrepresentation as to the material facts in the application or documents on which the permit or approval was based including, but not limited to, any one of the following:

1. The permit is used for a location or establishment other than that for which it was issued.

2. The permit is used for a condition or activity other than that listed in the permit.

3. Conditions and limitations set forth in the permit have been violated.

4. Inclusion of any false statements or misrepresentations as to a material fact in the application for permit or plans submitted or a condition of the permit.

5. The permit is used by a different person or firm than the person or firm for which it was issued.

6. The permittee failed, refused or neglected to comply with orders or notices duly served in accordance with the provisions of this code within the time provided therein.

7. The permit was issued in error or in violation of an ordinance, a regulation, or this code.

13VAC5-51-91. Section 109 Inspection.

A. 109.1 Inspection. The fire official may inspect all structures and premises for the purposes of ascertaining and causing to be corrected any conditions liable to cause fire, contribute to the spread of fire, interfere with firefighting operations, endanger life, or any violations of the provisions or intent of the SFPC.

Exception: Single family dwellings and dwelling units in two family and multiple family dwellings and farm structures shall be exempt from routine inspections. This exemption shall not preclude the fire official from conducting routine inspections in Group R-3 or Group R-5 occupancies operating as a commercial bed and breakfast as outlined in Section 310.3 of the USBC or inspecting under § 27-98.2 of the Code of Virginia for hazardous conditions relating to explosives, flammable and combustible conditions, and hazardous materials.

B. 109.1.1 Right to entry. The fire official may enter any structure or premises at any reasonable time to inspect subject to constitutional restrictions on unreasonable searches and seizures. If entry is refused or not obtained, the fire official may pursue recourse as provided by law.

Note: Specific authorization and procedures for inspections and issuing warrants are set out in §§ 27-98.1 through 27-98.5 of the Code of Virginia and shall be taken into consideration.

C. 109.1.2 Credentials. The fire official and technical assistants shall carry proper credentials of office when inspecting in the performance of their duties under the SFPC.

D. 109.2 Coordinated inspections. The fire official shall coordinate inspections and administrative orders with any other state and local agencies having related inspection authority, and shall coordinate those inspections required by the USBC for new construction when involving provisions of the amended IFC, so that the owners and occupants will not be subjected to numerous inspections or conflicting orders.

Note: The USBC requires the building official to coordinate such inspections with the fire official.

E. 109.3 Other inspections. In accordance with § 9.1-207 of the Code of Virginia, the State Fire Marshal, upon presenting proper credentials, shall make annual inspections for hazards incident to fire in all (i) residential care facilities operated by any state agency, (ii) assisted living facilities licensed or subject to licensure pursuant to Chapter 18 (§ 63.2-1800 et seq.) of Title 63.2 of the Code of Virginia which are not inspected by a local fire marshal, (iii) student-residence facilities owned or operated by the public institutions of higher education in the Commonwealth, and (iv) public schools in the Commonwealth which are not inspected by a local fire marshal. In the event that any such facility or residence is found to be nonconforming to the SFPC, the State Fire Marshal or local fire marshal may petition any court of competent jurisdiction for the issuance of an injunction.

13VAC5-51-101. Section 110 Unsafe Conditions.

A. 110.1 General. The fire official shall order the following dangerous or hazardous conditions or materials to be removed or remedied in accordance with the SFPC:

1. Dangerous conditions which are liable to cause or contribute to the spread of fire in or on said premises, building or structure, or to endanger the occupants thereof.

2. Conditions which would interfere with the efficiency and use of any fire protection equipment.

3. Obstructions to or on fire escapes, stairs, passageways, doors or windows, which are liable to interfere with the egress of occupants or the operation of the fire department in case of fire.

4. Accumulations of dust or waste material in air conditioning or ventilating systems or grease in kitchen or other exhaust ducts.

5. Accumulations of grease on kitchen cooking equipment, or oil, grease or dirt upon, under or around any mechanical equipment.

6. Accumulations of rubbish, waste, paper, boxes, shavings, or other combustible materials, or excessive storage of any combustible material.

7. Hazardous conditions arising from defective or improperly used or installed electrical wiring, equipment or appliances.

8. Hazardous conditions arising from defective or improperly used or installed equipment for handling or using combustible, explosive or otherwise hazardous materials.

9. Dangerous or unlawful amounts of combustible, explosive or otherwise hazardous materials.

10. All equipment, materials, processes or operations which are in violation of the provisions and intent of this code.

B. 110.2 Maintenance. The owner shall be responsible for the safe and proper maintenance of any structure, premises or lot. In all structures, the fire protection equipment, means of egress, alarms, devices and safeguards shall be maintained in a safe and proper operating condition as required by the SFPC and applicable referenced standards.

C. 110.3 Occupant responsibility. If a building occupant creates conditions in violation of this code, by virtue of storage, handling and use of substances, materials, devices and appliances, such occupant shall be held responsible for the abatement of said hazardous conditions.

D. 110.4 Unsafe structures. All structures that are or shall hereafter become unsafe or deficient in adequate exit facilities or which constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or by reason of illegal or improper use, occupancy or maintenance or which have sustained structural damage by reason of fire, explosion, or natural disaster shall be deemed unsafe structures. A vacant structure, or portion of a structure, unguarded or open at door or window shall be deemed a fire hazard and unsafe within the meaning of this code. Unsafe structures shall be reported to the building official or building maintenance official who shall take appropriate action under the provisions of the USBC to secure abatement. Subsequently, the fire official may request the legal counsel of the local governing body to institute the appropriate proceedings for an injunction against the continued use and occupancy of the structure until such time as conditions have been remedied.

E. 110.5 Evacuation. When, in the fire official's opinion, there is actual and potential danger to the occupants or those in the proximity of any structure or premises because of unsafe structural conditions, or inadequacy of any means of egress, the presence of explosives, explosive fumes or vapors, or the presence of toxic fumes, gases or materials, the fire official may order the immediate evacuation of the structure or premises. All notified occupants shall immediately leave the structure or premises and no person shall enter until authorized by the fire official.

F. 110.6 Unlawful continuance. Any person who refuses to leave, interferes with the evacuation of other occupants or continues any operation after having been given an evacuation order shall be in violation of this code.

Exception: Any person performing work directed by the fire official to be performed to remove an alleged violation or unsafe condition.

13VAC5-51-111. Section 111 Violations.

A. 111.1 Notice. When the fire official discovers an alleged violation of a provision of the SFPC or other codes or ordinances under the fire official's jurisdiction, the fire official shall prepare a written notice citing the section allegedly violated, describing the condition deemed unsafe and specifying time limitations for the required abatements to be made to render the structure or premises safe and secure.

B. 111.1.1 Right of appeal. Notices of violation issued under Section 111.1 shall indicate the right of appeal by referencing the appeals section of this code.

Exceptions:

1. Summons issued in lieu of a notice of violation in accordance with Section 111.5 of this code.

2. Documents reflecting uncorrected violations in subsequent inspections to verify compliance.

C. 111.2 Service. The written notice of violation of this code shall be served upon the owner, a duly authorized agent or upon the occupant or other person responsible for the conditions under violation. Such notice shall be served either by delivering a copy of same to such persons by mail to the last known post office address, by delivering in person or by delivering it to and leaving it in the possession of any person in charge of the premises, or, in the case such person is not found upon the premises, by affixing a copy thereof in a conspicuous place at the entrance door or avenue of access. Such procedure shall be deemed the equivalent of personal notice.

D. 111.3 Failure to correct violations. If the notice of violation is not complied with within the time specified, the fire official shall request the legal counsel of the local governing body to institute the appropriate legal proceedings to restrain, correct, or abate such alleged violation.

E. 111.4 Penalty. Penalties upon conviction of violating the SFPC shall be as set out in § 27-100 of the Code of Virginia.

F. 111.5 Summons. When authorized and certified in accordance with § 27-34.2 of the Code of Virginia, the fire official may, subject to any limitations imposed by the local governing body, issue a summons in lieu of a notice of violation. Fire officials not certified in accordance with § 27-34.2 of the Code of Virginia may request the law-enforcement agency of the local governing body to make arrests for any alleged violations of the SFPC or orders affecting the immediate public safety.

13VAC5-51-121. Section 112 Appeals.

A. 112.1 Local Board of Fire Prevention Code Appeals (LBFPCA). Each local governing body which enforces the SFPC shall have a LBFPCA to hear appeals as authorized herein or it shall enter into an agreement with the governing body of another county or municipality, with some other agency, or with a state agency approved by the DHCD to act on appeals. An appeal case decided by some other approved agency shall constitute an appeal in accordance with this section and shall be final unless appealed to the State Review Board.

B. 112.2 Membership. The LBFPCA shall consist of at least five members appointed by the local governing body and having terms of office established by written policy. Alternate members may be appointed to serve in the absence of any regular members and, as such, shall have the full power and authority of the regular members. Regular and alternate members may be reappointed. Written records of current membership, including a record of the current chairman and secretary shall be maintained in the office of the local governing body. In order to provide continuity, the terms of the members may be of different length so that less than half will expire in any one-year period. The LBFPCA shall meet as necessary to assure a duly constituted board, appoint officers as necessary and receive such training on the code as may be appropriate or necessary from staff of the locality.

C. 112.2.1 Chairman. The LBFPCA shall annually select one of its regular members to serve as chairman. In case of the absence of the chairman at a hearing, the members present shall select an acting chairman.

D. 112.2.2 Secretary. The local governing body shall appoint a secretary to the LBFPCA to maintain a detailed record of all proceedings.

E. 112.3 Qualifications of members LBFPCA. members shall be selected by the local governing body on the basis of their ability to render fair and competent decisions regarding application of the SFPC and shall, to the extent possible, represent different occupational or professional fields relating to building construction or fire prevention. At least one member should be an experienced builder and one member a licensed professional engineer or architect. Employees or officials of the local governing body shall not serve as members of the LBFPCA.

F. 112.4 Disqualification of member. A member shall not hear an appeal in which that member has conflict of interest in accordance with the State and Local Government Conflict of Interests Act, Chapter 31 (§ 2.2-3100 et seq.) of Title 2.2 of the Code of Virginia.

G. 112.5 Application for appeal. The owner of a structure, the owner's agent or any other person involved in the maintenance of the structure, or activity, may appeal a decision of the fire official concerning the application of the SFPC or the fire official's refusal to grant modification under Section 106.5 to the provisions of the SFPC. The appeal shall first lie to the LBFPCA and then to the State Review Board except that appeals concerning the application of the SFPC or refusal to grant modifications by the State Fire Marshal shall be made directly to the State Review Board. The appeal shall be submitted to the LBFPCA within 14 calendar days of the application of the SFPC. The application shall contain the name and address of the owner of the structure and the person appealing if not the owner. A copy of the written decision of the fire official shall be submitted along with the application for appeal and maintained as part of the record. The application shall be stamped or otherwise marked by the LBFPCA to indicate the date received. Failure to submit an application for appeal within the time limit established by this section shall constitute acceptance of the fire official's decision.

Note: In accordance with § 27-98 of the Code of Virginia, any local fire code may provide for an appeal to a local board of appeals. If no local board of appeals exists, the State Review Board shall hear appeals of any local fire code violation.

H. 112.6 Notice of meeting. The LBFPCA shall meet within 30 calendar days after the date of receipt of the application for appeal. Notice indicating the time and place of the hearing shall be sent to the parties in writing to the addresses listed on the application at least 14 calendar days prior to the date of the hearing. Less notice may be given if agreed upon by the applicant.

I. 112.7 Hearing procedures. All hearings before the LBFPCA shall be open to the public. The appellant, the appellant's representative, the local governing body's representative and any person whose interests are affected shall be given an opportunity to be heard. The chairman shall have the power and duty to direct the hearing, rule upon the acceptance of evidence and oversee the record of all proceedings.

J. 112.7.1 Postponement. When a quorum of the LBFPCA is not present to hear an appeal, either the appellant or the appellant's representative shall have the right to request a postponement of the hearing. The LBFPCA shall reschedule the appeal within 30 calendar days of the postponement.

K. 112.8 Decision. The LBFPCA shall have the power to uphold, reverse or modify the decision of the fire official by a concurring vote of a majority of those present. Decisions of the LBFPCA shall be final if no appeal is made therefrom and the appellant and the fire official shall act accordingly.

L. 112.8.1 Resolution. The LBFPCA's decision shall be explained in writing, signed by the chairman, and retained as part of the record by the LBFPCA. The following wording shall be part of the written decision: "Any person who was a party to the appeal may appeal to the State Building Code Technical Review Board (State Review Board) by submitting an application to the State Review Board within 21 calendar days upon receipt by certified mail of the written decision. Application forms are available from the Office of the State Review Board, 600 East Main Street, Richmond, Virginia 23219, (804) 371-7150." Copies of the written decision shall be furnished to all parties.

M. 112.9 Appeal to the State Review Board. After final determination by the LBFPCA, any person who was a party to the local appeal may appeal to the State Review Board. Application shall be made to the State Review Board within 21 calendar days of receipt of the decision to be appealed. Application for appeal to the State Review Board arising from the SFMO's enforcement of the code or from any local fire code violation if no local board of appeals exists shall be made to the State Review Board within 14 calendar days of receipt of the decision to be appealed and shall be accompanied by copies of the inspection reports and other relevant information. Failure to submit an application for appeal within the time limit established by this section shall constitute an acceptance of the LBFPCA's resolution or fire official's decision.

N. 112.9.1 Information to be submitted. Copies of the fire official's decision and the written decision of the LBFPCA shall be submitted with the application for appeal. Upon request by the office of the State Review Board, the LBFPCA shall submit a copy of all inspection reports and all pertinent information from the record of the LBFPCA.

O. 112.9.2 Decision of State Review Board. Procedures of the State Review Board are in accordance with Article 2 (§ 36-108 et seq.) of Chapter 6 of Title 36 of the Code of Virginia. Decisions of the State Review Board shall be final if no appeal is made therefrom and the appellant and the code official shall act accordingly.

13VAC5-51-129. Application of Part II.

Part II. Technical Amendments

The changes in this part shall be made to the model codes and standards as indicated in this chapter for use as part of the SFPC.

13VAC5-51-130. ~~Ifc~~ IFC Section 202 Definitions.

A. Add the following definitions to read:

Applicable building code. The local or statewide building code and referenced standards in effect at the time the building or portion thereof was constructed, altered, renovated, or underwent a change of occupancy. See Section 103 for the application of the code.

Background clearance card or BCC. An identification card issued to an individual who is not a certified blaster or pyrotechnician and is responsible management or an employee of a company, corporation, firm, or other entity, solely for the purpose of submitting an application to the fire official for a permit to manufacture, use, handle, store, or sell explosive materials; or conduct a fireworks display. A person to whom a BCC has been issued can fulfill the role of a designated individual on an application for a permit to manufacture, use, handle, store, or sell explosive materials; or on an application for a permit to design, setup, and conduct a fireworks display.

Blaster, restricted. Any person engaging in the use of explosives or blasting agents utilizing five pounds (2.25 kg) or less per blasting operation and using instantaneous detonators. A certified restricted blaster can fulfill the role of a designated individual on an application for permit to manufacture, use, handle, store, or sell explosive materials.

Blaster, unrestricted. Any person engaging in the use of explosives or blasting agents without the limit to the amount of explosives or blasting agents or type of detonator. A certified unrestricted blaster can fulfill the role of a designated individual on an application for permit to manufacture, use, handle, store, or sell explosive materials.

~~Chemical fume hood. A ventilated enclosure designed to contain and exhaust fumes, gases, vapors, mists, and particulate matter generated within the hood.~~

Design. For the purposes of a fireworks display, either inside a building or structure or outdoors, it shall mean the pyrotechnician who will be in attendance and makes the final artistic determination for the placement of fireworks and ground display pieces suitable for the display site.

Designated individual. A person who is in possession of a BCC issued by the SFMO, certified by the SFMO as a pyrotechnician, or a restricted or unrestricted blaster, any of whom are responsible for ensuring compliance with state law and regulations relating to blasting agents and explosives and applying for explosives or firework permits; is at least 21 years of age; and demonstrates the capability to effectively communicate safety messages verbally and in writing in the English language.

DHCD. The Virginia Department of Housing and Community Development.

Explosive manufacturing. Mixing, blending, extruding, assembling articles, disassembling, chemical synthesis, and other functions involved in making a product or device that is intended to explode.

~~Laboratory suite. A fire-rated enclosed laboratory area that will provide one or more laboratory spaces, within a Group B educational occupancy, that are permitted to include ancillary uses such as offices, bathrooms, and corridors that are contiguous with the laboratory area and are constructed in accordance with Section 430.3 of the USBC, Part I, Construction.~~

LBFPCA. Local Board of Fire Prevention Code Appeals.

Local government, local governing body or locality. The governing body of any county, city, or town, other political subdivision and state agency in this Commonwealth charged with the enforcement of the SFPC under state law.

Maintained. To keep unimpaired in an appropriate condition, operation, and continuance as installed in accordance with the applicable building code, or as previously approved, and in accordance with the applicable operational and maintenance provisions of this code.

~~Mobile food preparation vehicles. Vehicles and enclosed trailers able to be occupied by persons during cooking operations that contain cooking equipment that utilize open flames or produce smoke or grease laden vapors for the purpose of preparing and serving food to the public. Vehicles used for private recreation shall not be considered mobile food preparation vehicles.~~

Night club. Any building or portion thereof in which the main use is a place of public assembly that provides exhibition, performance or other forms or entertainment; serves alcoholic beverages; and provides music and space for dancing.

Permissible fireworks. Any sparklers, fountains, Pharaoh's serpents, caps for pistols, or pinwheels commonly known as whirligigs or spinning jennies.

Pyrotechnician (firework operator). Any person supervising or engaged in the design, setup, or conducting of any fireworks display, either inside a building or outdoors. A certified pyrotechnician can fulfill the role of a designated individual on an application for a permit for a fireworks display.

Pyrotechnician, aerial. A person supervising or engaged in the design, setup, or conducting of an outdoor aerial fireworks display performed in accordance with the regulations as set forth in this code and NFPA 1123, a referenced standard for fireworks displays.

Pyrotechnician, proximate. A person supervising or engaged in the design, setup, or conducting of a fireworks display, either inside a building or outdoors, performed in accordance with the regulations as set forth in this code and NFPA 1126, a referenced standard for the use of pyrotechnics before a proximate audience.

Reactive target. A target designator intended to be shot at with a firearm and is purchased or obtained through a commercial or retail outlet, is comprised of two or more components in presized quantities of 1 pound (0.453592 kg) or less that are advertised and sold together with instructions on how to combine the components or create a target that explodes upon impact. Also known as exploding targets.

Responsible management. A person who is any of the following:

1. The sole proprietor of a sole proprietorship.

2. The partners of a general partnership.

3. The managing partners of a limited partnership.

4. The officers or directors of a corporation.

5. The managers or members of a limited liability company.

6. The managers, officers or directors of an association.

7. Individuals in other business entities recognized under the laws of the Commonwealth as having a fiduciary responsibility to the firm.

Restricted explosives manufacturing. When an individual engaged in the incidental manufacture or production of explosive materials composed of commercially available components that are packaged or marketed for the purpose of producing explosive materials, including reactive targets, at a location not within the definition of unrestricted explosives manufacture; is for immediate use at the site of incidental explosives manufacturing or production without residual storage; and does not involve or include the bulk mixing and delivery vehicles that are within the scope of NFPA 495.

Sole proprietor. A person or individual, not a corporation, who is trading under his own name or under an assumed or fictitious name pursuant to the provisions of §§ 59.1-69 through 59.1-76 of the Code of Virginia.

~~Special expert. An individual who has demonstrated qualifications in a specific area, outside the practice of architecture or engineering, through education, training, and experience.~~

State Fire Marshal. The State Fire Marshal as provided for by § 9.1-206 of the Code of Virginia.

State Regulated Care Facility (SRCF). A building with an occupancy in Group R-2, R-3, R-4, or R-5 occupied by persons in the care of others where program oversight is provided by the Virginia Department of Social Services, the Virginia Department of Behavioral Health and Developmental Services, the Virginia Department of Education or the Virginia Department of Juvenile Justice.

State Review Board. The Virginia State Building Code Technical Review Board as established under § 36-108 of the Code of Virginia.

Teaching and research laboratory. A building or portion of a building where hazardous materials are stored, used, and handled for the purpose of testing, analysis, teaching, research, or developmental activities on a nonproduction basis rather than in a manufacturing process.

Technical Assistant. Any person employed by or under an extended contract to a local enforcing agency for enforcing the SFPC. For the purposes of this definition, an extended contract shall be a contract with an aggregate term of 18 months or longer.

Unrestricted explosives manufacturing. When any company, person, or group of persons engaged in the business of manufacturing or producing explosive materials at a fixed site or facility for the purpose of commercial sale, use, or distribution of explosives.

USBC. The Virginia Uniform Statewide Building Code (13VAC5-63).

B. ~~Add the following definition under the term "Occupancy Classification--Residential Group R" to read:~~

~~Residential Group R-5. Detached one and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures. The terms "R-5" and "one and two-family dwelling" where used in this code shall be interchangeable.~~

~~C.~~ Change the following definitions to read:

Approved. Acceptable to the authority having jurisdiction.

Automatic fire-extinguishing system. An approved system of devices and equipment that automatically detects a fire and discharges an approved fire-extinguishing agent onto or in the area of a fire. Such system shall include an automatic sprinkler system, unless otherwise expressly stated.

Change of occupancy. Either of the following shall be considered a change of occupancy where the current VCC requires a greater degree of accessibility, structural strength, fire protection, means of egress, ventilation, or sanitation than that which is existing in the current building or structure:

1. Any change in the occupancy classification of a building or structure.

2. Any change in the purpose of, or change in the level of activity within, a building or structure.

Note: The use and occupancy classification of a building or structure shall be determined in accordance with Chapter 3 of the VCC.

Fire code official. The officer or other designated authority charged with administration and enforcement of this code, or a duly authorized representative. For the purpose of this code, the terms "code official" and "fire official" shall have the same meaning as the term "fire code official" and, in addition, such official shall have the powers outlined in § 27-98.1 of the Code of Virginia.

Fireworks. Any firecracker, torpedo, skyrocket, or other substance or object, of whatever form or construction, that contains any explosive or inflammable compound or substance and is intended, or commonly known, as fireworks and that explodes, rises into the air or travels laterally, or fires projectiles into the air. Fireworks shall not include automobile flares, paper caps containing not more than the average of 0.25 grain (16 mg) of explosive content per cap or toy pistols, toy canes, toy guns, or other devices utilizing such caps and items commonly known as party poppers, pop rocks, and snap-n-pops. Fireworks may be further delineated and referred to as:

Fireworks, 1.4G (formerly known as Class C, Common Fireworks). Small fireworks devices containing restricted amounts of pyrotechnic composition designed primarily to produce visible or audible effects by combustion. Such 1.4G fireworks that comply with the construction, chemical composition, and labeling regulations of the U.S. Department of Transportation DOTn for Fireworks, UN0336, and the U.S. Consumer Product Safety Commission as set forth in CPSC 16 CFR Parts 1500 and 1507, are not explosive materials for the purpose of this code.

Fireworks, 1.3G (formerly Class B, Special Fireworks). Large fireworks devices, which are explosive materials, intended for the use in fireworks displays and designed to produce audible or visible effects by combustion, deflagration, or detonation. Such 1.3G fireworks include, but are not limited to, firecrackers containing more than 130 milligrams (2 grains) of explosive composition, aerial shells containing more than 40 grams of pyrotechnic composition, and other display pieces that exceed the limits for classification as 1.4G fireworks. Such 1.3G fireworks are also described as Fireworks, UN0335 by the DOTn.

Laboratory suite. A fire-rated enclosed laboratory area that will provide one or more laboratory spaces, within a Group B educational occupancy, that are permitted to include ancillary uses such as offices, bathrooms, and corridors that are contiguous with the laboratory area and are constructed in accordance with Section 430.3 of the USBC, Part I, Construction.

Mobile food preparation vehicles. Vehicles and enclosed trailers able to be occupied by persons during cooking operations that contain cooking equipment that utilize open flames or produce smoke or grease laden vapors for the purpose of preparing and serving food to the public. Vehicles used for private recreation shall not be considered mobile food preparation vehicles.

Occupancy classification. For the purposes of this code, occupancies are defined in accordance with the applicable building code.

Smokeless propellants. Solid propellants, commonly referred to as smokeless powders or any propellant classified by DOTn as a smokeless propellant in accordance with NA3178, Smokeless Powder for Small Arms, used in small arms ammunition, firearms, cannons, rockets, propellant-actuated devices, and similar articles.

13VAC5-51-131. ~~Ifc~~ IFC Chapter 3 General Requirements.

A. The following changes shall be made to Section 301, General:

1. Change Section 301.2 to read:

301.2 Permits. Permits shall be required as set forth in Section 107.2 for the activities or uses regulated by Sections 306, 307, 308, and 315.

2. Add Section 301.3 to read:

301.3 Occupancy. The occupancy of a structure shall be continued as originally permitted under and in full compliance with the codes in force at the time of construction or alteration. The occupancy of a structure shall not change to another occupancy that will subject the structure to any special provisions of this code or the applicable building code without the approval of the building official. Where a certificate of occupancy is not available for a building, the owner or owner's agent may request that one be issued by the building official and retained on site for reference.

B. The following changes shall be made to Section 302, Definitions:

Change Section 302.1 to read:

302.1 Definitions. The following terms are defined in Chapter 2:

Bonfire.

Explosive manufacturing.

Hi-boy.

High-voltage transmission line.

Mobile food preparation vehicles.

Open burning.

Portable outdoor fireplace.

Powered industrial truck.

Reactive targets.

Recreational fire.

Restricted explosives manufacturing.

Sky lantern.

Unrestricted explosives manufacturing.

C. The following changes shall be made to Section 304, Combustible Waste Material:

1. Change Section 304.1.2 to read:

304.1.2 Vegetation. Weeds, grass, vines, or other growth that is capable of being ignited and endangering property shall be cut down and removed by the owner or occupant of the premises.

2. Change Section 304.1.3 to read:

~~(N)~~304.1.3 Space underneath seats. Spaces underneath grandstand and bleacher seats shall be kept free from combustible and flammable materials unless approved by the applicable building code.

3. Change Section 304.3.2 to read:

304.3.2 Capacity exceeding 5.88 cubic feet. Containers with a capacity exceeding 5.88 cubic feet (44 gallons) (0.17 m^3) shall be provided with lids. Containers and lids shall be constructed of noncombustible materials or approved combustible materials.

4. Change Section 304.3.3 to read:

304.3.3 Capacity exceeding 1.5 cubic yards. Dumpsters and containers with an individual capacity of 1.5 cubic yards (40.5 cubic feet (1.15 m^3)) or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or combustible roof eave lines.

Exceptions:

1. Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout in accordance with the applicable ~~building code~~ NFPA 13 standard.

2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10 feet (3048 mm) from other buildings, and used exclusively for dumpster or container storage.

5. Change Section 304.3.4 to read:

304.3.4 Capacity of 1.0 cubic yard or more. Dumpsters with an individual capacity of 1.0 cubic yard 200 gallons (0.76 m^3) or more shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, openings or combustible roof eave lines unless the dumpsters are constructed of noncombustible materials or of combustible materials with a peak rate of heat release not exceeding 300 kW/m^2 where tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m^2 in the horizontal orientation.

Exceptions:

1. Dumpsters in areas protected by an approved automatic sprinkler system installed throughout in accordance with the applicable ~~building code~~ NFPA 13 standard.

2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10 feet (3048 mm) from other buildings, and used exclusively for dumpster or container storage.

D. The following change shall be made to Section 306, Motion Picture Projection Rooms and Film:

Change Section 306.1 to read:

306.1 Motion picture projection rooms. Electric arc, xenon, or other light source projection equipment that develops hazardous gases, dust, or radiation and the projection of ribbon-type cellulose nitrate film, regardless of the light source used in projection, shall be operated within a motion picture projection room complying with the applicable building code.

E. The following changes shall be made to Section 307, Open Burning, Recreational Fires and Portable Outdoor Fireplaces:

1. Add an exception to Section 307.1 to read:

Exception: Approved outdoor live fire training using equipment or appliances accessible or available to the general public, and that complies with Section 307.4.

2. Change Section 307.2 to read:

307.2 Permit required. A permit shall be obtained from the fire code official in accordance with Section 107.2 prior to kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or a bonfire. Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

F. The following changes shall be made to Section 308, Open Flames:

1. Change Section 308.2 to read:

308.2 Permits required. Permits shall be obtained from the fire code official in accordance with Section 107.2 prior to engaging in the following activities involving open flame, fire, and burning:

1. Use of a torch or flame-producing device to remove paint from a structure.

2. Use of open flame, fire, or burning in connection with Group A or E occupancies.

3. Use or operation of torches and other devices, machines, or processes liable to start or cause fire in or upon wildfire risk areas.

2. Change Section 308.3 to read:

308.3 Group A occupancies. Open-flame devices shall not be used in a Group A occupancy.

Exceptions:

1. Open-flame devices are allowed to be used in the following situations, provided approved precautions are taken to prevent ignition of a combustible material or injury to occupants:

1.1 Where necessary for ceremonial or religious purposes in accordance with Section 308.1.7.

1.2. On stages and platforms as a necessary part of a performance in accordance with Section 308.3.2.

1.3. Where candles on tables are securely supported on substantial noncombustible bases and the candle flames are protected.

2. Heat-producing equipment complying with Chapter 6 and the applicable building code.

3. Gas lights are allowed to be used provided adequate precautions satisfactory to the fire code official are taken to prevent ignition of combustible materials.

G. The following changes shall be made to Section 311, Vacant Premises:

1. ~~Change Section 311.1 to read:~~

~~311.1 General. Temporarily unoccupied buildings, structures, premises, or portions thereof, including tenant spaces, shall be safeguarded and maintained in accordance with Sections 311.1.1 through 311.6.~~

~~2.~~ Change Section 311.1.1 to read:

311.1.1 Abandoned premises. Buildings, structures and premises for which an owner cannot be identified or located by dispatch of a certificate of mailing to the last known or registered address, which persistently or repeatedly become unprotected or unsecured, which have been occupied by unauthorized persons or for illegal purposes, or which present a danger of structural collapse or fire spread to adjacent properties shall be considered abandoned and unsafe until declared abated by the Virginia Maintenance Code or the applicable building code.

~~3.~~ 2. Change Section 311.2.3 to read:

311.2.3 Fire separation. Fire-resistance-rated partitions, fire barriers, and fire walls separating vacant tenant spaces from the remainder of the building shall be maintained. Protection of openings, joints, and penetrations in fire-resistance-rated assemblies shall be maintained in accordance with Chapter 7.

~~4.~~ 3. Change Section 311.3 to read:

311.3 Removal of combustibles. Persons owning, or in charge or control of, a vacant building or portion thereof shall remove therefrom all accumulations of combustible materials, flammable or combustible waste, or rubbish and shall securely lock or otherwise secure doors, windows, and other openings to prevent entry by unauthorized persons. The premises shall be maintained clear of waste or hazardous materials.

Exceptions:

1. Buildings or portions of buildings undergoing additions, alterations, repairs, or change of occupancy in accordance with the applicable building code where waste is controlled and removed as required by Section 304.

2. Seasonally occupied buildings.

~~5.~~ 4. Add Section 311.5.6 to read:

311.5.6 Removal. Removal of placards posted in accordance with this section without the approval of the fire official shall be a violation of this code.

~~6.~~ 5. Change Section 311.6 to read:

~~(N)~~311.6 Unoccupied tenant spaces in mall buildings. Unoccupied tenant spaces in covered and open mall buildings shall be:

1. Kept free from the storage of any materials.

2. Without doors or other access openings other than one door that shall be kept key locked in the closed position except during that time when opened for inspection.

3. Kept free from combustible waste and be broom swept clean.

H. The following changes shall be made to Section 313, Fueled Equipment:

Change Section 313.1 to read:

313.1 General. Fueled equipment including motorcycles, mopeds, lawn-care equipment, portable generators, and portable cooking equipment shall not be stored, operated, or repaired within a building.

Exceptions:

1. Buildings or rooms constructed for such use in accordance with the applicable building code.

2. Where allowed by Section 314.

3. Storage of equipment utilized for maintenance purposes is allowed in approved locations where the aggregate fuel capacity of the stored equipment does not exceed 10 gallons (38 L) and the building is protected throughout by an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard.

I. The following changes shall be made to Section 314, Indoor Displays:

1. Change Section 314.1 to read:

314.1 General. Indoor displays constructed within any building or structure shall comply with Sections 314.2 through 314.5.

2. Add Section 314.5 to read:

314.5 Smokeless powder and small arms primers. Venders shall not store, display, or sell smokeless powder or small arms primers during trade shows inside exhibition halls except as follows:

1. The amount of smokeless powder displayed by each vender is limited to the amount established in Section 5606.5.1.1.

2. The amount of smokeless powder each vender may store is limited to the storage arrangements and storage amounts established in Section 5606.5.2.1. Smokeless powder shall remain in the

manufacturer's original sealed container, and the container shall remain sealed while inside the building. The repackaging of smokeless powder shall not be performed inside the building. Damaged containers shall not be repackaged inside the building and shall be immediately removed from the building in such manner to avoid spilling any powder.

3. There shall be at least 50 feet separation between venders and 20 feet from any exit.

4. Small arms primers shall be displayed and stored in the manufacturer's original packaging and in accordance with the requirements of Section 5606.5.2.3.

J. The following changes shall be made to Section 315, General Storage:

1. Change Section 315.2 to read:

315.2 Permit required. A permit for miscellaneous combustible storage shall be required as set forth in Section 107.2.

2. Change ~~Section~~ Exception 2 of 315.3.1 and Section 315.3.4 to read:

2. The 18-inch (457 mm) ceiling clearance is not required for storage along walls in areas of buildings equipped with an automatic sprinkler system in accordance with the applicable NFPA 13 standard.

~~(N)~~315.3.4 Attic, under-floor and concealed spaces. Attic, under-floor and concealed spaces shall not be used for storage of combustible materials unless approved or not prohibited by the applicable building code.

3. Change Section 315.4 to read:

315.4 Outside storage. Outside storage of combustible materials shall not be located within 10 feet (3048 mm) of a property line or other building on the site.

Exceptions:

1. The separation distance is allowed to be reduced to 3 feet (914 mm) for storage not exceeding 6 feet (1829 mm) in height.

2. The separation distance is allowed to be reduced when the fire official determines that no hazard to the adjoining property exists.

4. Change Section 315.4.1 to read:

315.4.1 Storage beneath overhead projections from buildings. To the extent required by the code the building was constructed under, when buildings are required to be protected by automatic sprinklers, the outdoor storage, display, and handling of combustible materials under eaves, canopies, or other projections or overhangs is prohibited except where automatic sprinklers are installed under such eaves, canopies, or other projections or overhangs.

5. Change Section 315.6 to read:

~~(N)~~315.6 Storage in plenums. Storage shall not be permitted in plenums unless approved for such use by the applicable building code. Abandoned material in plenums shall be deemed to be storage and shall be removed. Where located in plenums, the accessible portion of abandoned cables that are not identified for future use with a tag shall be deemed storage and shall be removed.

K. The following changes shall be made to Section 316, Hazards to Fire Fighters:
Change Section 316.6.1 to read:

~~(N)~~316.6.1 Structures. Structures shall not be constructed within the utility easement beneath high-voltage transmission lines unless approved.

L. The following changes shall be made to Section 317, Rooftop Gardens and Landscaped Roofs:

1. Change Section 317.1 to read:

~~(N)~~317.1 General. Rooftop gardens and landscaped roofs shall be maintained in accordance with Sections 317.2 through 317.5.

2. Change Section 317.2 to read:

~~(N)~~317.2 Rooftop garden or landscaped roof size. Rooftop garden or landscaped roof areas shall not exceed the size approved in accordance with the applicable building code.

3. Change Section 317.3 to read:

~~(N)~~317.3 Rooftop structure and equipment clearance. Required structure and equipment clearances shall be maintained as provided by the applicable building code.

~~4. Change Section 317.4 to read:~~

~~317.4 Vegetation. Vegetation shall be maintained in accordance with Sections 317.4.1 and 317.4.2.~~

M. The following ~~changes~~ change shall be made to Section 318, Laundry Carts:

Change Section 318.1 to read:

318.1 Laundry carts with a capacity of 1 cubic yard or more. Laundry carts with an individual capacity of 1 cubic yard (200 gallons (0.76 m^3)) or more used in laundries within Groups B, E, F-1, I, M and R-1 occupancies shall be constructed of noncombustible materials or materials having a peak rate of heat release not exceeding 300 kW/m^2 at a flux of 50 kW/m^2 where tested in a horizontal orientation in accordance with ASTM E 1354.

Exceptions:

1. Laundry carts in areas protected by an approved automatic sprinkler system throughout in accordance with the applicable NFPA 13 standard.

2. Laundry carts in coin-operated laundries.

N. ~~Add~~ Change Section 319, Mobile Food Preparation Vehicles~~.~~ , in its entirety, to read:

~~Add Sections 319.1 through 319.11, including subsections, to read:~~

319.1 General. Mobile food preparation vehicles that are equipped with appliances that utilize open flames or produce smoke or grease laden vapors shall comply with this section.

319.2 Permit required. Permits shall be required as set forth in Section 107.2.

319.3 Seating. Seating for the public within any mobile food preparation vehicles is prohibited.

319.4 Exhaust hood. Cooking equipment that produces grease laden vapors shall be provided with a kitchen exhaust hood in accordance with NFPA 96, Annex B.

319.5 Fire protection. Fire protection shall be provided in accordance with Sections 319.5.1 through 319.5.2.

319.5.1 Fire protection for cooking equipment. Cooking equipment shall be protected by automatic fire extinguishing systems in accordance with Section 904.3.

319.5.2 Fire extinguisher. Portable fire extinguishers shall be provided in accordance with Section 904.12.5.

319.6 Appliance connection to fuel supply. Gas cooking appliances shall be secured in place and connected to fuel supply piping with an appliance connector complying with ANSI Z21.69/CSA 6.16. The connector installation shall be configured in accordance with manufacturer's installation instructions. Movement of appliances shall be limited by restraining devices installed in accordance with the connector and appliance manufacturer's instructions.

319.6.1 Construction and modifications. Following initial construction and any modifications of the fuel system, the system, including hoses, shall be proven free of leaks by performing a pressure test in accordance with NFPA 58 at not less than the normal operating pressure.

319.6.2 Leak detection. Gas systems shall be inspected prior to each use and following fuel tank replacement or refill in one of the following methods:

1. A water and soap solution shall be applied to every accessible connection or connection manipulated during the replacement or fueling and observed for evidence of gas leakage.

2. Pressure testing in accordance with Annex L of NFPA 58.

319.6.3 Leaks. When leaks are discovered during inspections and testing, the fuel supply shall be secured in the "off" position or disconnected from the appliance, and the appliance shall not be operated until serviced by a qualified person.

319.7 Cooking oil storage containers. Cooking oil storage containers within mobile food preparation vehicles shall have a minimum aggregate area volume not to exceed 120 gallons (454L) and shall be stored in such a way as to not be toppled or damaged during transport.

319.8 Cooking oil storage tanks. Cooking oil storage tanks within mobile food preparation vehicles shall comply with Sections 319.8.1 through 319.8.5.

319.8.1 Metallic storage tanks. Metallic cooking oil storage tanks shall be listed in accordance with UL 142 or UL 80, and shall be installed in accordance with the tank manufacturer's instructions.

319.8.2 Nonmetallic tanks. Nonmetallic cooking oil storage tanks shall be installed in accordance with the tank manufacturer's instructions and shall also comply with all of the following:

1. Tanks shall be listed for use with cooking oil, including maximum temperature to which the tanks will be exposed to during use.

2. Tank capacity shall not exceed 200 gallons (757 L) per tank.

319.8.3 Cooking oil storage system components. Metallic and nonmetallic cooking oil storage system components shall include piping, connections, fittings, valves, tubing, hose, pumps, vents, and other related components used for the transfer of cooking oil.

319.8.4 Design criteria. The design, fabrication, and assembly of system components shall be suitable for the working pressures, temperatures, and structural stresses to be encountered by the components.

319.8.5 Tank venting. Normal and emergency venting shall be provided for cooking oil storage tanks.

319.8.5.1 Normal vents. Normal vents shall be located above the maximum normal liquid line and shall have a minimum effective area not smaller than the largest filling or withdrawal connection. Normal vents are not required to vent to the exterior.

319.8.5.2 Emergency vents. Emergency relief vents shall be located above the maximum normal liquid line and shall be in the form of a device that will relieve excessive internal pressure caused by an exposure fire. For nonmetallic tanks, the emergency relief vent shall be allowed to be in the form of construction. Emergency vents are not required to discharge to the exterior.

319.9 Liquefied petroleum gas (LP-gas) systems. Where LP-gas systems provide fuel for cooking appliances, such systems shall comply with NFPA 58, Chapter 61 and Sections 319.9.1 through 319.9.5.

319.9.1 Maximum aggregate volume. The maximum aggregate capacity of LP-gas containers transported on the vehicle and used to fuel cooking appliances only shall not exceed 200 pounds propane capacity.

319.9.2 Protection of container. LP-gas containers installed on the vehicle shall be securely mounted and restrained to prevent movement.

319.9.3 LP-gas container construction. LP-gas containers shall be manufactured in compliance with the requirements of NPFA 58.

319.9.4 Protection of system piping. LP-gas system piping, including valves and fittings, shall be adequately protected to prevent tampering, impact damage, and damage from vibration.

319.9.5 LP-gas alarms. A listed LP-gas alarm shall be installed with the vehicle in the vicinity of LP-gas system components, in accordance with manufacturer's instructions.

319.10 Compressed natural gas (CNG) systems. Where CNG systems provide fuel for cooking appliances, such systems shall comply with Sections 319.10.1 through 319.10.4.

319.10.1 CNG containers supplying only cooking fuel. CNG containers installed solely to provide fuel for cooking purposes shall be in accordance with Sections 319.10.1.1 through 319.10.1.3.

319.10.1.1 Maximum aggregate volume. The maximum aggregate capacity of CNG containers transported on the vehicle shall not exceed 1,300 pounds water capacity.

319.10.1.2 Protection of container. CNG containers shall be securely mounted and restrained to prevent movement. Containers shall not be installed in locations subject to direct vehicle impact.

319.10.1.3 CNG container construction. The construction of CNG containers shall be approved.

319.10.2 CNG containers supplying transportation and cooking fuel. Where CNG containers and systems are used to supply fuel for cooking purposes in addition to being used for transportation fuel, the installation shall be in accordance with NFPA 52.

319.10.3 Protection of system piping. CNG system piping, including valves and fittings, shall be adequately protected to prevent tampering, impact damage, and damage from vibration.

319.10.4 Methane alarms. A listed methane gas alarm shall be installed within the vehicle in accordance with manufacturer's instructions.

319.11 Maintenance. Maintenance of systems on mobile food preparation vehicles shall be in accordance with Sections 319.11.1 through 319.11.3.

319.11.1 Exhaust system. The exhaust system, including hood, grease-removal devices, fans, ducts and other appurtenances, shall be inspected and cleaned in accordance with Chapter 6.

319.11.2 Fire protection systems and devices. Fire protection systems and devices shall be maintained in accordance with Chapter 9.

319.11.3 Fuel-gas systems. LP-gas containers installed on the vehicle and fuel-gas piping systems shall be inspected annually by an approved inspection agency or a company that is registered with the U.S. Department of Transportation to requalify LP-gas cylinders to ensure that system components are free of damage, suitable for the intended service, and not subject to leaking. CNG containers shall be inspected every three years in a qualified service facility. CNG containers shall not be used past their expiration dates listed on the manufacturer's container label. Upon satisfactory inspection, the approved inspection agency shall affix a tag on the fuel-gas system or within the vehicle indicating the name of the inspection agency and the date of satisfactory inspection.

13VAC5-51-132. ~~Ifc~~ IFC Chapter 4 Emergency Planning and Preparedness.

A. The following change shall be made to Section 401, General:

Add Section 401.1.1 to read:

401.1.1 State Regulated Care Facilities. When a state license is required by the Virginia Department of Social Services; Virginia Department of Behavioral Health and Developmental Services; Virginia Department of Education; or Virginia Department of Juvenile Justice to operate, SRCF shall comply with this section and the provisions of Section 404.

B. The following changes shall be made to Section 403, Emergency Preparedness Requirements:

1. Add Section 403.1.1 to read:

403.1.1 Maintaining occupant load posting. Occupant load postings required by the building code are required to be maintained.

2. Add Sections 403.2.2.1, 403.2.2.1.1, and 403.2.2.1.2 to read:

403.2.2.1 Night clubs. Night clubs shall comply with Sections 403.2.2.1.1 and 403.2.2.1.2.

403.2.2.1.1 Audible announcements. Audible announcements shall be made to the occupants no longer than 10 minutes prior to the start of the entertainment and at each intermission to notify the occupants of the location of the exits to be used in the event of a fire or other emergency.

403.2.2.1.2 Occupant load count. Upon request of the fire code official, the owner or operator, or both, will be required to keep a running count of the occupant load to provide to the fire code official during performance hours of operation, entertainment hours of operation, or both.

3. Change Section 403.8.3.2 to read:

403.8.3.2 Employee staffing. Group I-3 occupancies shall be provided with 24-hour staffing. An employee shall be within three floors or 300 feet (91 440 mm) horizontal distance of the access door of each resident housing area. In Group I-3 Conditions 3, 4, and 5, as defined in Chapter 2, the arrangement shall be such that the employee involved can start release of locks necessary for emergency evacuation or rescue and initiate other necessary emergency actions within 2 minutes of an alarm.

Exception: An employee shall not be required to be within three floors or 300 feet (91 440 mm) horizontal distance of the access door of each resident housing area in areas in which all locks are unlocked remotely and automatically in accordance with the applicable building code.

4. Change Section 403.10 to read:

403.10 Group R occupancies. Group R occupancies shall comply with Sections 403.10.1 through 403.10.4.

5. Add Section 403.10.4 to read:

403.10.4 Groups R-3 and R-5 lodging facilities. An approved fire safety and evacuation plan in accordance with Section 404 shall be prepared and maintained for Groups R-3 and R-5 bed and breakfast and other transient boarding facilities that are either proprietor or non-proprietor occupied.

6. Change Section 403.11 to read:

403.11 Special uses. Special uses shall be in accordance with Sections 403.11.1 through ~~403.11.5~~ 403.11.6.

7. Change Section 403.11.1.4 to read:

403.11.1.4 Lease plan revisions. The lease plans shall be revised annually or as often as necessary to keep them current. Modifications or changes in tenants or occupancies shall not be made without prior approval of the fire code official.

8. Add Section ~~403.11.5~~ 403.11.6 to read:

~~403.11.5~~ 403.11.6 SRCF. An approved fire safety and evacuation plan in accordance with Section 404 shall be prepared and maintained for SRCFs.

C. The following change shall be made to Section 404, Fire Safety, Evacuation and Lockdown Plans:

Change Section 404.4.1 to read:

404.4.1 Distribution. The fire safety and evacuation plans shall be distributed to the tenants and building service employees by the owner or owner's agent. Tenants shall distribute to their employees applicable parts of the fire safety plan affecting the employees' actions in the event of a fire or other emergency. Fire safety and evacuation plans shall be made available by the proprietor of Group R-3 and R-5 bed and breakfast and other transient boarding facilities to transient guests upon their arrival or are present in each transient guest room.

D. The following changes shall be made to Section 405, Emergency Evacuation Drills

1. Change Section 405.1 to read:

405.1 General. Emergency evacuation drills complying with Sections 405.2 through 405.9 shall be conducted at least annually where fire safety and evacuation plans are required by Section 403 or when required by the fire code official. Drills shall be designed in cooperation with the local authorities.

Exception: Emergency evacuation drills shall not be conducted in school buildings during periods of mandatory testing required by the Virginia Board of Education.

2. Add the following row to Table 405.2 to read:

Group or Occupancy	Frequency	Participation
SRCF	Monthly	All occupants

3. Add Section 405.2.1 to read:

405.2.1 High-rise buildings. Fire exit drills shall be conducted annually by building staff personnel or the owner of the building in accordance with the fire safety plan and shall not affect other current occupants.

13VAC5-51-133. ~~Ifc~~ IFC Chapter 5 Fire Service Features.

A. The following changes shall be made to Section 501, General:

1. Change Section 501.2 to read:

501.2 Permits. A permit shall be required as set forth in Section 107.2.

2. Delete Section 501.4.

B. The following changes shall be made to Section 503, Fire Apparatus Access Roads:

1. Add exceptions to Section 503.1 to read:

Exceptions:

1. Fire apparatus access roads shall be permitted to be provided and maintained in accordance with written policy that establish fire apparatus access road requirements and such requirements shall be identified to the owner or his agent prior to the building official's approval of the building permit.

2. On construction and demolition sites fire apparatus access roads shall be permitted to be provided and maintained in accordance with Section 3310.1.

2. Change Section 503.1.1 to read:

503.1.1 Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building, or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45,720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

Exceptions:

1. The fire code official is authorized to increase the dimension of 150 feet (45,720 mm) where any of the following conditions occur:

1.1. The building is equipped throughout with an approved automatic sprinkler system in accordance with the applicable NFPA13~~, NFPA 13R, or NFPA13D~~ standard.

1.2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades, or other similar conditions, and an approved alternative means of fire protection is provided.

1.3. There are not more than two Group R-3 or Group U occupancies.

2. Where approved by the fire code official, fire apparatus access roads shall be permitted to be exempted or modified for solar photovoltaic power generation facilities.

3. Add exception to Section 503.2.1 to read:

Exception: Fire apparatus access roads exclusively serving single family dwelling or townhouse developments that are fully sprinklered as provided for in Sections R313.1 or R313.2 of the International Residential Code shall have an unobstructed width of not less than 18 feet (5486 mm), exclusive of shoulders.

4. Add Section 503.7 to read:

503.7 Fire lanes for existing buildings. The fire code official is authorized to designate public and private fire lanes as deemed necessary for the efficient and effective operation of fire apparatus. Fire lanes shall comply with Sections 503.2 through 503.6.

C. The following changes shall be made to Section 504, Access to Building Openings and Roofs:

1. Change Section 504.1 to read:

504.1 Required access. Exterior doors and openings required by the applicable building code shall be maintained readily accessible for emergency access by the fire department. An approved access walkway leading from fire apparatus access roads to exterior openings shall be provided when required by the fire code official.

2. Change Section 504.3 to read:

~~(N)~~504.3 Stairway access to roof. Stairway access to the roof shall be maintained and marked at street and floor levels with a sign indicating that the stairway continues to the roof.

D. The following changes shall be made to Section 507, Fire Protection Water Supplies:

1. Add Section 507.3.1 to read:

507.3.1 Fire flow requirements for fully sprinklered residential developments. Notwithstanding Section 103.1.2, the fire flow requirements in Table B105.1(1) of Appendix B of the IFC shall be permitted to be used for determining fire flow in single family dwelling and townhouse developments which are fully sprinklered as provided for in Sections R313.1 or R313.2 of the International Residential Code.

2. Change Section 507.5.1 to read:

507.5.1 Where required. Fire hydrant systems shall be located and installed as directed by the fire department. Fire hydrant systems shall conform to the written standards of the jurisdiction and the fire department.

Exceptions:

1. For in-fill development of fewer than five detached single-family dwellings constructed in existing residential developments.

2. For the reconstruction or rehabilitation of detached single-family dwellings.

3. Add Section 507.5.1.2 to read:

507.5.1.2 Fire hydrant requirements for fully sprinklered residential developments. Notwithstanding Section 103.1.2, the number and distribution of fire hydrants in Table C102.1 of Appendix C of the IFC shall be permitted to be used in single family dwelling and townhouse developments which are fully sprinklered as provided for in Sections R313.1 or R313.2 of the International Residential Code, with the spacing and distances of fire hydrants indicated in Table C102.1 increased by 100%.

E. The following changes shall be made to Section 508, Fire Command Center:

1. Change Section 508.1 to read:

~~(N)~~508.1 General. Where required by the applicable building code or where otherwise provided, a fire command center for fire department operations shall comply with Sections 508.1.1 through 508.1.6.

2. Delete Section 508.1.1.

3. Change Section 508.1.2 to read:

~~(N)~~508.1.2 Separation. Fire-rated construction shall be maintained in accordance with Section 703 of this code.

4. Delete Section 508.1.3.

5. Change Section 508.1.4 to read:

~~(N)~~508.1.4 Layout approval. A layout of the fire command center and all features shall be submitted for approval prior to modification.

6. Change Section 508.1.6 to read:

~~(N)~~ 508.1.6 Required features. In addition to the features required by the applicable building code, the fire command center shall contain the following:

1. A telephone for fire department use with controlled access to the public telephone system.

2. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, firefighter air-replenishment systems, firefighting equipment, and fire department access and the location of fire walls, fire barriers, fire partitions, smoke barriers, and smoke partitions.

3. An approved building information card that includes all of the following information:

3.1. General building information that includes property name, address, the number of floors in the building above and below grade, use and occupancy classification (for mixed uses, identify the different types of occupancies on each floor) and the estimated building population during the day, night and weekend;

3.2. Building emergency contact information that includes a list of the building's emergency contacts including building manager, building engineer, and their respective work phone numbers, cell phone numbers, and email addresses;

3.3. Building construction information that includes the type of building construction including floors, walls, columns, and roof assembly;

3.4. Exit access stairway and exit stairway information that includes number of exit access stairways and exit stairways in building; each exit access stairway and exit stairway designation and floors served; location where each exit access stairway and exit stairway discharges; interior exit stairways that are pressurized; exit stairways provided with emergency lighting; each exit stairway that allows reentry; exit stairways providing roof access; elevator information that includes: number of elevator banks, elevator bank designation, elevator car numbers, and respective floors that they serve; location of elevator machine rooms; control rooms and control spaces; location of sky lobby; and location of freight elevator banks;

3.5. Building services and system information that includes location of mechanical rooms, location of building management system, location and capacity of all fuel oil tanks, location of emergency generator, and location of natural gas service;

3.6. Fire protection system information that includes location of standpipes, location of fire pump room, location of fire department connections, floors protected by automatic sprinklers, and location of different types of automatic sprinkler systems installed including dry, wet, and preaction; and

3.7. Hazardous material information that includes: location and quantity of hazardous material.

4. Work table.

F. The following changes shall be made to Section 510, Maintenance of In-Building Emergency Communication Equipment:

Change Sections 510.1 through 510.3 ~~to read:~~ and delete Sections 510.4 through 510.6, including subsections.

510.1 General. In-building emergency communication equipment shall be maintained in accordance with USBC and the provisions of this section.

510.2 Additional in-building emergency communications installations. If it is determined by the locality that increased amplification of their emergency communication system is needed, the building owner shall allow the locality access as well as provide appropriate space within the building to install and maintain necessary additional communication equipment by the locality. If the building owner denies the locality access or appropriate space, or both, the building owner shall be responsible for the installation and maintenance of these additional systems.

510.3 Field tests. After providing reasonable notice to the owner or the owner's representative, the fire official, police chief, or their agents shall have the right during normal business hours, or other mutually agreed upon time, to enter onto the property to conduct field tests to verify that the required level of radio coverage is present at no cost to the owner.

13VAC5-51-133.5. ~~Ifc~~ IFC Chapter 6 Building Services and Systems.

A. The following changes shall be made to Section 601, General:

1. Change Section 601.1 to read:

601.1 Scope. The provisions of this chapter shall apply to the operation and maintenance of fuel-fired appliances and heating systems, emergency and standby power systems, electrical systems, and equipment, mechanical refrigeration systems, elevator recall, stationary storage battery systems and commercial kitchen equipment.

2. Change Section 601.2 to read:

601.2 Permits. Permits shall be obtained for refrigeration systems, battery systems and solar photovoltaic power systems as set forth in Section 107.2.

B. The following changes shall be made to Section 603, Fuel-Fired Appliances:

1. Change Section 603.1 to read:

~~(N)~~603.1 Installation. The installation of nonportable fuel gas appliances and systems shall comply with the applicable building code. The use of all other fuel-fired appliances, other than internal combustion engines, oil lamps and portable devices such as blow torches, melting pots and weed burners, shall comply with this section.

2. Change Section 603.1.1 to read:

~~(N)~~603.1.1 Manufacturer's instructions. Appliances shall be maintained in accordance with the manufacturer's instructions and applicable federal, state, and local rules and regulations. Where it becomes necessary to change, modify, or alter a manufacturer's instructions in any way, written approval shall first be obtained from the manufacturer.

3. Delete Section 603.1.2.

4. Change Section 603.1.3 to read:

~~(N)~~603.1.3 Electrical wiring and equipment. Electrical wiring and equipment used in connection with oil-burning equipment shall be maintained in accordance with Section 605 and NFPA 70.

5. Change Section 603.1.5 to read:

~~(N)~~603.1.5 Access. Appliances shall be readily accessible for cleaning hot surfaces; removing burners; replacing motors, controls, air filters, chimney connectors, draft regulators, and other working parts; and for adjusting, cleaning, and lubricating parts.

6. Change Section 603.1.6 to read:

~~(N)~~603.1.6 Testing, diagrams and instructions. Following servicing or maintenance of oil-burning equipment, operation and combustion performance tests shall be conducted to determine that the burner is in proper operating condition and that all accessory equipment, controls, and safety devices function properly.

7. Change Section 603.1.6.1 to read:

~~(N)~~603.1.6.1 Diagrams. Two copies of diagrams showing the main oil lines and controlling valves shall be provided, one copy of which shall be posted at the oil-burning equipment and another at an approved location that will be accessible in case of emergency.

8~~. Change Section 603.1.7 to read:~~

~~(N)603.1.7 Clearances. Working clearances between oil-fired appliances and electrical panelboards and equipment shall be in accordance with NFPA 70. Clearances between oil-fired equipment and oil supply tanks shall be in accordance with NFPA 31~~.

~~9.~~ 8. Change Section 603.2 to read:

~~(N)~~603.2 Chimneys. Masonry, metal, and factory-built chimneys shall be maintained in accordance with the applicable building code and NFPA 211.

~~10.~~ 9. Change Section 603.3 to read:

~~(N)~~603.3 Fuel oil storage systems. Fuel oil storage systems shall be maintained as provided by the applicable building code.

~~11.~~ 10. Change Section 603.3.1 to read:

~~(N)~~603.3.1 Fuel oil storage in outside, aboveground tanks. Where connected to a fuel-oil piping system, the maximum amount of fuel oil storage allowed outside above ground without additional protection shall be 660 gallons (2498 L) unless otherwise installed in accordance with the applicable building code. The storage of fuel oil above ground in quantities exceeding 660 gallons (2498 L) shall ~~comply~~ be maintained in accordance with NFPA 31.

~~12.~~ 11. Change Section 603.3.2 to read:

~~(N)~~603.3.2 Fuel oil storage inside buildings. Fuel oil storage inside buildings shall be maintained in accordance with the applicable building code.

~~13.~~ 12. Change Section 603.3.2.1 to read:

~~(N)~~603.3.2.1 Quantity limits. The amount of fuel oil storage in fuel oil storage tanks inside buildings shall not exceed that amount approved under the applicable building code.

~~14.~~ 13. Change Section 603.3.2.2 to read:

~~(N)~~603.3.2.2 Restricted use and connection. Tanks subject to Section 603.3.2 shall be used only as approved under the applicable building code. Closed piping systems shall be maintained in accordance with the applicable building code.

~~15.~~ 14. Change Section 603.3.2.3 to read:

~~(N)~~603.3.2.3 Applicability of maximum allowable quantity and control area requirements. The quantity of combustible liquid stored in tanks subject to Section 603.3.2 shall not be counted toward the maximum allowable quantity set forth in Table 5003.1.1(1), and such tanks shall not be required to be located in a control area when there are such allowances under the applicable building code.

~~16.~~ 15. Change Section 603.3.2.4 ~~to read~~ and delete Sections 603.3.2.5 and 603.3.2.6:

~~(N)~~603.3.2.4 Installation. Tanks and piping systems shall be maintained in accordance with the applicable building code.

~~17.~~ 16. Change Section ~~603.3.2.5~~ 603.3.2.7 to read:

~~(N)603.3.2.5~~ 603.3.2.7 Tanks in basements. Tanks in basements shall be maintained in accordance with the applicable building code.

~~18.~~ 17. Change Section 603.3.3 to read:

~~(N)~~603.3.3 Underground storage of fuel oil. The storage of fuel oil in underground storage tanks shall be maintained in accordance with the applicable building code.

~~19.~~ 18. Change Section 603.5 to read:

~~(N)~~603.5 Heating appliances. Heating appliances shall be maintained in accordance with the applicable building code.

~~20.~~ 19. Change Section 603.5.1 to read:

~~(N)~~603.5.1 Guard against contact. The heating element or combustion chamber guard shall be maintained so as to prevent accidental contact by persons or material to the extent required by the applicable building code.

~~21.~~ 20. Change Section 603.5.2 to read:

~~(N)~~603.5.2 Heating appliance installation and maintenance. Heating appliances shall be maintained in accordance with the applicable building code.

~~22.~~ 21. Change Section 603.6 to read:

~~(N)~~603.6 Chimneys and appliances. Chimneys, incinerators, smokestacks or similar devices for conveying smoke or hot gases to the outer air and the stoves, furnaces, fireboxes or boilers to which such devices are connected shall be maintained in accordance with the applicable building code.

~~23.~~ 22. Change Section 603.6.1 to read:

~~(N)~~603.6.1 Masonry chimneys. Masonry chimneys that, upon inspection, are found to be without a flue liner and that have open mortar joints that will permit smoke or gases to be discharged into the building or that are cracked as to be dangerous shall be repaired in accordance with the applicable building code.

~~24.~~ 23. Change Section 603.6.2 to read:

~~(N)~~603.6.2 Metal chimneys. Metal chimneys that are corroded shall be repaired or replaced.

~~25. Change Section 603.6.3 to read:~~

~~(N)603.6.3 Decorative shrouds. Decorative shrouds installed at the termination of factory-built chimneys shall be removed except where such shrouds are listed and labeled for use with the specific factory-built chimney system and are installed in accordance with the chimney manufacturer's instructions.~~

~~26.~~ 24. Change Section 603.6.4 to read:

~~(N)~~603.6.4 Factory-built chimneys. Existing factory-built chimneys that are corroded shall be repaired or replaced.

~~27.~~ 25. Change Section 603.6.5 to read:

~~(N)~~603.6.5 Connectors. Existing chimney and vent connectors that are damaged or corroded shall be repaired or replaced.

~~28.~~ 26. Add a note to Section 603.7 to read:

Note: The fire code official may request a copy of the latest certificate of inspection from the Virginia Department of Labor and Industry for boilers and pressure vessels subject to such requirements. When the certificate is not available, the fire code official shall notify the Department of Labor and Industry to ensure that the required maintenance and testing is performed in accordance the Virginia Boiler and Pressure Vessel Regulations (16VAC25-50).

~~29.~~ 27. Change Section 603.8 to read:

~~(N)~~603.8 Incinerators. Commercial, industrial and residential-type incinerators and chimneys shall be maintained as installed in accordance with the applicable building code.

~~30.~~ 28. Change Section 603.8.1 to read:

~~(N)~~603.8.1 Residential incinerators. Residential incinerators not regulated by the applicable building code shall be of an approved type.

~~31.~~ 29. Change Section 603.8.2 to read:

~~(N)~~603.8.2 Spark arrestor. Incinerators not regulated by the applicable building code shall be equipped with an effective means for arresting sparks.

~~32.~~ 30. Delete Section ~~608.8.6~~ 603.8.6.

C. ~~The following changes shall be made to Section 604, Emergency and Standby Power Systems:~~

~~1. Change Section 604.1 to read:~~

~~(N)604.1 General. Emergency power systems and standby power systems shall be maintained in accordance with the applicable building code.~~

~~2. Change Section 604.1.1 to read:~~
~~(N)604.1.1 Generators Emergency and standby power generators shall be listed.~~

~~3. Delete Section 604.1.2.~~

~~4. Change Section 604.1.3 to read:~~

~~(N)604.1.3 Load transfer. Emergency power systems shall automatically provide secondary power within 10 seconds after primary power is lost unless specified otherwise by the applicable building code. Standby power systems shall automatically provide secondary power within 60 seconds after primary power is lost unless specified otherwise by the applicable building code.~~

~~5. Change Section 604.1.4 to read:~~

~~(N)604.1.4 Load duration. Emergency power systems and standby power systems shall require power for a minimum duration of hours without being refueled or recharged, unless otherwise specified by the applicable building code.~~

~~6. Change Section 604.1.5 to read:~~

~~(N)604.1.5 Uninterruptable power source. An uninterrupted source of power shall be provided for equipment where required by the manufacturer's instructions, the listing, the applicable building code, or the applicable referenced standards.~~

~~7. Change Section 604.1.6 to read:~~

~~(N)604.1.6 Interchangeability. Emergency power systems shall be an acceptable alternative for installations that require standby power systems when permitted by the applicable building code.~~

~~8. Delete Section 604.1.7.~~

~~9. Change Section 604.1.8 to read:~~

~~604.1.8 Maintenance. Existing installations shall be maintained in accordance with the original approval and Section 604.4.~~

~~10. Change Section 604.2 to read:~~

~~(N)604.2 Specific equipment requirements. Emergency and standby power systems shall be maintained in accordance with Sections 604.2.1 through 604.2.16.~~

~~11. Change Section 604.2.1 to read:~~

~~(N)604.2.1 Elevators and platform lifts. Standby power shall be maintained in accordance with NFPA 72 for elevators and platform lifts required by the applicable building code.~~

~~12. Change Section 604.2.2 to read:~~

~~(N)604.2.2 Emergency alarm systems. Emergency power shall be maintained for emergency alarm systems as required by applicable building code.~~

~~13. Delete Section 604.2.3.~~

~~14. Change Section 604.2.4 to read:~~

~~(N)604.2.4 Emergency voice or alarm communication systems. Emergency power shall be maintained for emergency voice or alarm communication systems as required by the applicable building code. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.~~

~~15. Change Section 604.2.5 to read:~~

~~(N)604.2.5 Exit signs. Emergency power for exit signs shall be capable of powering the required load for a duration of not less than 90 minutes unless otherwise specified by the applicable building code.~~

~~16. Change Section 604.2.6 to read:~~

~~(N)604.2.6 Group I-2 occupancies. Essential electrical systems for Group I-2 occupancies shall be maintained in accordance with NFPA 70 when required by applicable building code.~~

~~17. Change Section 604.2.7 to read:~~

~~(N)604.2.7 Group I-3 occupancies. Power-operated sliding doors or power-operated locks for swinging doors in Group I-3 occupancies shall be operable by a manual release mechanism at the door and emergency power provided for the doors and locks shall be maintained where required by the applicable building code.~~

~~18. Change Section 604.2.8 to read:~~

~~(N)604.2.8 Hazardous materials. Emergency and standby power shall be maintained in accordance with NFPA 70 in occupancies with hazardous materials when required by the applicable building code.~~

~~19. Delete Section 604.2.9.~~

~~20. Change Section 604.2.10 to read:~~

~~(N)604.2.10 Horizontal sliding doors. Standby power shall be maintained in accordance with NFPA 70 for horizontal sliding doors as required by the applicable building code. The standby power supply shall have a capacity to operate not fewer than 50 closing cycles of the door unless otherwise specified by the applicable building code.~~

~~21. Change Section 604.2.11 to read:~~

~~(N)604.2.11 Hydrogen fuel gas rooms. Standby power shall be maintained in accordance with NFPA 70 for hydrogen fuel gas rooms as required by the applicable building code.~~

~~22. Change Section 604.2.12 to read:~~

~~(N)604.2.12 Means of egress illumination. Emergency power shall be maintained for means of egress illumination in accordance with the applicable building code.~~

~~23. Change Section 604.2.13 to read:~~

~~(N)604.2.13 Membrane structures. Standby power shall be maintained for auxiliary inflation systems in permanent membrane structures in accordance with applicable building code. Auxiliary inflation systems shall be provided in temporary air-supported and air-inflated membrane structures in accordance with Section 3103.10.4.~~

~~24. Change Section 604.2.14 to read:~~

~~(N)604.2.14 Semiconductor fabrication facilities. Emergency power shall be maintained in accordance with NFPA 70 for semiconductor fabrication facilities as required by the applicable building code.~~

~~25. Change Section 604.2.15 to read:~~

~~(N)604.2.15 Smoke control systems. Standby power shall be maintained in accordance with NFPA 70 for smoke control as required by the applicable building code.~~

~~26. Change Section 604.2.16 to read:~~

~~(N) 604.2.16 Underground buildings. Emergency and standby power shall be maintained in accordance with NFPA 70 in underground buildings as required by the applicable building code.~~

~~27. Change Section 604.3 to read:~~

~~(N)604.3 Critical circuits. Cables used for survivability of required critical circuits shall be listed. Electrical circuit protective systems shall be maintained in accordance with their listing requirements.~~

~~28. Change Section 604.4 to read:~~

~~604.4 Maintenance. Emergency and standby power systems shall be maintained in accordance with NFPA 70, NFPA 110, and NFPA 111 such that the system is capable of supplying service within the time specified for the type and duration required in accordance with the applicable building code.~~

~~29. Change Section 604.5 to read:~~
~~604.5 Operational inspection and testing. Emergency power systems, including all appurtenant components, shall be inspected and tested under load in accordance with NFPA 110, NFPA 70, and NFPA 111.~~

~~Exception: Where the emergency power system is used for standby power or peak load shaving, such use shall be recorded and shall be allowed to be substituted for scheduled testing of the generator set, provided that appropriate records are maintained.~~

~~30. Add Section 604.8 to read:~~

~~604.8 Testing of battery powered emergency lights and exit signs. Required emergency lighting utilizing battery powered emergency lights or exit signs, or both, shall be tested annually. The emergency lights and exit signs shall be tested for proper operation for the time period established in the building code in effect when the equipment was installed. Written records of tests shall be retained by the owner of the building for a minimum of two years after the test is conducted and shall be made available to the fire code official upon request.~~

~~D.~~ The following changes shall be made to Section ~~605~~ 604, Electric Equipment, Wiring and Hazards:

1. Change Section ~~605.2~~ 604.2 to read:

~~605.2~~ 604.2 Illumination. Illumination shall be maintained for service equipment areas, motor control centers, and electrical panelboards.

2. Change Section ~~605.9~~ 604.9 to read:

~~(N)605.9~~ 604.9 Temporary wiring. Temporary wiring for electrical power and lighting installations not regulated by the applicable building code is allowed for a period not to exceed 90 days. Temporary wiring methods shall meet the applicable provisions of NFPA 70.

Exception: Temporary wiring for electrical power and lighting installations is allowed during periods of construction, remodeling, repair, or demolition of buildings, structures, equipment, or similar activities.

3. Change Section ~~605.10.1~~ 604.10.1 to read:

~~605.10.1~~ 604.10.1 Listed and labeled. Only portable electric space heaters listed and labeled in accordance with UL 1278 shall be used.

~~4. Change Section 605.11 to read:~~

~~(N)605.11 Solar photovoltaic power systems. Solar photovoltaic power systems shall be maintained in accordance with Sections 605.11.1 through 605.11.2, the applicable building code and NFPA 70.~~

~~5. Change Section 605.11.1 to read:~~

~~(N)605.11.1 Access and pathways. Roof access, pathways, and spacing requirements shall be maintained in accordance with Section 605.11.1.~~

~~6. Change Section 605.11.1.1 to read:~~

~~(N)605.11.1.1 Roof access points. Roof access points shall be maintained in areas that do not require the placement of ground ladders over openings such as windows or doors and located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.~~

~~7. Delete Section 605.11.1.2.~~

~~8. Delete Section 605.11.1.2.1.~~

~~9. Delete Section 605.11.1.2.2.~~

~~10. Delete Section 605.11.1.2.3.~~

~~11. Delete Section 605.11.1.2.4.~~

~~12. Delete Section 605.11.1.2.5.~~

~~13. Delete Section 605.11.1.3.~~

~~14. Delete Section 605.11.1.3.1.~~

~~15. Delete Section 605.11.1.3.2.~~

~~16. Delete Section 605.11.1.3.3.~~

~~17. Change Section 605.11.2 to read:~~

~~(N)605.11.2 Ground-mounted photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be maintained for ground-mounted photovoltaic arrays.~~

~~E.~~ D. The following changes shall be made to Section 606, Mechanical Refrigeration:

1. Change ~~Section 606.1~~ Sections 605.1 and 605.1.2, and delete Section 605.1.1 ~~to read~~:

~~606.1~~ 605.1 Scope. Refrigeration systems shall be maintained in accordance with the applicable building code.

605.1.2 Ammonia refrigeration. Refrigeration systems using ammonia refrigerant and the buildings in which such systems are installed shall comply with IIAR-7 for operating procedures.

2. Change Section ~~606.2~~ 605.2 to read:

~~606.2~~ 605.2 Refrigerants. The use and purity of new, recovered, and reclaimed refrigerants shall be in accordance with the applicable building code.

3. Change Section ~~606.3~~ 605.3 to read:

~~606.3~~ 605.3 Refrigerant classification. Refrigerants shall be classified in accordance with the applicable building code.

4. Change Section ~~606.4~~ 605.4 to read:

~~606.4~~ 605.4 Change in refrigerant type. A change in the type of refrigerant in a refrigeration system shall be in accordance with the applicable building code.

5. Change Section ~~606.6~~ 605.6 to read:

~~606.6~~ 605.6 Testing of equipment. Refrigeration equipment and systems having a refrigerant circuit containing more than 220 pounds (100 kg) of Group A1 or 30 pounds (14 kg) of any other group refrigerant shall be subject to periodic testing in accordance with Section 606.6.1. Records of tests shall be maintained. Tests of emergency devices or systems required by the applicable building code shall be conducted by persons trained and qualified in refrigeration systems.

6. Change Section ~~606.7~~ 605.7 to read:

~~606.7~~ 605.7 Emergency signs. Refrigeration units or systems having a refrigerant circuit containing more than 220 pounds (100 kg) of Group A1 or 30 pounds (14 kg) of any other group refrigerant shall be provided with approved emergency signs, charts and labels in accordance with NFPA 704. Hazard signs shall be in accordance with the applicable building code for the classification of refrigerants listed therein.

7. Change Section ~~606.8~~ 605.8 and 605.8.1 to read:

~~(N)606.8 Refrigerant detector detection. Refrigerant detection systems shall be maintained. The alarm shall be actuated at a value not greater than the corresponding threshold limit value-time-weighted average values (TLV-TWA) for those agents. Detectors and alarms shall be maintained in approved locations. The detector shall transmit a signal to an approved location.~~

605.8 Refrigerant detection. Refrigerant detection systems shall be maintained. Where ammonia is used as the refrigerant, detection shall comply with IIAR 2. Detectors and alarms shall be maintained in approved locations. The detector shall transmit a signal to an approved location. For refrigerants other than ammonia, refrigerant detection shall comply with Section 605.8.1.

605.8.1 Refrigerants other than ammonia. Refrigerant detection systems shall be maintained. The alarm shall be actuated at a value not greater than the corresponding threshold limit value-time-weighted average values (TLV-TWA) for those agents. Detectors and alarms shall be maintained in approved locations. The detector shall transmit a signal to an approved location.

8. Change Section ~~606.9~~ 605.9 to read:

~~(N)606.9~~ 605.9 Remote controls. Remote controls required by the applicable building code shall be maintained and accessible at all times as required by that code.

9. Change Section ~~606.9.1~~ 605.9.1 to read:

~~(N)606.9.1~~ 605.9.1 Refrigeration system emergency shutoff. Emergency shutoffs shall be maintained and accessible at all times.

10. Change Section ~~606.9.2~~ 605.9.2 to read:

~~(N)606.9.2~~ 605.9.2 Ventilation system. Ventilation system switches shall be clearly identified and maintained in an approved manner.

11. Change Section ~~606.10~~ 605.10 to read:

~~(N)606.10~~ 605.10 Emergency pressure control system. Permanently installed refrigeration systems containing more than 6.6 pounds (3 kg) of flammable, toxic or highly toxic refrigerant or ammonia shall be maintained as installed in accordance with the applicable building code and this code.

12. Change Section ~~606.10.1~~ 605.10.1 to read:

~~(N)606.10.1~~ 605.10.1 Automatic crossover valves. Automatic crossover valves shall be maintained as installed in accordance with the applicable building code.

13. Change Section ~~606.10.1.1~~ 605.10.1.1 to read:

~~(N)606.10.1.1~~ 605.10.1.1 Overpressure limit set point. Automatic crossover valves shall be arranged and maintained in accordance with the applicable building code.

14. Change Section ~~606.10.1.2~~ 605.10.1.2 to read:

~~(N)606.10.1.2~~ 605.10.1.2 Manual operation. Manual operation of the automatic crossover valve, where provided, shall be maintained in accordance with the applicable building code.

15. Delete Section ~~606.10.1.3~~ 605.10.1.3.

16. Change Section ~~606.10.2~~ 605.10.2 to read:

~~(N)606.10.2~~ 605.10.2 Automatic emergency stop. An automatic emergency stop feature shall be maintained in accordance with the applicable building code.

17. Delete Section ~~606.10.2.1~~ 605.10.2.1.

18. Delete Section ~~606.10.2.2~~ 605.10.2.2.

19. Change Section ~~606.12~~ 605.12 to read:

~~(N)606.12~~ 605.12 Discharge and termination of pressure relief and purge systems. Pressure relief devices, fusible plugs and purge systems discharging to the atmosphere from refrigeration systems containing flammable, toxic or highly toxic refrigerants or ammonia shall be maintained in accordance with Sections 606.12.3 through 606.12.5.

20. ~~Delete Section 606.12.1.~~

~~21. Change Section 606.12.1.1 to read:~~

~~(N)606.12.1.1 Ammonia refrigeration. Refrigeration systems using ammonia refrigerant and the buildings in which such systems are installed shall comply with IIAR-7 for operating procedures.~~

~~22.~~ Change Section ~~606.12.2~~ 605.12.1 to read:

~~(N)606.12.2~~ 605.12.1 Fusible plugs and rupture members. Unless otherwise required by the applicable building code, discharge piping and devices connected to the discharge side of a fusible plug or rupture member shall have provisions to prevent plugging the pipe in the event the fusible plug or rupture member functions.

~~23.~~ 21. Change Section ~~606.12.3~~ 605.12.2 to read:

~~(N) 606.12.3~~ 605.12.2 Flammable refrigerants. Unless otherwise regulated by the applicable building code, systems containing more than 6.6 pounds (3 kg) of flammable refrigerants having a density equal to or greater than the density of air shall discharge vapor to the atmosphere only through an approved treatment system in accordance with Section 606.12.6 or a flaring system in accordance with Section 606.12.7. Systems containing more than 6.6 pounds (3 kg) of flammable refrigerants having a density less than the density of air shall be permitted to discharge vapor to the atmosphere provided that the point of discharge is located outside of the structure at not less than 15 feet (4572 mm) above the adjoining grade level and not less than 20 feet (6096 mm) from any window, ventilation opening, or exit.

~~24.~~ 22. Change Section ~~606.12.4~~ 605.12.3 to read:

~~(N)606.12.4~~ 605.12.3 Toxic and highly toxic refrigerants. Toxic or highly toxic refrigerant discharge methods shall be maintained in accordance with the applicable building code.

~~25.~~ 23. Change Section ~~606.12.5~~ 605.12.4 to read:

~~(N)606.12.5~~ 605.12.4 Ammonia refrigerant. The discharge methods for systems containing more than 6.6 pounds (3 kg) of ammonia refrigerant shall be maintained in accordance with the applicable building code.

~~26.~~ 24. Change Section ~~606.12.6~~ 605.12.5 through 605.12.7 to read:

~~(N)606.12.6~~ 605.12.5 Treatment systems. Treatment systems for refrigerant gas discharge shall be maintained in accordance with the applicable building code.

~~(N)606.12.7~~ 605.12.6 Flaring systems. Flaring systems for incineration of flammable refrigerants shall be maintained in accordance with the applicable building code.

~~27~~. ~~Change Section 606.12.8 to read:~~

~~(N)606.12.8~~ 605.12.7 Ammonia diffusion systems. Ammonia diffusion systems shall be maintained in accordance with the applicable building code.

~~28~~25. Change Section ~~606.13~~ 605.13 to read:

~~(N)606.13~~ 605.13 Discharge location for refrigeration machinery room ventilation. Treatment systems for exhaust from mechanical ventilation systems serving refrigeration machinery rooms containing flammable, toxic or highly toxic refrigerants, other than ammonia, capable of exceeding 25% of the LFL or 50% of the IDLH shall be maintained in accordance with the applicable building code.

Exception: Refrigeration systems containing Group A2L complying with Section 605.17.

~~29~~26. Change Section ~~606.16~~ 605.16 to read:

~~(N)606.16~~ 605.16 Electrical equipment. The hazardous location classification of refrigeration machinery rooms where refrigerants of Groups A2, A3, B2 and B3, as defined in the International Mechanical Code, are used, shall be maintained in accordance with the applicable building code.

27. Change Sections 605.17 through 605.17.2 to read:

605.17 Special requirements for Group A2L refrigerant machinery rooms. Machinery rooms with systems containing Group A2L refrigerants shall comply with Sections 605.17.1 through 605.17.2.

605.17.1 Refrigerant detection system. Refrigerant detection systems in machinery rooms shall be maintained in accordance with the applicable building code.

605.17.2 Emergency ventilation system. Emergency ventilation systems shall be maintained in accordance with the applicable building code.

28. Delete Table 605.17.2 and Section 605.17.3.

~~F.~~ E. The following changes shall be made to Section 607, Elevator Operation, Maintenance and Fire Service Keys:

1. Change Section ~~607.1~~ 606.1 to read:

~~607.1~~ 606.1 Operation. Existing elevators with a travel distance of 25 feet (7620 mm) or more shall comply with the requirements of Section 607.5 and the USBC, Part III, Maintenance.

2. Change Section ~~607.2~~ 606.2 to read:

~~607.2~~ 606.2 Standby power. In buildings and structures where standby power is required or furnished to operate an elevator, standby power shall be maintained in accordance with Section 604. Operation of the system shall be in accordance with Sections ~~607.2.1~~ 606.2.1 through ~~607.2.4~~ 606.2.4.

3. Change Section ~~607.2.4~~ 606.2.4 to read:

~~607.2.4~~ 606.2.4 Machine room ventilation. Where standby power is connected to elevators, the machine room ventilation or air conditioning shall remain connected to the standby power source in accordance with the applicable building code.

4. Change Section ~~607.4~~ 606.4 to read:

~~607.4~~ 606.4 Fire service access elevator lobbies. Where fire service access elevators are required by the applicable building code, fire service access elevator lobbies shall be maintained free of storage and furniture.

5. Change Section ~~607.5~~ 606.5 to read:

~~607.5~~ 606.5 Occupant evacuation elevator lobbies. Where occupant evacuation elevators are provided in under the applicable building code, occupant evacuation elevator lobbies shall be maintained free of storage and furniture.

6. Change Section ~~607.6~~ 606.6 to read:

~~607.6~~ 606.6 Water protection of hoistway enclosures. Methods to prevent water from infiltrating into a hoistway enclosure required by the applicable building code shall be maintained.

~~G.~~ F. The following changes shall be made to Section 608, Storage Battery Systems:

1. ~~Change Section 608.1 to read:~~

~~608.1 Scope. Stationary storage battery systems having an electrolyte capacity of more than 50 gallons (189 L) for flooded lead-acid, nickel cadmium (Ni-Cd), and valve-regulated lead-acid (VRLA) or more than 1,000 pounds (454 kg) for lithium-ion and lithium metal polymer used for facility standby power, emergency power, or uninterruptible power supplies shall comply with this section and Table 608.1 when required by the applicable building code.~~

~~2. Change Section 608.4 to read:~~

~~608.4 Room design and construction. Enclosure of stationary battery systems shall comply with the applicable building code. Battery systems shall be allowed to be in the same room with the equipment they support.~~

~~3. Change Section 608.6.1 to read:~~

~~(N)608.6.1 Room ventilation. Ventilation shall be maintained in accordance with the applicable building code.~~

~~4. Change Section 608.6.2 to read:~~

~~(N)608.6.2 Cabinet ventilation. Where VRLA batteries are installed inside a cabinet, the cabinet shall be approved for use in occupied spaces and shall be mechanically or naturally vented in accordance with one of the following methods:~~

> ~~1. The cabinet ventilation shall limit the maximum concentration of hydrogen to 1% of the total volume of the cabinet during the worst-case event of simultaneous "boost" charging of all the batteries in the cabinet.~~
>
> ~~2. Where calculations are not available to substantiate the ventilation rate, continuous ventilation shall be provided at a rate of not less than 1 cubic foot per minute per square foot 1 $ft^3/min/ft^2$ or 0.0051 $m^3/(sm^2)$ of floor area covered by the cabinet. The room in which the cabinet is installed shall be ventilated as required in Section 608.6.1.~~

~~5. Change Section 608.6.3 to read:~~

~~(N)608.6.3 Supervision. Mechanical ventilation systems where required by Sections 608.6.1 and 608.6.2 shall be supervised by an approved central, proprietary, or remote station service or shall initiate an audible and visual signal at a constantly attended onsite location when required by the applicable building code.~~

~~6. Change Section 608.8 to read:~~

~~(N)608.8 Seismic protection. Seismic protection required for battery systems shall be maintained in accordance with the applicable building code.~~

~~7. Change Section 608.9 to read:~~

~~(N)608.9 Smoke detection. Automatic smoke detection system shall be maintained in accordance with Chapter 9 in rooms containing stationary battery systems.~~

~~H.~~ G. The following changes shall be made to Section ~~609~~ 607, Commercial Kitchen Hoods:

1. Change Section ~~609.1~~ 607.1 to read:

~~609.1~~ 607.1 General. Commercial kitchen exhaust hoods shall comply with the requirements of this Section.

2. Change Section ~~609.2~~ 607.2 to read:

~~(N)609.2~~ 607.2 Where required. A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors in mobile food preparation vehicles.

Exception: A Type I hood shall not be required for an electric cooking appliance where an approved testing agency provides documentation that the appliance effluent contains 5 mg/m^3 or less of grease when tested at an exhaust flow rate of 500 cfm (0.236 m^3/s) in accordance with UL 710B.

3. Change Section ~~609.3.3.3~~ 607.3.3.3 to read:

~~609.3.3.3~~ 607.3.3.3 Records. Records for inspections shall state the individual and company performing the inspection, a description of the inspection, and when the inspection took place. Records for cleanings shall state the individual and company performing the cleaning and when the cleaning took place. Such records shall be completed after each inspection or cleaning and maintained for a minimum of three years and be copied to the fire code official upon request.

4. Change Section ~~609.3.3.3.1~~ 607.3.3.3.1 to read:

~~609.3.3.3.1~~ 607.3.3.3.1 Tags. Where a commercial kitchen hood or duct system is inspected or cleaned, a tag containing the service provider name, address, telephone number and date of service shall be provided in a conspicuous location. Prior tags shall be covered or removed.
Exception: Where records required by Section ~~609.3.3.3~~ 607.3.3.3 are maintained on the premises.

~~I.~~ H. The following change shall be made to Section ~~610~~ 608, Commercial Kitchen ~~Hoods~~ Cooking Oil Storage:

Change Section ~~610.7~~ 608.7 to read:

~~(N)610.7~~ 608.7 Electrical equipment. Electrical equipment used for the operation of cooking oil storage systems shall ~~comply~~ be maintained in accordance with NFPA 70.

13VAC5-51-133.8. ~~Ifc~~ IFC Chapter 7 Fire and Smoke Protection Features.

A. The following changes shall be made to Section 701, General:

1. Change Section 701.1 to read:

701.1 Scope. The provisions of this chapter shall govern maintenance of the materials, systems, and assemblies used for structural fire resistance and fire-resistance-rated construction separation of adjacent spaces to safeguard against the spread of fire and smoke within a building and the spread of fire to or from buildings.

2. Change Section ~~701.2~~ 701.6 and 701.7 to read:

701.6 Maintenance. The required fire-resistance rating of fire-resistance-rated construction, including walls, firestops, shaft enclosures, partitions, smoke barriers, floors, fire-resistive coatings, and sprayed fire-resistant materials applied to structural members and fire-resistant joint systems, shall be maintained. Such elements shall be visually inspected by the owner annually and properly repaired, restored, or replaced where damaged, altered, breached, or penetrated. Records of inspections and repairs shall be maintained. Where concealed, such elements shall not be required to be visually inspected by the owner unless the concealed space is accessible by the removal or movement of a panel, access door, ceiling tile, or similar movable entry to the space. Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings, and holes made for any reason shall be protected with approved methods capable of resisting the passage of smoke and fire. Openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly.

~~701.2~~ 701.7 Unsafe conditions. Where any components in this chapter are not maintained and do not function as intended or do not have the fire resistance required by the code under which the building was constructed, remodeled or altered, such components or portion thereof shall be deemed an unsafe condition in accordance with Section 110.1.1. Components or portions thereof determined to be unsafe shall be repaired or replaced to conform to that code under which the building was constructed, remodeled, or altered or this chapter, as deemed appropriate by the fire code official.

Where the extent of the conditions of components is such that any building, structure, or portion thereof presents an imminent danger to the occupants of the building, structure, or portion thereof, the fire code official shall act in accordance with Section 110.5.

B. The following changes shall be made to Section 703, Fire-Resistance-Rated Construction:

1. ~~Change Section 703.1 to read:~~

~~703.1 Maintenance. The required fire-resistance rating of fire-resistance-rated construction, including walls, firestops, shaft enclosures, partitions, smoke barriers, floors, fire-resistive coatings, and sprayed fire-resistant materials applied to structural members and fire-resistant joint systems, shall be maintained. Such elements shall be visually inspected by the owner annually and properly repaired, restored, or replaced where damaged, altered, breached, or penetrated. Records of inspections and repairs shall be maintained. Where concealed, such elements shall not be required to be visually inspected by the owner unless the concealed space is accessible by the removal or movement of a panel, access door, ceiling tile, or similar movable entry to the space. Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings, and holes made for any reason shall be protected with approved methods capable of resisting the passage of smoke and fire. Openings through fire-resistance-rated assemblies shall be protected by self-closing or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly.~~

~~Exception: When requested by the building owner and approved by the fire official, the visual inspection required by 703.1 may be modified to a time period greater than annually based on the history of the previous inspections.~~

~~2. Change Section 703.1.1 to read:~~

~~703.1.1 Fireblocking and draftstopping. Required fireblocking and draftstopping in combustible concealed spaces shall be maintained to provide continuity and integrity of the construction.~~

~~3. Change Section 703.2.1 to read:~~

~~703.2.1 Testing. Opening protectives shall be inspected and tested annually in accordance with NFPA 80 to confirm proper operation and full closure. A written record shall be maintained and be available to the fire code official.~~

~~4. Change Section 703.2.2 to read:~~

~~703.2.2 Signs. Where required by the fire code official, a sign shall be permanently displayed on or near each fire door in letters not less than 1 inch (25 mm) high to read as follows:~~

~~1. For doors designed to be kept normally open: FIRE DOOR—DO NOT BLOCK.~~

~~2. For doors designed to be kept normally closed: FIRE DOOR—KEEP CLOSED.~~

~~5. Change Section 703.2.3 to read:~~

~~703.2.3 Hold-open devices and closers. Hold-open devices and automatic door closers, where provided, shall be maintained. During the period that such device is out of service for repairs, the door it operates shall remain in the closed position.~~

~~6. Add new Section 703.2.4 to read:~~

~~703.2.4 Door operation. Swinging fire doors shall close from the full-open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position.~~

C. The following changes shall be made to Section 704, ~~Floor Openings and Shafts~~ Joints and Voids:

1. ~~Change Section 704.1 to read:~~

~~704.1 Enclosure. New floor openings in existing buildings shall comply with the International Building Code.~~

~~2.~~ Change Section 704.2 to read:

~~(N)~~ 704.2 Opening protectives. Where openings are required to be protected, opening protectives and associated closing devices shall be maintained as self-closing or automatic-closing.

D. The following changes shall be made to Section 705, Door and Window Openings:

1. Change Section 705.2.2 to read:

705.2.2 Signs. Where required by the fire code official, a sign shall be permanently displayed on or near each fire door in letters not less than 1 inch (25 mm) high to read as follows:

For doors designed to be kept normally open: FIRE DOOR—DO NOT BLOCK.

For doors designed to be kept normally closed: FIRE DOOR—KEEP CLOSED.

2. Change Section 705.2.3 to read:

705.2.3 Hold-open devices and closers. Hold-open devices and automatic door closers, where provided, shall be maintained. During the period that such device is out of service for repairs, the door it operates shall remain in the closed position.

3. Change Section 705.2.4 to read:

705.2.4 Door operation. Swinging fire door operations shall be maintained in accordance with the applicable building code.

4. Change Section 705.2.5 to read:

705.2.5 Smoke- and Heat-activated doors. Smoke-activated doors shall be maintained to self-close or automatically close upon detection of smoke in accordance with the applicable building code.

5. Change Section 705.2.6 to read:

705.2.6 Testing. Opening protectives shall be inspected and tested annually in accordance with NFPA 80 to confirm proper operation and full closure. A written record shall be maintained and be available to the fire code official.

E. The following change shall be made to Section 707, Concealed Spaces:

1. Change Section 707.1 to read:

707.1 Fireblocking and draftstopping. Required fireblocking and draftstopping in combustible concealed spaces shall be maintained to provide continuity and integrity of the construction.

13VAC5-51-134. ~~Ifc~~ IFC Chapter 8 Interior Finish, Decorative Materials and Furnishings.

A. Change Section 801.1 to read:

801.1 Scope. The provisions of this chapter shall govern interior finish, interior trim, furniture, furnishings, decorative materials and decorative vegetation in buildings.

B. Change the title of Section 803 and Section 803.1 to read:

Section 803 Interior Wall and Ceiling Finish and Trim in Buildings

~~(N)~~803.1 General. The provisions of this section shall apply to the maintenance of interior wall and ceiling finishes and interior wall and ceiling trim in existing buildings in accordance with the applicable building code.

C. ~~Delete~~ Change Section 803.1.1 to read.

~~D. Change Section 803.1.2 to read:~~

~~(N)803.1.2~~ 803.1.1 Classification. Interior wall or ceiling finishes shall be classified and tested in accordance with the applicable building code.

~~E.~~ D. Delete Section ~~803.1.2.1~~ 803.1.1.1.

E. Delete Sections 803.1.2 and 803.1.3.

F. Change Sections 803.2 and 803.3 to read:

~~(N)~~803.2 Stability. Interior finish materials regulated by this chapter shall be applied or otherwise fastened in accordance with the applicable building code.

~~(N)~~803.3 Interior finish requirements. Interior wall and ceiling finish shall have a flame spread index not greater than that approved under the applicable building code.

G. Delete Table 803.3.

H. Change Section 803.5 to read:

~~(N)~~803.5 Textiles. Where used as interior wall or ceiling finish materials, textiles, including materials having woven or nonwoven, napped, tufted, looped or similar surface, shall comply with the requirements of the applicable building code.

I. Delete Sections 803.5.1, ~~and~~ 803.5.1.1, 803.5.2 and 803.6.

J. Change Sections ~~803.5.2 through~~ 803.7, 803.8, 803.10, 803.11 and 803.12 to read:

~~(N)803.5.2 Newly introduced textile wall and ceiling coverings. Newly introduced textile wall and ceiling coverings shall be approved by the building official.~~

~~(N)803.6~~ 803.7 Expanded vinyl wall ~~or ceiling~~ coverings. Expanded vinyl wall ~~or ceiling coverings~~ shall be maintained in accordance with the applicable building code.

~~(N)803.7 Facings or wood veneers intended to be applied on site over a wood substrate. Facings or veneers intended to be applied on site over a wood substrate shall be maintained in accordance with the applicable building code.~~

~~(N)803.8 Foam plastic materials. Foam plastic materials shall not be used as interior wall and ceiling finish unless specifically allowed by the applicable building code.~~

803.8 Expanded vinyl ceiling coverings. Expanded ceiling coverings shall be maintained in accordance with the applicable building code.

803.10 Site-fabricated stretch systems. Where used as newly installed interior wall or interior ceiling finish materials, site-fabricated stretch systems containing all three components described in the definition in Chapter 2 shall be tested in accordance with the applicable building code.

803.11 Foam plastic materials. Foam plastic materials shall not be used as interior wall and ceiling finish unless specifically allowed by the applicable building code.

K. Delete Sections 803.11.1 through 803.11.2 and change Section 803.12 to read:

803.12 Facings or wood veneers intended to be applied on site over a wood substrate. Facings or veneers intended to be applied on site over a wood substrate shall be maintained in accordance with the applicable building code.

~~K. Delete Sections 803.8.1 through 803.8.3.~~

L. Change ~~Section 803.10,~~ the title of Section 804, and Section 804.1 to read:

~~(N)803.10 Site-fabricated stretch systems. Where used as newly installed interior wall or interior ceiling finish materials, site-fabricated stretch systems containing all three components described in the definition in Chapter 2 shall be tested in accordance with the applicable building code.~~

Section 804 Interior Wall and Ceiling Trim and Interior Floor Finish in Buildings

~~(N)~~804.1 Interior trim. Material, other than foam plastic, used as interior trim shall be maintained in accordance with the applicable building code.

M. Delete ~~Section~~ Sections 804.1.1 and 804.1.2.

N. Change Sections 804.2 to read:

~~(N)~~804.2 Foam plastic. Foam plastic used as interior trim shall be maintained in accordance with the applicable building code.

O. Delete Sections 804.2.1 through 804.2.4.

P. Change Sections 804.3 through 804.4 to read:

~~(N)~~804.3 Interior floor finish. Interior floor finish and floor covering materials shall be maintained in accordance with the applicable building code.

~~(N)~~804.3.1 Classification. Interior floor finish and floor covering materials shall be classified in accordance with the applicable building code.

~~(N)~~804.3.2 Testing and identification. Interior floor finish and floor covering materials shall be tested in accordance with the applicable building code.

~~(N)~~804.3.3 Interior floor finish requirements. Interior floor coverings materials shall comply with Sections 804.3.3.1 and 804.3.3.2, and interior floor finish materials shall comply with Section 804.3.1.

~~(N)~~804.3.3.1 Testing. Floor covering material shall be testing in accordance with the applicable building code.

~~(N)~~804.3.3.2 Minimum critical radiant flux. In all occupancies, new interior floor finish and floor covering materials in enclosures for stairways and ramps, exit passageways, corridors and rooms or spaces not separated from corridors by full-height partitions extending from the floor to the underside of the ceiling shall withstand a minimum critical radiant flux as required by the applicable building code.

~~(N)~~804.4 Interior floor-wall base. Interior floor-wall base shall be maintained in accordance with the applicable building code.

Q. Change the title of Section 805, and Sections 805.1.1.2, 805.1.2.2, 805.2.1.2, 805.2.2.2, 805.4.1.2 and 805.4.2.2 to read:

Section 805 Upholstered Furniture and Mattresses in Buildings

805.1.1.2 Heat release rate. Newly introduced upholstered furniture shall have limited rates of heat release when tested in accordance with ASTM E 1537 or California Technical Bulletin 133, as follows:

> 1. The peak rate of heat release for the single upholstered furniture item shall not exceed 80 kW.
>
> Exception: Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard.
>
> 2. The total energy released by the single upholstered furniture item during the first 10 minutes of the test shall not exceed 25 megajoules (MJ).
>
> Exception: Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard.

805.1.2.2 Heat release rate. Newly introduced mattresses shall have limited rates of heat release when tested in accordance with ASTM E 1590 or California Technical Bulletin 129, as follows:

> 1. The peak rate of heat release for the single mattress shall not exceed 100 kW.
>
> Exception: Mattresses in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard.
>
> 2. The total energy released by the single mattress during the first 10 minutes of the test shall not exceed 25 MJ.
>
> Exception: Mattresses in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard.

805.2.1.2 Heat release rate. Newly introduced upholstered furniture shall have limited rates of heat release when tested in accordance with ASTM E 1537 or California Technical Bulletin 133, as follows:

> 1. The peak rate of heat release for the single upholstered furniture item shall not exceed 80 kW.
>
> Exception: Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard.
>
> 2. The total energy released by the single upholstered furniture item during the first 10 minutes of the test shall not exceed 25 MJ.

Exception: Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard.

805.2.2.2 Heat release rate. Newly introduced mattresses shall have limited rates of heat release when tested in accordance with ASTM E 1590 or California Technical Bulletin 129, as follows:

1. The peak rate of heat release for the single mattress shall not exceed 100 kW.

Exception: Mattresses in rooms or spaces protected by an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard.

2. The total energy released by the single mattress during the first 10 minutes of the test shall not exceed 25 MJ.

Exception: Mattresses in rooms or spaces protected by an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard.

805.4.1.2 Heat release rate. Newly introduced upholstered furniture shall have limited rates of heat release when tested in accordance with ASTM E 1537 or California Technical Bulletin 133, as follows:

1. The peak rate of heat release for the single upholstered furniture item shall not exceed 80 kW.

Exception: Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard.

2. The total energy released by the single upholstered furniture item during the first 10 minutes of the test shall not exceed 25 MJ.

Exception: Upholstered furniture in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard.

805.4.2.2 Heat release rate. Newly introduced mattresses shall have limited rates of heat release when tested in accordance with ASTM E 1590 or California Technical Bulletin 129, as follows:

1. The peak rate of heat release for the single mattress shall not exceed 100 kW.

Exception: Mattresses in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard.

2. The total energy released by the single mattress during the first 10 minutes of the test shall not exceed 25 MJ.

Exception: Mattresses in rooms or spaces protected by an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard.

R. Change the title of Section 806, change Exception 1 and add ~~exception~~ Exception 3 in Section 806.1.1 to read:

Section 806 Decorative Vegetation in Buildings

1. Trees located in areas protected by an automatic sprinkler system in accordance with the applicable NFPA 13 standard.

3. Trees shall be permitted in places of worship in Group A occupancies.

S. Change the title of Section 807 a~~nd exception 1 in Section 807.3~~ and Exceptions 1 and 2 of Section 807.2 to read:

Section 807 Decorative Materials Other Than Decorative Vegetation in Buildings

~~1. In auditoriums in Group A, the permissible amount of curtains, draperies, fabric hangings and other similar combustible decorative material suspended from walls or ceilings shall not exceed 75% of the aggregate wall area where the building is equipped throughout with an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard and where the material is installed in accordance with of the applicable building code.~~

1. In auditoriums in Group A, the permissible amount of curtains, draperies, fabric hangings and similar combustible decorative material suspended from walls or ceilings shall not exceed 75 percent of the aggregate wall area where the building is equipped throughout with an approved automatic sprinkler system in accordance with the applicable building code, and where the material is installed in accordance with Section 803.15 of the International Building Code.

2. In Group R-2 dormitories, within sleeping units and dwelling units, the permissible amount of curtains, draperies, fabric hangings and similar decorative materials suspended from walls or ceilings shall not exceed 50 percent of the aggregate wall areas where the building is equipped throughout with an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard.

T. Change ~~exception~~ Exceptions 1 and 2 in Section 807.3 to read:

1. In auditoriums in Group A, the permissible amount of curtains, draperies, fabric hangings and other similar combustible decorative material suspended from walls or ceilings shall not exceed 75% of the aggregate wall area where the building is equipped throughout with an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard and where the material is installed in accordance with of the applicable building code.

2. In dwelling units or sleeping rooms in Group R-2 dormitories, the permissible amount of decorative material suspended from or attached to the walls shall not exceed 50% of the aggregate area of the walls where the building has an approved automatic sprinkler system or 20% of the aggregate area of the walls where approved smoke alarms are provided and in the corridors of such buildings, the permissible amount of decorative material suspended from or attached to the walls shall not exceed 10% of the aggregate area of the walls.

U. Change Exception to 807.4 to read:

Exception: Testing of artificial vegetation is not required in Group I-1; Group I-2, Condition 1; Group R-2; Group R-3; or Group R-4 occupancies equipped throughout with an *approved automatic sprinkler system* installed in accordance with the applicable NFPA 13 standard, where such artificial vegetation complies with the following:

1. Wreaths and other decorative items on doors shall not obstruct the door operation and shall not exceed 50 percent of the surface area of the door.

2. Decorative artificial vegetation shall be limited to not more than 30 percent of the wall area to which it is attached.

3. Decorative artificial vegetation not on doors or walls shall not exceed 3 feet (914 mm) in any dimension.

V. Change Section 807.5.1.2 and 807.5.2.1 to read:

807.5.1.2 Motion picture screens. The screens upon which motion pictures are projected in buildings of Group A shall either meet the flame propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701 or shall comply with the requirements for a Class B interior finish in accordance with the applicable building code.

~~V. Change Section 807.5.2.1 to read:~~

807.5.2.1 Storage in corridors and lobbies. Clothing and personal effects shall not be stored in corridors and lobbies.

Exceptions:

1. Corridors protected by an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard.

2. Corridors protected by an approved fire alarm system installed in accordance with NFPA 72.

3. Storage in metal lockers, provided the minimum required egress width is maintained.

W. Change Sections 807.5.3.1 through 807.5.3.4 to read:

807.5.3.1 Group I-1 and Group I-2 Condition 1 within units. In Group I-1 and Group I-2 Condition 1 occupancies, equipped with an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard, within sleeping units and dwelling units, combustible decorative materials placed on walls shall be limited to not more than 50% of the wall area to which they are attached.

807.5.3.2 In Group I-1 and Group I-2 Condition 1 for areas other than within units. In Group I-1 and Group I-2 Condition 1 occupancies, equipped with an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard, combustible decorative materials placed on walls in areas other than within dwelling and sleeping units shall be limited to not more than 30% of the wall area to which they are attached.

807.5.3.3 In Groups I-2 Condition 2. In Group I-2 Condition 2 occupancies, equipped with an approved automatic sprinkler system installed in accordance with the applicable NFPA 13 standard, combustible decorative materials placed on walls shall be limited to not more than 30% of the wall area to which they are attached.

807.5.3.4 Other areas in Groups I-1 and I-2. In Group I-1 and I-2 occupancies, in areas not equipped with an approved automatic sprinkler system, combustible decorative materials shall be of such limited quantities that a hazard of fire development or spread is not present.

X. Change Section 807.5.5.1 to read:

807.5.5.1 Storage in corridors and lobbies. Clothing and personal effects shall not be stored in corridors and lobbies.

Exceptions:

1. Corridors protected by an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard.

2. Corridors protected by an approved fire alarm system installed in accordance with Section 907.

3. Storage in metal lockers, provided the minimum required egress width is maintained.

Y. Change the title of Section 808 and Sections 808.1, ~~and~~ 808.2 and 808.4 to read:

Section 808 Furnishings Other Than Upholstered Furniture and Mattresses or Decorative Materials in Buildings

808.1 Wastebaskets and linen containers in Groups I-1, I-2, and I-3 occupancies and Group B ambulatory care facilities. Wastebaskets, linen containers, and other waste containers, including their lids, located in Groups I-1, I-2, and I-3 occupancies shall be constructed of noncombustible materials or of materials that meet a peak rate of heat release not exceeding 300 kW/m^2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m^2 in the horizontal orientation. Metal wastebaskets and other metal waste containers with a capacity of 20 gallons (75.7 L) or more shall be listed in accordance with UL 1315 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons (121 L) shall be stored in an area classified as a waste and linen collection room and constructed in accordance with the applicable building code.

808.2 Waste containers with a capacity of 20 gallons or more in Group R-2 college and university dormitories. Waste containers, including their lids, located in Group R-2 college and university dormitories, and with a capacity of 20 gallons (75.7 L) or more, shall be constructed of noncombustible materials or of materials that meet a peak rate of heat release not exceeding 300 kW/m^2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m^2 in the horizontal orientation. Metal wastebaskets and other metal waste containers with a capacity of 20 gallons (75.7 L) or more shall be listed in accordance with UL 1315 and shall be provided with a noncombustible lid. Portable containers exceeding 32 gallons (121 L) shall be stored in an area classified as a waste and linen collection room constructed in accordance with the applicable building code.

808.4 Combustible lockers. Where lockers constructed of combustible materials are used, the lockers shall be considered to be interior finish and shall comply with Section 803.

Exception: Lockers constructed entirely of wood and noncombustible materials shall be permitted to be used wherever interior finish materials are required to meet a Class C classification in accordance with the applicable building code.

13VAC5-51-135. ~~Ifc~~ IFC Chapter 9 Fire Protection Systems.

A. The following changes shall be made to Section 901, General:

1. Change Section 901.1 to read:

901.1 Scope. The provisions of this chapter shall apply to the inspection, operation, testing and maintenance of all fire protection systems.

2. Delete Sections 901.2 and 901.2.1.

3. Change Section 901.3 to read:

901.3 Permits. Permits shall be required as set forth in Section 107.2.

4. Change Sections 901.4 and 901.4.1 to read:

~~(N)~~901.4 Maintenance and alterations. Fire protection systems shall be maintained in accordance with the original installation standards for that system. Alterations and repairs to fire protection systems shall be done in accordance with the applicable building code and the applicable standards.

~~(N)~~901.4.1 Required fire protection systems. Fire protection systems shall be repaired, operated, tested and maintained in accordance with this code. A fire protection system for which a design option, exception or reduction to the provisions of this code or the applicable building code has been granted shall be considered to be a required system.

5. Change Section 901.4.2 to read:

901.4.2 Nonrequired fire protection systems. Nonrequired fire protection systems shall be maintained to function as originally installed. If any such systems are to be reduced in function or discontinued, approval shall be obtained from the building official in accordance with Section ~~103.8.1~~ 103.3.1 of Part I of the USBC.

6. Change Section 901.4.3 to read:

~~(N)~~901.4.3 Fire areas. Where buildings, or portions thereof, are divided into fire areas so as not to exceed the limits established for requiring a fire protection system in accordance with the applicable building code, such fire areas shall be maintained.

7. Delete Section 901.4.4.

8. Change ~~Section~~ Sections 901.4.6, 901.4.6.3 and 901.4.6.4 to read:

~~(N)~~901.4.6 Pump and riser room size. Where provided, fire pump rooms and automatic sprinkler system riser rooms shall maintain clearances around equipment to elements of permanent construction, including other installed equipment and appliances, and shall be sufficient to allow inspection, service, repair or replacement without removing such elements of permanent construction or disabling the function of a required fire-resistance-rated assembly. Passageways provided for the removal of equipment shall remain unobstructed.

901.4.6.3 Environment. Suitable means shall be provided for maintaining the temperature in automatic sprinkler system riser rooms and fire pump rooms above 40°F (5°C).

901.4.6.4 Lighting. Permanently installed artificial illumination in automatic sprinkler system riser rooms and fire pump rooms shall be maintained in accordance with the applicable building code.

9. Delete Section 901.5.1.

10. ~~Change~~ Add Section 901.5.2 to read:

901.5.2 Hydrant and fire service main acceptance testing. Fire hydrant systems and private fire service mains shall be subject to acceptance tests as contained in the installation standards and as approved by the fire code official. The fire code official shall be notified before any required acceptance testing.

11. Change Section 901.6 to read:

901.6 Inspection, testing and maintenance. To the extent that equipment, systems, devices, and safeguards, such as fire detection, alarm and extinguishing systems, which were provided and approved by the building official when constructed, shall be maintained in an operative condition at all times. And where such equipment, systems, devices, and safeguards are found not to be in an operative condition, the fire official shall order all such equipment to be rendered safe in accordance with the USBC.

12. Change Sections 901.7.1 through 901.7.6 and add Section 901.7.7 to read:

901.7.1 Modifications during impairment. The fire code official is authorized to require safeguards in a building or fire area when the required fire protection is out of service. Those safeguards may be based upon the provisions of the applicable building code or other recognized safety standards.

901.7.2 Impairment coordinator. The building owner shall assign an impairment coordinator to comply with the requirements of this section. In the absence of a specific designee, the owner shall be considered the impairment coordinator.

901.7.3 Tag required. A tag shall be used to indicate that a system or portion thereof has been removed from service.

901.7.4 Placement of tag. The tag shall be posted at each fire department connection, system control valve, fire alarm control unit, fire alarm annunciator and fire command center indicating which system or part thereof has been removed from service. The fire code official shall specify where the tag is to be placed.

901.7.5 Preplanned impairment programs. Preplanned impairments shall be authorized by the impairment coordinator. Before authorization is given, a designated individual shall be responsible for verifying that all of the following procedures have been implemented:

1. The extent and expected duration of the impairment have been determined.

2. The areas or buildings involved have been inspected and the increased risks determined.

3. Recommendations have been submitted to management or the building owner or manager.

4. The fire department has been notified.

5. The insurance carrier, the alarm company, the building owner or manager and other authorities having jurisdiction have been notified.

6. The supervisors in the areas to be affected have been notified.

7. A tag impairment system has been implemented.

8. Necessary tools and materials have been assembled on the impairment site.

901.7.6 Emergency impairments. Where unplanned impairments occur, appropriate emergency action shall be taken to minimize potential injury and damage. The impairment coordinator shall implement the steps outlined in Section 901.7.4.

901.7.7 Restoring systems to service. When impaired equipment is restored to normal working order, the impairment coordinator shall verify that all of the following procedures have been implemented:

1. Necessary inspections and tests have been conducted to verify that affected systems are operational.

2. Supervisors have been advised that protection is restored.

3. The fire department has been advised that protection is restored.

4. The building owner or manager, insurance carrier, alarm company and other involved parties have been advised that protection is restored.

5. The impairment tag has been removed.

13. Change Section 901.8 to read:

901.8 Removal of or tampering with equipment. It shall be unlawful for any person to remove, tamper with, or otherwise disturb any fire hydrant, fire detection and alarm system, fire suppression system, or other fire appliance required by this code or the applicable building code except for the purpose of extinguishing fire, for training purposes, for recharging or making necessary repairs, or where approved by the fire code official.

14. Change Section 901.8.2 to read:

901.8.2 Removal of existing occupant-use hose lines. The fire code official is authorized to permit the removal of existing occupant-use hose lines where all of the following conditions exist:

1. Installation is not required by this code or the applicable building code.

2. The hose line would not be utilized by trained personnel or the fire department.

3. The remaining outlets are compatible with local fire department fittings.

15. Add Section 901.11 to read:

901.11 Defective equipment. When the fire official determines through investigation or testing or reports by a nationally recognized testing agency that specific, required water sprinkler or water-spray extinguishing equipment has been identified as failing to perform or operate through not less than 30 randomly selected sprinkler heads at four or more building sites anywhere in the nation, the fire official shall order all such equipment to be rendered safe.

B. The following changes shall be made to Section 903, Automatic Sprinkler Systems:

1. Delete Sections 903.1.1 through 903.2.11.1.3, including Tables.

2. Change Section 903.2.11.2 to read:

~~(N)~~903.2.11.2 Rubbish and linen chutes. Access to automatic sprinkler systems shall be maintained for servicing of the automatic sprinkler system components.

3. Delete Sections 903.2.11.3 through 903.2.11.6, including Tables.

4. Change Sections 903.2.12 and 903.3 to read:

~~(N)~~903.2.12 During construction and demolition. Automatic sprinkler systems required by the applicable building code during construction, alteration and demolition operations shall be maintained in accordance with Chapter 33.

~~(N)~~903.3 Installation requirements. Automatic sprinkler systems shall be maintained in accordance with the applicable building code.

5. Delete Sections 903.3.1 through 903.3.5.2.

6. Change Sections 903.3.6 to read:

~~(N)~~903.3.6 Hose threads. Fire hose threads and fittings used in connection with automatic sprinkler systems shall be maintained as approved by the fire code official.

7. Delete Sections 903.3.7 through 903.3.8.4.

8. Change Sections 903.3.8.5 to read:

~~(N)~~903.3.8.5 Calculations. When required by inspections, testing, and maintenance provisions of NFPA 25, hydraulic calculations shall be provided to demonstrate that the available water flow and pressure are adequate to supply all sprinklers installed in any single fire area with discharge densities corresponding to the hazard classification.

9. Delete Sections 903.4 through 903.4.3.

10. Change Section 903.6 to read:

903.6 Where required in existing buildings and structures. An automatic sprinkler system shall be provided in existing buildings and structures in accordance with Section 102.7 of this code.

C. The following changes shall be made to Section 904, Alternative Automatic Fire-Extinguishing Systems:

1. Change Sections 904.1 and 904.1.1 to read:

~~(N)~~904.1 General. Automatic fire-extinguishing systems, other than automatic sprinkler systems, shall be inspected, tested and maintained in accordance with the provisions of this section and the applicable referenced standards.

904.1.1 Certification of service personnel for fire-extinguishing equipment. Service personnel providing or conducting maintenance on automatic fire-extinguishing systems, other than automatic sprinkler systems, shall possess a valid certificate issued by an approved agency or other approved organization for the type of system and work performed.

2. Delete Section 904.2 and 904.2.1.

3. Change Sections 904.2.2 and 904.3 to read:

~~(N)~~904.2.2 Commercial hood and duct systems. Each required commercial kitchen exhaust hood and duct system required by Section 319.4 for mobile food preparation vehicles to have a Type I hood shall be protected with an approved automatic fire-extinguishing system installed in accordance with this code.

~~(N)~~904.3 Installation. Automatic fire-extinguishing systems shall be installed in accordance with Annex B of NFPA 96 when required in mobile food preparation vehicles.

4. Delete Sections 904.3.1 through 904.4.3.

5. Change Section 904.5 to read:

904.5 Wet-chemical systems. Wet-chemical extinguishing systems shall be maintained, periodically inspected and tested in accordance with NFPA 17A and their listing. Records of inspections and testing shall be maintained.

6. Change Section 904.6 to read:

904.6 Dry-chemical systems. Dry-chemical extinguishing systems shall be maintained, periodically inspected and tested in accordance with NFPA 17 and their listing. Records of inspections and testing shall be maintained.

7. Change Section 904.7 to read:

904.7 Foam systems. Foam-extinguishing systems shall be maintained, periodically inspected and tested in accordance with NFPA 11 and NFPA 16 and their listing. Records of inspections and testing shall be maintained.

8. Change Section 904.8 to read:

904.8 Carbon dioxide systems. Carbon dioxide extinguishing systems shall be maintained, periodically inspected and tested in accordance with NFPA 12 and their listing. Records of inspections and testing shall be maintained.

9. Change Section 904.9 to read:

904.9 Halon systems. Halogenated extinguishing systems shall be maintained, periodically inspected and tested in accordance with NFPA 12A and their listing. Records of inspections and testing shall be maintained.

10. Change Section 904.10 to read:

904.10 Clean-agent systems. Clean-agent fire-extinguishing systems shall be maintained, periodically inspected and tested in accordance with NFPA 2001 and their listing. Records of inspections and testing shall be maintained.

11. Change Section 904.11 to read:

~~(N)~~904.11 Automatic water mist systems. Automatic water mist systems shall be maintained in accordance with NFPA 25 and the manufacturer's instructions.

12. Delete Sections 904.11.1.1 through 904.11.2.3.

13. Change Sections 904.12 through 904.12.2 to read:

~~(N)~~904.12 Commercial cooking systems. Automatic fire-extinguishing systems for commercial cooking shall comply with this section.

~~(N)~~904.12.1 Manual system operation. Where provided, manual actuation devices shall be maintained as installed in accordance with the applicable building code and shall not be obstructed.

~~(N)~~904.12.2 System interconnection. Where required by the applicable building code, the actuation of the fire extinguishing system shall automatically shut down the fuel or electrical power supply to the cooking equipment. The fuel and electrical supply reset shall be manual.

14. Delete Sections 904.12.3 through 904.12.4.

15. Change Sections 904.12.4.1 to read:

~~(N)~~904.12.4.1 Listed sprinklers. Sprinklers replaced in accordance with NFPA 25, which are used for the protection of fryers, shall be tested in accordance with UL 199E, listed for that application, and installed in accordance with their listing.

16. Change Section ~~904.12.6.1~~ 904.12.5.1to read:

~~(N)904.12.6.1~~ 904.12.5.1 Existing automatic fire-extinguishing systems. Where a change in the cooking media, positioning of cooking equipment, or replacement of cooking equipment occurs in existing commercial cooking systems, the automatic fire-extinguishing system shall be required to comply with the applicable building code.

17. Delete Sections 904.13 through ~~904.13.2~~ 904.13.1.2.

18. Change Section 904.14 to read:

904.14 Aerosol fire-extinguishing systems. Aerosol fire-extinguishing systems shall be periodically inspected, tested and maintained in accordance with Section 901 and NFPA 2010, and in accordance with their listing.

D. The following changes shall be made to Section 905, Standpipe Systems:

1. Change Sections 905.1 and 905.2 to read:

~~(N)~~905.1 General. Standpipe systems shall be inspected, tested and maintained in accordance with the provisions of this section and the applicable referenced standards.

~~(N)~~905.2 Maintenance standard. Standpipe systems shall be maintained in accordance with this section and NFPA 14. Fire department connections for standpipe systems shall be in accordance with Section 912.

2. Delete Sections 905.3 through 905.3.4.

3. Change Sections 905.3.4.1 to read:

~~(N)~~905.3.4.1 Hose and cabinet. Where required by the applicable building code, hose connections shall be equipped with sufficient lengths of 1-1/2-inch (38 mm) hose to provide fire protection for the required area. Hoses shall be equipped with an approved adjustable fog nozzle and be mounted in a cabinet or on a rack.

4. Delete Sections 905.3.5 and 905.3.6.

5. Change Section 905.3.7 to read:

~~(N)~~905.3.7 Marinas and boatyards. Standpipes in marinas and boatyards shall comply with Chapter 36.

6. Delete Sections 905.3.8 through 905.5.2.

7. Change Section 905.5.3 to read:

~~(N)~~905.5.3 Class II system 1-inch hose. A minimum 1-inch (25 mm) hose shall be allowed to be used for hose stations in light-hazard occupancies where investigated and listed for this service and where approved by the fire code official.

8. Delete Sections 905.6 through 905.6.2.

9. Change Sections 905.7 through 905.7.2 to read:

~~(N)~~905.7 Cabinets. Cabinets containing firefighting equipment, such as standpipes, fire hose, fire extinguishers or fire department valves, shall not be blocked from use or obscured from view.

~~(N)~~905.7.1 Cabinet equipment identification. Cabinets shall be identified in an approved manner by a permanently attached sign with letters not less than 2 inches (51 mm) high in a color that contrasts with the background color indicating the equipment contained therein.

Exceptions:

> 1. Doors not large enough to accommodate a written sign shall be marked with a permanently attached pictogram of the equipment contained therein.
>
> 2. Doors that have either an approved visual identification clear glass panel or a complete glass door panel are not required to be marked.

~~(N)~~905.7.2 Locking cabinet doors. Cabinets shall be unlocked.

Exceptions:

1. Visual identification panels of glass or other approved transparent frangible material that is easily broken and allows access.

2. Approved locking arrangements.

3. Group I-3 occupancies.

10. Delete Sections 905.8 and 905.9.

11. Change Section 905.10 to read:

~~(N)~~905.10 During construction. Standpipe systems required during construction and demolition operations shall comply with Chapter 33.

12. Delete ~~Section~~ Sections 905.11 and 905.12.

E. The following changes shall be made to Section 906, Portable Fire Extinguishers:

1. Change Item 1 in Section 906.1 to read:

1. In Group A, B, E, F, H, I, M, R-1, R-4 and S occupancies.

Exceptions:

1. In Groups A, B, and E occupancies equipped throughout with quick response sprinklers, portable fire extinguishers shall be required only in locations specified in Items 2 through 6.

2. In Group I-3 occupancies, portable fire extinguishers shall be permitted to be located at staff locations and the access to such extinguishers shall be permitted to be locked.

2. Add a note to Section 906.1 to read:

Note: In existing buildings, whether fire extinguishers are needed is determined by the USBC or other code in effect when such buildings were constructed.

3. Change Section 906.2.1 to read:

906.2.1 Certification of service personnel for portable fire extinguishers. Service personnel providing or conducting maintenance on portable fire extinguishers shall possess a valid certificate issued by an approved agency, or other approved organization for the type of work performed.

F. The following changes shall be made to Section 907, Fire Alarm and Detection Systems:

1. Change Section 907.1 to read:

907.1 General. This section covers the performance and maintenance of fire alarm systems and their components in buildings and structures.

2. Delete Sections 907.1.1 and 907.1.2.

3. Change Section 907.1.3 to read:

~~(N)~~907.1.3 Equipment. Systems and components not regulated by the applicable building code shall be listed and approved for the purpose for which they are installed.

4. Delete Sections 907.2 through 907.2.6.3.2.

5. Delete Sections 907.2.6.3.3 through ~~907.2.10.3~~ 907.2.9.3.

6. Change Section ~~907.2.11~~ 907.2.10 to read:

~~(N)907.2.11~~ 907.2.10 Single-station and multiple-station smoke alarms. Alarms not required by the applicable building code shall be listed single-station and multiple-station smoke alarms complying with UL 217 and installed in accordance with the manufacturer's instructions and NFPA 72.

7. Delete Sections ~~907.2.11.1~~ 907.2.10.1 through 907.3.1.

8. Change Sections 907.3.2 and 907.3.3 to read:

~~(N)~~907.3.2 ~~Delayed egress locks~~ Special locking systems. Where ~~delayed egress locks~~ special locking systems are installed on means of egress doors, they shall be maintained as installed in accordance with the applicable building code.

~~(N)~~907.3.3 Elevator emergency operation. Automatic fire detectors installed for elevator emergency operation shall be maintained as provided by the applicable building code.

9. Delete Sections 907.3.4 through 907.4.1.

10. Change Section 907.4.2 to read:

~~(N)~~907.4.2 Manual fire alarm boxes. Manual fire alarm boxes or pull stations shall be maintained as provided in accordance with the applicable building code.

11. Delete Sections 907.4.2.1 and 907.4.2.2.

12. Change Sections 907.4.2.3 and 907.4.2.5 to read:

~~(N)~~907.4.2.3 Color. Manual fire alarm boxes shall be maintained as installed unless otherwise approved.

907.4.2.5 Protective covers. The fire code official is authorized to require the installation of listed manual fire alarm box protective covers to prevent malicious false alarms or to provide the manual fire alarm box with protection from physical damage. The protective cover shall be transparent or red in color with a transparent face to permit visibility of the manual fire alarm box. Each cover shall include proper operating instructions. A protective cover that emits a local alarm signal shall not be installed unless approved. Protective covers shall not reduce the required means of egress width.

13. Delete Sections 907.4.3 through 907.5.

14. Change Section 907.5.1 to read:

~~(N)~~907.5.1 Presignal feature. A presignal feature shall not be utilized unless approved by the fire code official and the fire department. Where a presignal feature is provided, a signal shall be annunciated at a constantly attended location approved by the fire department so that occupant notification can be activated in the event of fire or other emergency.

15. Delete Sections 907.5.2 through 907.5.2.2.3.

16. Change Section 907.5.2.2.4 to read:

~~(N)~~907.5.2.2.4 Emergency voice or alarm communication captions. Where stadiums, arenas and grandstands are required to caption audible public announcements in accordance with of the applicable building code, the emergency or voice alarm communication system shall be captioned. Prerecorded or live emergency captions shall be from an approved location constantly attended by personnel trained to respond to an emergency.

17. Delete Sections 907.5.2.2.5 through 907.6.2.

18. Change Section 907.6.3 to read:

~~(N)~~907.6.3 Initiating device identification. The fire alarm systems that identify the specific initiating device address, location, device type, floor level where applicable, and status, including indication of normal, alarm, trouble and supervisory status, shall be maintained as provided in accordance with the applicable building code.

19. Delete Sections 907.6.3.1 through 907.6.4.2.

20. Change Sections 907.6.5 through 907.6.6 to read:

~~(N)~~907.6.5 Access. Access to each fire alarm device and notification appliance for periodic inspection, maintenance and testing shall not be obstructed.

~~(N)~~907.6.6 Monitoring. The monitoring of fire alarm systems required by the applicable building code shall be maintained in accordance with NFPA 72.

21. Delete Sections 907.7 through 907.7.2.

22. Change Section 907.7.3 to read:

907.7.3 Instructions. Operating, testing and maintenance instructions and existing record drawings ("as builts") and equipment specifications shall be provided at an approved location.

23. Change Section 907.8.2 to read:

907.8.2 Testing. Testing shall be performed in accordance with the schedules in Chapter 10 of NFPA 72 or more frequently where required by the fire code official. Where automatic testing is performed at least weekly by a remotely monitored fire alarm control unit specifically listed for the application, the manual testing frequency shall be permitted to be extended to annual. In Group R-1 occupancies, battery-powered single station smoke detectors shall be tested and inspected at one-month intervals.

Exception: Devices or equipment that are inaccessible for safety considerations shall be tested during scheduled shutdowns where approved by the fire code official, but not less than every 18 months.

24. Change Section 907.8.5 to read:

907.8.5 Maintenance, inspection and testing. The building owner shall be responsible for maintaining the fire and life safety systems in an operable condition at all times. Service personnel shall meet the qualification requirements of NFPA 72 for maintaining, inspecting and testing such systems. A written record shall be maintained and shall be made available to the fire code official. In addition to all applicable information contained in Figure 7.8.2 of NFPA 72, the written record of inspections, testing and maintenance shall contain the following minimum information:

1. Date, name and address of property.

2. Name of person performing inspection, maintenance and tests, or combination thereof, and affiliation, business address and telephone number.

3. Name, address and representative of approving agency or agencies.

4. Test frequency.

5. Designation of the detector or detectors tested (for example, "Test performed in accordance with Section _______.").

6. Physical location (for example, "Heat detector in main kitchen; horn-strobe in Room 115.") and a list of all initiating and notification devices and appliances tested.

7. Functional list of detectors and required sequence of operations.

8. Check of all smoke detectors.

9. Loop resistance for all fixed-temperature, line-type detectors.

10. Other tests as required by either the equipment manufacturer's published instructions or the authority having jurisdiction.

11. Signature of tester and approved authority representative.

12. Disposition of problems identified during test (examples, "Owner notified," "Problem corrected or successfully retested, or both," "Device abandoned in place.").

25. Delete Section 907.9.

G. The following changes shall be made to Section 908, Emergency Alarm Systems:
Change Sections 908.1 ~~through 908.7~~ and 908.2 to read:

908.1 Group H occupancies. Emergency alarms for the detection and notification of an emergency condition in Group H occupancies shall be maintained as provided in accordance with the applicable building code.

~~(N)~~908.2 Group H-5 occupancy. Emergency alarms for notification of an emergency condition in a hazardous production material (HPM) facility shall be maintained as provided in accordance with the applicable building code. Continuous gas detection systems shall be maintained for HPM gases as provided in accordance with the applicable building code.

~~(N)908.3 Highly toxic and toxic materials. Where required by the applicable building code for highly toxic and toxic materials, gas detection systems shall be maintained.~~

~~(N)908.4 Ozone gas-generator rooms. Where required by the applicable building code, gas detection systems provided in ozone gas-generator rooms shall be maintained.~~

~~(N)908.5 Repair garages. A flammable-gas detection system provided in accordance with the applicable building code in repair garages for vehicles fueled by nonodorized gases shall be maintained.~~

~~(N)908.6 Refrigeration systems. Refrigeration system machinery rooms provided with refrigerant detection in accordance with the applicable building code shall be maintained.~~

~~908.7 Carbon dioxide systems. Emergency alarm systems provided in accordance with the applicable building code shall be maintained.~~

H. The following changes shall be made to Section 909, Smoke Control Systems:

1. Change Section 909.1 to read:

~~(N)~~909.1 Scope and purpose. This section applies to the inspection, testing, and maintenance of mechanical or passive smoke control systems. The purpose of these systems to provide a tenable environment for the evacuation or relocation of occupants. These provisions are not intended for the preservation of contents, the timely restoration of operations, or for assistance in fire suppression or overhaul activities.

2. Delete Sections 909.2 through 909.4.5.

3. Change Section 909.4.6 to read:

~~(N)~~909.4.6 Duration of operation. All portions of active or engineered smoke control systems shall be capable of continued operation after detection of the fire event for a period of not less than that required by the applicable building code.

4. Delete Section 909.4.7.

5. Change Section 909.5 to read:

~~(N)~~909.5 Smoke barriers. Smoke barriers required for passive smoke control and smoke control systems using the pressurization method shall be maintained in accordance with Chapter 7 of this code.

6. Delete Sections 909.5.1 and 909.5.2.

7. Change Section 909.5.3 to read:

~~(N)~~909.5.3 Opening protection. Protection of openings in smoke barriers shall be maintained in accordance with Chapter 7.

8. Delete Section 909.5.3.1

9. Change Section 909.5.3.2 to read:

~~(N)~~909.5.3.2 Ducts and air transfer openings. Protection of ducts and air transfer openings shall be maintained in accordance with Chapter 7.

10. Delete Sections 909.6 through 909.10.4.

11. Change Sections 909.10.5 through 909.11.1 to read:

~~(N)~~909.10.5 Fans. Motors driving fans associated with smoke control systems shall not be operated beyond their nameplate horsepower (kilowatts) as determined from measurement of actual current draw and shall have a minimum service factor of 1.15.

~~(N)~~909.11 Standby power. Standby power provided for smoke control systems shall be maintained in accordance with Section ~~604~~ 1203.

~~(N)~~909.11.1 Equipment room. Fire barriers associated with equipment rooms servicing smoke control systems shall be maintained in accordance with Chapter 7.

12. Delete Sections 909.11.2 through 909.13.3.

13. Change Sections 909.14 and 909.15 to read:

909.14 Marking and identification. The detection and control systems shall be clearly marked at all junctions, accesses and terminations.

909.15 Control diagrams. Identical control diagrams showing all devices in the system and identifying their location and function shall be maintained current and kept on file with the fire code official, with the fire department, and in the fire command center in a format and manner approved by the fire chief.

14. Delete Sections 909.16 and 909.16.1.

15. Change Section 909.16.2 to read:

~~(N)~~909.16.2 Smoke control panel. The firefighter's control panel shall maintain control capability over the complete smoke control system equipment within the building in accordance with the applicable building code.

16. Delete Section 909.16.3.

17. Change Sections 909.17 and 909.18 to read:

~~(N)~~909.17 System response time. Smoke-control system activation, including all associated components, shall be initiated in accordance with its design. The total response time shall not be less than the requirements specified in the design.

~~(N)~~909.18 Acceptance testing.

18. Delete Sections 909.18.1 through 909.18.8.3.

19. Change Sections 909.18.8.3.1 and 909.18.9 to read:

~~(N)~~909.18.8.3.1 Report filing. A copy of the final report required by the applicable building code shall be filed with the fire code official and an identical copy shall be maintained in an approved location at the building.

~~(N)~~909.18.9 Identification and documentation. Copies of charts, drawings, and other documents identifying and locating each component of the smoke control system and describing their proper function and maintenance requirements shall be maintained on file at the building. Devices shall have an approved identifying tag or mark on them consistent with such copies and shall be dated indicating the last time they were successfully tested and by whom.

20. Delete Section 909.19.

21. Change Sections 909.20.1, 909.20.6 and 909.21 to read:

909.20.1 Schedule. A routine maintenance and operational testing program shall be initiated immediately after the smoke control system has passed the acceptance tests. A written schedule for routine maintenance and operational testing shall be established and approved by the fire code official in accordance with Chapter 9 of the applicable building code.

~~(N)~~909.20.6 Components bypassing weekly test. Where components of the smoke control system are bypassed by the preprogrammed weekly test in accordance with the applicable building code, such components shall be tested semiannually. The system shall be tested under standby power conditions.

~~(N)~~909.21 Elevator hoistway pressurization alternative. Where elevator hoistway pressurization is provided in lieu of required enclosed elevator lobbies, the pressurization system shall be maintained in accordance with Section 909.

22. Delete Sections 909.21.1 through 909.21.2.

23. Change Sections 909.21.3 through 909.21.4.1 to read:

~~(N)~~909.21.3 Ducts for system. Any duct system protected with a fire-resistance rating shall be maintained in accordance with Chapter 7.

~~(N)~~909.21.4 Fan system. The fan system provided for the pressurization system shall comply with Sections 909.21.4.1.

~~(N)~~909.21.4.1 Fire resistance. Where provided in accordance with the applicable building code, the fire-resistance rating required for the elevator shaft enclosure shall be maintained in accordance with Chapter 7.

24. Delete Sections 909.21.4.2 through 909.21.4.4.

25. Change Section 909.21.5 to read:

~~(N)~~909.21.5 Standby power. Standby power systems for pressurization systems shall be maintained in accordance with Section ~~604~~ 1203.

26. Delete Sections 909.21.6 and 909.21.7.

27. Change Sections 909.21.8 and 909.21.9 to read:

~~(N)~~909.21.8 Marking and identification. Detection and control systems shall be marked in accordance with Section 909.14.

~~(N)~~909.21.9 Control diagrams. Control diagrams shall be provided in accordance with Section 909.15.

28. Delete Section 909.21.10.

29. Change Section 909.21.11 to read:

~~(N)~~909.21.11 System response time. Hoistway pressurization systems response time shall be maintained in accordance with the requirements for smoke control system response time in the applicable building code.

I. The following changes shall be made to Section 910, Smoke and Heat Removal:

1. Change Section 910.1 to read:

~~(N)~~910.1 General. Where required by the applicable building code, smoke and heat vents or mechanical smoke removal systems shall be maintained as installed.

2. Delete Sections 910.2 through 910.3.3.

3. Change Section 910.4 to read:

~~(N)~~910.4 Mechanical smoke removal systems. Mechanical smoke removal systems provided shall be maintained as installed in accordance with the applicable building code.

4. Delete Sections 910.4.1 through 910.4.7.

J. The following changes shall be made to Section 911, Explosion Control:

1. Change Section 911.1 to read:

~~(N)~~911.1 General. Explosion control systems and components shall be maintained and operated in accordance with NFPA 69, or NFPA 495, as applicable. Deflagration venting shall not be used as a means to protect buildings from detonation hazards.

2. Delete Table 911.1 and Sections 911.2 through 911.4.

K. The following changes shall be made to Section 912, Fire Department Connections:

1. Delete Sections 912.1 through 912.2.1.

2. Change Section 912.6 to read:

~~(N)~~912.6 Backflow protection. The potable water supply to automatic sprinkler and standpipe systems protected against backflow as required by the applicable building code shall be maintained in accordance with NFPA 25.

L. The following changes shall be made to Section 913, Fire Pumps:

1. Change Sections 913.1 through 913.2.1 to read:

~~(N)~~913.1 General. Where provided, fire pumps shall be maintained in accordance with the applicable building code.

~~(N)~~913.2 Protection against interruption of service. The fire pump, driver and controller shall be maintained in accordance with the applicable building code.

~~(N)~~913.2.1 Protection of fire pump rooms. Rooms where fire pumps are separated from all other areas of the building by a fire-rated assembly in accordance with the applicable building code shall be maintained in accordance with Chapter 7.

2. Delete Section 913.2.2.

3. Change Sections 913.3 and 913.4 to read:

~~(N)~~913.3 Temperature of pump room. Suitable means shall be provided for maintaining the temperature of a pump room or pump house above 40°F (5°C).

~~(N)~~913.4 Valve supervision. Where provided, the fire pump suction, discharge and bypass valves, and isolation valves on the backflow prevention device or assembly shall be maintained in accordance with the applicable building code.

4. Delete Section 913.5.1.

M. The following changes shall be made to Section 914, Fire Protection Based on Special Detailed

Requirements of Use and Occupancy:

1. Delete Sections 914.1 through 914.2.3.

2. Change Section 914.2.4 to read:

914.2.4 Fire department access to equipment. Rooms or areas containing controls for air-conditioning systems, automatic fire-extinguishing systems, automatic sprinkler systems, or other detection, suppression, or control elements shall be identified for use by the fire department.

3. Delete Sections 914.3 through 914.11.3, including Tables.

N. The following changes shall be made to Section 915, Carbon Monoxide Detection:

1. Change Section 915.1 to read:

~~(N)~~915.1 General. Where provided, carbon monoxide detection shall be installed in accordance with the applicable building code.

2. Delete Sections 915.1.1 through 915.5.3.

3. Change Section ~~915.6~~ 916.1 to read:

~~915.6 Maintenance. Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with NFPA 720. Carbon monoxide alarms and carbon monoxide detectors that become inoperable or begin producing end-of-life signals shall be replaced.~~

916.1 Gas detection systems. Gas detection systems shall be maintained in accordance with the applicable building code.

4. Delete Sections 916.2 through 917.

13VAC5-51-135.5. ~~Ifc~~ IFC Chapter 10 Means of Egress.

A. The following changes shall be made to Section 1001, Administration:

1. Change Section 1001.1 to read:

1001.1 General. Means of egress systems for buildings or portions thereof shall be maintained in accordance with the applicable building code and Section 1031.

2. Add Section 1001.3 to read:

1001.3 Overcrowding. Overcrowding, admittance of any person beyond the approved occupant load established by the USBC or other building code under which the building was constructed, or obstructing aisles, passageways, or any part of the means of egress shall not be allowed. The fire code official, upon finding any condition that constitutes a life safety hazard, shall be authorized to cause the event to be stopped until such condition or obstruction is corrected.

B. The following changes shall be made to Section 1003, General Means of Egress:

1. Change Section 1003.1 to read:

~~(N)~~1003.1 Applicability. The general requirements specified in Sections 1003 through 1015 shall apply to the maintenance of the building.

2. Change Section 1003.2 to read:

~~(N)~~1003.2 Ceiling height. The means of egress ceiling height shall be maintained in accordance with the applicable building code.

3. Change Section 1003.3 to read:

1003.3 Protruding objects. Protruding objects on circulation paths shall comply with the requirements of Sections 1003.3.1 and 1003.3.4.

4. Change Section 1003.3.1 to read:

~~(N)~~1003.3.1 Headroom. Minimum headroom shall be maintained in accordance with the applicable building code.

5. Delete Section 1003.3.2.

6. Delete Section 1003.3.3.

7. Change Section 1003.3.4 to read:

~~(N)~~1003.3.4 Clear width. Protruding objects shall not reduce the minimum clear width of accessible routes.

8. Change Section 1003.4 to read:

~~(N)~~1003.4 Floor surface. Slip and trip hazards in the means of egress shall be abated.

9. Delete Section 1003.5.

10. Change Section 1003.6 to read:

~~(N)~~1003.6 Means of egress continuity. Means of egress continuity shall be maintained in accordance with the applicable building code.

11. Delete Section 1003.7.

C. The following changes shall be made to Section 1004, Occupant Load:

1. Change Section 1004.1 to read:

~~(N)~~1004.1 Design occupant load. The design occupant load shall be maintained in accordance with the applicable building code.

2. Delete ~~Section~~ Sections ~~1004.1.1~~ 1004.2 through 1004.3, 1004.5, 1004.5.1 and 1004.6 including Table 1004.5.

3. ~~Delete~~ Change ~~Section~~ Sections ~~1004.1.1.1~~ 1004.4 and 1004.7 to read.

1004.4 Multiple occupancies. Where a building contains two or more occupancies, the means of egress requirements shall be maintained in accordance with the applicable building code.

1004.7 Outdoor areas. The means of egress for outdoor areas shall be maintained in accordance with the applicable building code.

4. Delete Section ~~1004.1.1.2~~ 1004.8.

5. ~~Delete Section 1004.1.1.3.~~

~~6. Delete Section 1004.1.2 and Table 1004.1.2.~~

~~7. Delete Section 1004.2.~~

~~8.~~ Change Section ~~1004.3~~ 1004.9 to read:

~~(N)1004.3~~ 1004.9 Posting of occupant load. Every room or space that is an assembly occupancy and where the occupant load of that room or space is 50 or more shall have the occupant load of the room or space posted in a conspicuous place near the main exit or exit access doorway from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or the owner's authorized agent.

~~9. Delete Section 1004.4.~~

~~10. Change Section 1004.5 to read:~~

~~(N)1004.5 Outdoor areas. The means of egress for outdoor areas shall be maintained in accordance with the applicable building code.~~

~~11. Change Section 1004.6 to read:~~

~~(N)1004.6 Multiple occupancies. Where a building contains two or more occupancies, the means of egress requirements shall be maintained in accordance with the applicable building code.~~

D. The following changes shall be made to Section 1005, Means of Egress Sizing:

1. Change Section 1005.1 to read:

~~(N)~~1005.1 General. All portions of the means of egress system shall be sized in accordance with the applicable building code.

2. Change Section 1005.2 to read:

~~(N)~~1005.2 Minimum width based on component. The minimum width of any means of egress components shall be maintained in accordance with the applicable building code.

3. Change Section 1005.3 to read:

~~(N)~~1005.3 Required capacity based on occupant load. The required capacity of the means of egress for any room, area, space or story shall be maintained in accordance with the applicable building code.

4. Change Section 1005.3.1 to read:

~~(N)~~1005.3.1 Stairways. The capacity, in inches, of means of egress stairways shall be maintained in accordance with the applicable building code.

5. Delete Section 1005.3.2.

6. Change Section 1005.4 to read:

~~(N)~~1005.4 Continuity. The minimum width or required capacity of the means of egress required from any story of a building shall be maintained in accordance with the applicable building code.

7. Delete Section 1005.5.

8. Change Section 1005.6 to read:

~~(N)~~1005.6 Egress convergence. Where the means of egress from stories above and below converge at an intermediate level, the capacity of the means of egress from the point of convergence shall be maintained in accordance with the applicable code.

9. Change Section 1005.7 to read:

~~(N)~~1005.7 Encroachment. Encroachments into the required means of egress width shall be in accordance with the provisions of the applicable building code.

10. Delete Section 1005.7.1.

11. Delete Section 1005.7.2.

12. Delete Section 1005.7.3.

E. The following changes shall be made to Section 1006, Numbers of Exits and Exit Access Doorways:

1. Change Section 1006.1 to read:

~~(N)~~1006.1 General. The number of exits or exit access doorways required within the means of egress system shall be maintained in accordance with the applicable building code.

2. Change Section 1006.2 to read:

~~(N)~~1006.2 Egress from spaces. Egress from spaces shall be maintained in accordance with the applicable building code.

3. Delete Section 1006.2.1 and Table 1006.2.1.

4. Delete Section 1006.2.1.1.

5. Delete Section 1006.2.2.

6. Delete Section 1006.2.2.1.

7. Delete Section 1006.2.2.2.

8. Delete Section 1006.2.2.3.

9. Delete Section 1006.2.2.4.

10. Delete ~~Section~~ Sections 1006.2.2.5 and 1006.2.2.6.

11. Change Section 1006.3 to read:

~~(N)~~1006.3 Egress from stories or occupied roofs. The means of egress system serving any story or occupied roof shall be maintained in accordance with the applicable building code.

12. Delete Section 1006.3.1 and Table 1006.3.1.

13. Delete Section 1006.3.2, 1006.3.3 and Tables ~~1006.3.2(1)~~ 1006.3.3(1) and ~~1006.3.2(2)~~ 1006.3.3(2).

14. Delete Section ~~1006.3.2.1~~ 1006.3.3.1.

~~15. Delete Section 1006.3.2.2.~~

F. The following changes shall be made to Section 1007, Exit and Exit Access Doorway Configuration:

1. Change Section 1007.1 to read:

~~(N)~~1007.1 General. Exits, exit access doorways, and exit access stairways and ramps serving spaces, including individual building stories, shall be maintained in accordance with the applicable code.

2. Delete Section 1007.1.1.

3. Delete Section 1007.1.1.1.

4. Delete Section 1007.1.2.

5. Delete Section 1007.1.3.

6. Delete Section 1007.1.3.1.

G. The following changes shall be made to Section 1008, Means of Egress Illumination:

1. Change Section 1008.1 to read:

~~(N)~~1008.1 Means of egress illumination. Illumination provided in the means of egress shall be maintained in accordance with the applicable code.

2. Change Section 1008.2 to read:

~~(N)~~1008.2 Illumination required. Illumination provided for the means of egress serving a room or space shall be maintained in accordance with the applicable building code.

3. Delete Section 1008.2.1.

4. Delete Section 1008.2.2 and 1008.2.3.

5. Change Section 1008.3 to read:

~~(N)~~1008.3 Emergency power for illumination. The power supply for means of egress illumination shall be maintained in accordance with the applicable building code.

6. Delete Section 1008.3.1.

7. Delete Section 1008.3.2.

8. Delete Section 1008.3.3.

9. Delete Section 1008.3.4.

10. Delete Section 1008.3.5.

H. The following changes shall be made to Section 1009, Accessible Means of Egress:

1. Change Section 1009.1 to read:

~~(N)~~1009.1 Accessible means of egress required. Accessible means of egress shall be maintained in accordance with the applicable building code.

2. Change Section 1009.2 to read:

~~(N)~~1009.2 Continuity and components. Continuity and components provided for accessible means of egress shall be maintained in accordance with the applicable building code.

3. Delete Section 1009.2.1.

4. Change Section 1009.3 ~~to read~~ and delete Sections 1009.3.1, 1009.3.2 and 1009.3.3:

~~(N)~~1009.3 Stairways. Stairways part of an accessible means of egress shall be maintained in accordance with the applicable building code.

5. Change Section 1009.4 ~~to read~~ and delete Sections 1009.4.1 and 1009.4.2:

~~(N)~~1009.4 Elevators. Elevators considered part of the means of egress shall be maintained in accordance with the applicable building code.

6. Change Section 1009.5 to read:

~~(N)~~1009.5 Platform lifts. Platform lifts serving as a part of an accessible means of egress shall be maintained in accordance with the applicable building code.

7. Change Section 1009.6 to read:

~~(N)~~1009.6 Areas of refuge. Areas of refuge shall be maintained in accordance with the applicable building code.

8. Delete Section 1009.6.1.

9. Delete Section 1009.6.2.

10. Delete Section 1009.6.3.

11. Delete Section 1009.6.4.

12. Delete Section 1009.6.5.

13. Change Section 1009.7 to read:

~~(N)~~1009.7 Exterior areas for assisted rescue. Exterior areas for assisted rescue shall be maintained in accordance with the applicable building code.

14. Delete Section 1009.7.1.

15. Delete Section 1009.7.2.

16. Delete Section 1009.7.3.

17. Delete Section 1009.7.4.

18. Change Section 1009.8 to read:

~~(N)~~1009.8 Two-way communication. Where provided, two-way communication systems shall be maintained in accordance with the applicable building code.

19. Delete Section 1009.8.1.

I. The following changes shall be made to Section 1010, Doors, Gates and Turnstiles:

1. Change Section 1010.1 to read:

~~(N)~~1010.1 Doors. Doors serving a means of egress system shall be maintained in accordance with the applicable building code. Means of egress doors shall be readily distinguishable from the adjacent construction and finishes such that the doors are easily recognizable as doors. Mirrors or similar reflecting materials shall not be used on means of egress doors. Means of egress doors shall not be concealed by curtains, drapes, decorations or similar materials.

2. Delete Section 1010.1.1.

3. Delete Section 1010.1.1.1.

4. Delete Section 1010.1.2.

5. Delete Section 1010.1.2.1.

6. Delete Section 1010.1.3.

7. Delete Section 1010.1.3.1.

8. Delete Section 1010.1.4.

9. Delete Section 1010.1.4.1 and Tables 1010.1.4.1(1) and 1010.1.4.1(2).

10. Delete Section 1010.1.4.1.1.

11. Delete Section 1010.1.4.1.2.

12. Delete Section 1010.1.4.2.

13. Delete Section 1010.1.4.3.

14. Delete Section 1010.1.5.

15. Delete Section 1010.1.6.

16. Delete Section 1010.1.7.

17. Delete Section 1010.1.8.

18. Delete Section 1010.1.9.1.

19. Delete Section 1010.1.9.2.

20. ~~Change~~ Delete Section 1010.1.9.3 ~~to read:~~.

21. Change Section 1010.1.9.4 to read:

~~(N)1010.1.9.3~~ 1010.1.9.4 Locks and latches. Where required, a readily visible durable sign is posted on the egress side on or adjacent to the door stating THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background and shall be maintained.

~~21. Delete Section 1010.1.9.4.~~

22. Delete Section 1010.1.9.5.

23. Delete Section ~~1010.1.9.5.1~~ 1010.1.9.6.

24. Delete Section ~~1010.1.9.6~~ 1010.1.9.6.1.

25. Delete Section 1010.1.9.7.

26. Delete Section 1010.1.9.8 and 1010.1.9.8.1.

27. Delete Section 1010.1.9.9.

28. Delete Section 1010.1.9.10.

29. Delete Section 1010.1.9.11 and 1010.1.9.12.

30. Delete Section 1010.1.10.

31. Delete Section 1010.1.10.1.

32. Delete Section 1010.1.10.2.

33. Change Section 1010.2 to read:

~~(N)~~1010.2 Gates. Gates serving the means of egress system shall be maintained in accordance with the applicable building code.

34. Delete Section 1010.2.1.

35. Change Section 1010.3 to read:

~~(N)~~1010.3 Turnstiles. Turnstiles or similar devices shall be maintained in accordance with the applicable building code.

36. Delete Section 1010.3.1 through 1010.3.4.

~~37. Delete Section 1010.3.2.~~

J. The following changes shall be made to Section 1011, Stairways:

1. Change Section 1011.1 to read:

~~(N)~~1011.1 General. Stairways serving occupied portions of a building shall be maintained in accordance with the applicable building code.

2. Change Section 1011.2 to read:

~~(N)~~1011.2 Width and capacity. The capacity of stairways shall be maintained in accordance with the applicable building code.

3. Change Section 1011.3 to read:

~~(N)~~1011.3 Headroom. Headroom requirements for stairways shall be maintained in accordance with the applicable building code.

4. Change Section 1011.4 to read:

~~(N)~~1011.4 Walkline. The walkline across winder treads shall be maintained in accordance with the applicable building code.

5. Change Section 1011.5 to read:

~~(N)~~1011.5 Stair treads and risers. Stair treads and risers shall be maintained in accordance with the applicable building code

6. Delete Section 1011.5.1.

7. Delete Section 1011.5.2.

8. Delete Section 1011.5.3.

9. Delete Section 1011.5.4.

10. Delete Section 1011.5.4.1.

11. Delete Section 1011.5.5.

12. Delete Section 1011.5.5.1.

13. Delete Section 1011.5.5.2.

14. Delete Section 1011.5.5.3.

15. Delete Section 1011.6.

16. Delete Section 1011.7.

17. Delete Section 1011.7.1.

18. Delete Section 1011.7.2.

19. Delete Section 1011.7.3.

20. Delete Section 1011.7.4.

21. Change Section 1011.8 to read:

~~(N)~~1011.8 Vertical rise. Vertical rise of a flight of stairs shall be maintained in accordance with the applicable building code.

22. Change Section 1011.9 to read:

~~(N)~~1011.9 Curved stairways. Curved stairways with winder treads shall be maintained in accordance with the applicable building code.

23. Change Section 1011.10 to read:

~~(N)~~1011.10 Spiral stairways. Spiral stairways used as a component in the means of egress shall be maintained in accordance with the applicable building code.
24. Change Section 1011.11 to read:

~~(N)~~1011.11 Handrails. Handrails for stairways shall be maintained in accordance with the applicable building code.

25. Change Section 1011.12 to read:

~~(N)~~1011.12 Stairway to roof. Stairways to a roof shall be maintained in accordance with the applicable building code.

26. Delete Section 1011.12.1.

27. Delete Section 1011.12.2.

28. Change Section 1011.13 to read:

~~(N)~~1011.13 Guards. Guards shall be maintained in accordance with the applicable building code.

29. Change Section 1011.14 to read:

~~(N)~~1011.14 Alternating tread devices. Alternating tread devices shall be maintained in accordance with the applicable building code.

30. Delete Section 1011.14.1.

31. Delete Section 1011.14.2.

32. Change Section 1011.15 to read:

~~(N)~~1011.15 Ships ladders. Ships ladders shall be maintained in accordance with the applicable building code.

33. Delete Section 1011.15.1.

34. Delete Section 1011.15.2.

35. Delete Section 1011.16.

K. The following changes shall be made to Section 1012, Ramps:

1. Change Section 1012.1 to read:

~~(N)~~1012.1 Scope. The provisions of this section shall apply to the maintenance of ramps used as a component of a means of egress.

2. Change Section 1012.2 to read:

~~(N)~~1012.2 Slope. Ramp slopes shall be maintained in accordance with the applicable building code.

3. Change Section 1012.3 to read:

~~(N)~~1012.3 Cross slope. The cross slope for ramps shall be maintained in accordance with the applicable building code.

4. Change Section 1012.4 to read:

~~(N)~~1012.4 Vertical rise. The rise for any ramp run shall be maintained in accordance with the applicable building code.

5. Change Section 1012.5 to read:

~~(N)~~1012.5 Minimum dimensions. The minimum dimensions of means of egress ramps shall be maintained in accordance with the applicable building code.

6. Delete Section 1012.5.1.

7. Delete Section 1012.5.2.

8. Delete Section 1012.5.3.

9. Change Section 1012.6 to read:

~~(N)~~1012.6 Landings. Landings serving ramps shall be maintained in accordance with the applicable building code.

10. Delete Section 1012.6.1.

11. Delete Section 1012.6.2.

12. Delete Section 1012.6.3.

13. Delete Section 1012.6.4.

14. Delete Section 1012.6.5.

15. Delete Section 1012.7.

16. Delete Section 1012.7.2.

17. Change Section 1012.8 to read:

~~(N)~~1012.8 Handrails. Handrails serving ramps shall be maintained in accordance with the applicable building code.

18. Change Section 1012.9 to read:

~~(N)~~1012.9 Guards. Guards shall be maintained in accordance with the applicable building code.

19. Change Section 1012.10 to read:

~~(N)~~1012.10 Edge protection. Edge protection shall be maintained in accordance with the applicable building code.

20. Delete Section 1012.10.1.

21. Delete Section 1012.10.2.

L. The following changes shall be made to Section 1013, Exit Signs:

1. Change Section 1013.1 to read:

~~(N)~~1013.1 Where required. Exits and exit access doors shall be maintained in accordance with the applicable building code.

2. Change Section 1013.2 to read:

~~(N)~~1013.2 Floor-level exit signs in Group R-1. Floor-level exit signs in Group R-1 buildings shall be maintained in accordance with the applicable building code.

3. Change Section 1013.3 to read:

~~(N)~~1013.3 Illumination. Exit sign illumination shall be maintained in accordance with the applicable building code.

4. Change Section 1013.4 to read:

~~(N)~~1013.4 Raised character and braille exit signs. Raised character and braille exit signs shall be maintained in accordance with the applicable building code.

5. Change Section 1013.5 to read:

~~(N)~~1013.5 Internally illuminated exit signs. Electrically powered, self-luminous, and photoluminescent exit signs shall be maintained in accordance with the applicable building code.

6. Change Section 1013.6 to read:

~~(N)~~1013.6 Externally illuminated exit signs. Externally illuminated exit signs shall be maintained in accordance with the applicable building code.

7. Delete Section 1013.6.1.

8. Delete Section 1013.6.2.

9. Delete Section 1013.6.3.

M. The following changes shall be made to Section 1014, Handrails:

1. Change Section 1014.1 to read:

~~(N)~~1014.1 Where required. Handrails serving stairways, ramps, stepped aisles, and ramped aisles shall be maintained in accordance with the applicable building code.

2. Change Section 1014.2 to read:

~~(N)~~1014.2 Height. Handrail height, shall be maintained in accordance with the applicable building code.

3. Change Section 1014.3 to read:

~~(N)~~1014.3 Handrail graspability. Handrail graspability shall be maintained in accordance with the applicable building code.

4. Delete Section 1014.3.1.

5. Delete Section 1014.3.2.

6. Change Section 1014.4 to read:

~~(N)~~1014.4 Continuity. Handrail continuity shall be maintained in accordance with the applicable building code.

7. Delete Section 1014.5.

8. Delete Section 1014.6.

9. Change Section 1014.7 to read:

~~(N)~~1014.7 Clearance. Clear space between a handrail and a wall or other surface shall be maintained in accordance with the applicable building code.

10. Change Section 1014.8 to read:

~~(N)~~1014.8 Projections. Projections into the required width of aisles, stairways and ramps at each side shall not exceed the requirements of the applicable building code.

11. Change Section 1014.9 to read:

~~(N)~~1014.9 Intermediate handrails. Where provided, intermediate handrails shall be maintained in accordance with the applicable building code.

N. The following changes shall be made to Section 1015, Guards:

1. Change Section 1015.1 to read:

~~(N)~~1015.1 General. Guards shall be maintained in accordance with the applicable building code.

2. Delete Section 1015.2.

3. Delete Section 1015.2.1.

4. Change Section 1015.3 to read:

~~(N)~~1015.3 Height. Guard height shall be maintained in accordance with the applicable building code.

5. Change Section 1015.4 to read:

~~(N)~~1015.4 Opening limitations. Openings in guards shall be maintained in accordance with the applicable building code.

6. Change Section 1015.5 to read:

~~(N)~~1015.5 Screen porches. Guards provided for screen porches shall be maintained in accordance with the applicable building code.

7. Change Section 1015.6 to read:

~~(N)~~1015.6 Mechanical equipment, systems and devices. Guards provided for mechanical equipment shall be maintained in accordance with the applicable building code.

8. Change Section 1015.7 to read:

~~(N)~~1015.7 Roof access. Guards provided for roof access shall be maintained in accordance with the applicable building code.

9. Change Section 1015.8 to read:

~~(N)~~1015.8 Window openings. Windows shall be maintained in accordance with the applicable building code.

10. Delete Section 1015.8.1.

O. The following changes shall be made to Section 1016, Exit Access:

1. Change Section 1016.1 to read:

~~(N)~~1016.1 General. The exit access shall be maintained in accordance with the applicable building code.

2. Change Section 1016.2 to read:

~~(N)~~1016.2 Egress through intervening spaces. Egress through intervening spaces shall be maintained in accordance with the applicable building code.

3. Delete Section 1016.2.1.

P. The following changes shall be made to Section 1017, Exit Access Travel Distance:

1. Change Section 1017.1 to read:

~~(N)~~1017.1 General. Travel distance within the exit access portion of the means of egress system shall be maintained in accordance with the applicable building code.

2. Delete Section 1017.2 and Table 1017.2.

3. Delete Section 1017.2.1.

4. Delete Section 1017.2.2.

5. Delete Section 1017.3.

6. Delete Section 1017.3.1.

Q. The following changes shall be made to Section 1018, Aisles:

1. Change Section 1018.1 to read:

~~(N)~~1018.1 General. Aisles and aisle accessways serving as a portion of the exit access in the means of egress system shall be maintained in accordance with the applicable building code.

2. Change Section 1018.2 to read:

~~(N)~~1018.2 Aisles in assembly spaces. Aisles and aisle accessways serving a room or space used for assembly purposes shall be maintained in accordance with the applicable building code.

3. Change Section 1018.3 to read:

~~(N)~~1018.3 Aisles in Groups B and M. In Groups B and M occupancies, the aisle width shall be maintained in accordance with the applicable building code.

4. Change Section 1018.4 to read:

~~(N)~~1018.4 Aisle accessways in Group M. Aisle accessways in Group M shall be maintained in accordance with the applicable building code.

5. Change Section 1018.5 to read:

~~(N)~~1018.5 Aisles in other than assembly spaces and Groups B and M. Aisles in other than assembly spaces and Groups B and M shall be maintained in accordance with the applicable building code.

R. The following changes shall be made to Section 1019, Exit Access Stairways and Ramps.

1. Change Section 1019.1 to read:

~~(N)~~1019.1 General. Exit access stairways and ramps serving as an exit access component in a means of egress system shall be maintained in accordance with the applicable building code.

2. Delete Section 1019.2.

3. Delete Section 1019.3.

4. Delete Section 1019.4.

S. The following changes shall be made to Section 1020, Corridors:

1. Change Section 1020.1 to read:

~~(N)~~1020.1 Maintenance. Corridors shall be maintained in accordance with the applicable building code.

2. Delete Table 1020.1.

3. Change Section 1020.2 to read:

~~(N)~~1020.2 Width and capacity. The width and capacity of corridors shall be maintained in accordance with the applicable building code.

4. Delete Table 1020.2.

5. Delete Section 1020.4.

6. Delete Section 1020.5.

7. Delete Section 1020.5.1.

8. Change Section 1020.6 to read:

~~(N)~~1020.6 Corridor continuity. The continuity of fire-resistance-rated corridors shall be maintained in accordance with the applicable building code.

T. The following changes shall be made to Section 1021, Egress Balconies:

1. Change Section 1021.1 to read:

~~(N)~~1021.1 General. Balconies used for egress purposes shall be maintained in accordance with the applicable building code.

2. Change Section 1021.2 to read:

~~(N)~~1021.2 Wall separation. Wall separation for egress balconies shall be maintained in accordance with the applicable building code.

3. Delete Section 1021.3.

4. Change Section 1021.4 to read:

~~(N)~~1021.4 Location. The fire separation distance for exterior egress balconies shall be maintained in accordance with the applicable building code.

U. The following changes shall be made to Section 1022, Exits:

1. Change Section 1022.1 to read:

~~(N)~~1022.1 General. An exit shall not be used for any purpose that interferes with its function as a means of egress. Once a given level of exit protection is achieved, such level of protection shall not be reduced until arrival at the exit discharge. Exits shall be continuous from the point of entry into the exit to the exit discharge. Exits shall be maintained in accordance with the applicable building code.

2. Change Section 1022.2 to read:

~~(N)~~1022.2 Exterior exit doors. Exterior exit doors shall be maintained in accordance with the applicable building code.

3. Delete Section 1022.2.1.

4. Delete Section 1022.2.2.

V. The following changes shall be made to Section 1023, Interior Exit Stairways and Ramps:

1. Change Section 1023.1 to read:

~~(N)~~1023.1 General. Interior exit stairways and ramps serving as an exit component in a means of egress system shall be maintained in accordance with the applicable building code.

2. Delete Section 1023.2.

3. Delete Section 1023.3.

4. Delete Section 1023.3.1.

5. Change Section 1023.4 to read:

~~(N)~~1023.4 Openings. Interior exit stairway and ramp opening protectives shall be maintained in accordance with the applicable building code.

6. Delete Section 1023.5.

7. Change Section 1023.6 to read:

~~(N)~~1023.6 Ventilation. Equipment and ductwork for interior exit stairway and ramp ventilation shall be maintained in accordance with the applicable building code.

8. Change Section 1023.7 to read:

~~(N)~~1023.7 Interior exit stairway and ramp exterior walls. Exterior walls of the interior exit stairway or ramp shall be maintained in accordance with the applicable building code.

9. Change Section 1023.8 to read:

~~(N)~~1023.8 Discharge identification. An interior exit stairway and ramp shall not continue below its level of exit discharge unless an approved barrier is provided at the level of exit discharge to prevent persons from unintentionally continuing into levels below. Directional exit signs shall be provided and maintained in accordance with the applicable building code.

10. Change Section 1023.9.1 to read:

~~(N)~~1023.9.1 Signage requirements. Stairway identification signs shall comply with all of the following requirements:

1. The signs shall be a minimum size of 18 inches (457 mm) by 12 inches (305 mm).

2. The letters designating the identification of the interior exit stairway and ramp shall be not less than 1-1/2 inches (38 mm) in height.

3. The number designating the floor level shall be not less than of 5 inches (127 mm) in height and located in the center of the sign.

4. Other lettering and numbers shall be not less than 1 inch (25 mm) in height.

5. Characters and their background shall have a nonglare finish. Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.

11. Change Section 1023.10 to read:

~~(N)~~1023.10 Elevator lobby identification signs. At landings in interior exit stairways where two or more doors lead to the floor level, any door with direct access to an enclosed elevator lobby shall be identified by signage located on the door or directly adjacent to the door stating "Elevator Lobby." Signage shall be in accordance with Section 1023.9.1, Items 4 and 5.

12. Change Section 1023.11 to read:

~~(N)~~1023.11 Smokeproof enclosures. Smokeproof enclosures shall be maintained in accordance with the applicable building code.

13. Delete Section 1023.11.1.

14. Delete Section 1023.11.2.

15. Delete Section 1023.12.

W. The following changes shall be made to Section 1024, Exit Passageways:

1. Change Section 1024.1 to read:

~~(N)~~1024.1 Exit passageways. Exit passageways serving as an exit component in a means of egress system shall be maintained in accordance with the applicable building code.

2. Change Section 1024.2 to read:

~~(N)~~1024.2 Width. The minimum width or required capacity of exit passageways shall be maintained in accordance with the applicable building code.

3. Delete Section 1024.3.

4. Delete Section 1024.4.

5. Change Section 1024.5 to read:

~~(N)~~1024.5 Openings. Exit passageway opening protectives shall be maintained in accordance with the applicable building code.

6. Change Section 1024.6 to read:

~~(N)~~1024.6 Penetrations. Penetration protection shall be maintained in accordance with the applicable building code.

7. Change Section 1024.7 to read:

~~(N)~~1024.7 Ventilation. Equipment and ductwork for exit passageway ventilation shall be maintained in accordance with the applicable building code.

X. The following changes shall be made to Section 1025, Luminous Egress Path Markings:

1. Change Section 1025.1 to read:

~~(N)~~1025.1 General. Luminous egress path markings shall be maintained in accordance with the applicable building code.

2. Change Section 1025.2 to read:

~~(N)~~1025.2 Markings within exit components. Egress path markings provided in interior exit stairways, interior exit ramps, and exit passageways shall be maintained in accordance with the applicable building code.

3. Delete Section 1025.2.1.

4. Delete Section 1025.2.2.

5. Delete Section 1025.2.3.

6. Delete Section 1025.2.4

7. Delete Section 1025.2.4.1.

8. Delete Section 1025.2.4.2.

9. Delete Section 1025.2.4.3.

10. Delete Section 1025.2.5.

11. Delete Section 1025.2.6.

12. Delete Section 1025.2.6.1.

13. Delete Section 1025.2.6.2.

14. Delete Section 1025.2.6.3.

15. Delete Section 1025.3.

16. Change Section 1025.4 to read:

~~(N)~~1025.4 Self-luminous and photoluminescent. Self-luminous and photoluminescent egress path markings shall be maintained in accordance with the applicable building code.

17. Change Section 1025.5 to read:

~~(N)~~1025.5 Illumination. Photoluminescent exit path markings shall be maintained in accordance with the applicable building code.

Y. The following changes shall be made to Section 1026, Horizontal Exits:

1. Change Section 1026.1 to read:

~~(N)~~1026.1 Horizontal exits. Horizontal exits serving as an exit in a means of egress system shall be maintained in accordance with the applicable building code.

2. Change Section 1026.2 to read:

~~(N)~~1026.2 Separation. The separation between buildings or refuge areas connected by a horizontal exit shall be maintained in accordance with the applicable building code.

3. Change Section 1026.3 to read:

~~(N)~~1026.3 Opening protectives. Fire doors in horizontal exits shall be maintained in accordance with the applicable building code.

4. Change Section 1026.4 to read:

~~(N)~~1026.4 Refuge area. Where provided, the refuge area of a horizontal exit shall be maintained in accordance with the applicable building code.

5. Delete Section 1026.4.1.

6. Delete Section 1026.4.2.

Z. The following changes shall be made to Section 1027, Exterior Exit Stairways and Ramps:

1. Change Section 1027.1 to read:

~~(N)~~1027.1 Exterior exit stairways and ramps. Exterior exit stairways and ramps serving as an element of a required means of egress shall be maintained in accordance with the applicable building code.

2. Change Section 1027.2 to read:

~~(N)~~1027.2 Use in a means of egress. Exterior exit stairways shall not be used as an element of a required means of egress.

3. Delete Section 1027.3.

4. Delete Section 1027.4.

5. Delete Section 1027.5.

6. Delete Section 1027.6.

AA. The following changes shall be made to Section 1028, Exit Discharge:

1. Change Section 1028.1 to read:

~~(N)~~1028.1 General. The exit discharge shall be maintained in accordance with the applicable building code.

2. Change Section 1028.2 to read:

~~(N)~~1028.2 Exit discharge width or capacity. The minimum width or required capacity of the exit discharge shall be maintained in accordance with the applicable building code.

3. Change Section 1028.3 to read:

~~(N)~~1028.3 Exit discharge components. Exit discharge components shall be maintained in accordance with the applicable building code.

4. Change Section 1028.4 to read:

~~(N)~~1028.4 Egress courts. Egress courts serving as a portion of the exit discharge in the means of egress system shall be maintained in accordance with the applicable building code.

5. Change Section 1028.4.1 to read:

~~(N)~~1028.4.1 Width or capacity. The required capacity of egress courts shall be maintained in accordance with the applicable building code.

6. Delete Section 1028.4.2.

7. Change Section 1028.5 to read:

~~(N)~~1028.5 Access to a public way. Where provided, access to a public way shall be maintained in accordance with the applicable building code.

Exception: Where access to a public way cannot be provided, a safe dispersal area shall be provided where all of the following are met:

1. The area shall be of a size to accommodate not less than 5 square feet (0.46 m^2) for each person.

2. The area shall be located on the same lot not less than 50 feet (15 240 mm) away from the building requiring egress.

3. The area shall be permanently maintained and identified as a safe dispersal area.

4. The area shall be provided with a safe and unobstructed path of travel from the building.

BB. The following changes shall be made to Section 1029, Assembly:

1. Change Section 1029.1 to read:

~~(N)~~1029.1 General. The means of egress serving a room or space used for assembly purposes that contains seats, tables, displays, equipment or other material shall be maintained in accordance with the applicable building code.

2. Delete Section 1029.1.1.

3. Delete Section 1029.1.1.1.

4. Change Section 1029.2 to read:

~~(N)~~1029.2 Assembly main exit. The assembly main exit shall be maintained in accordance with the applicable building code.

5. Change Section 1029.3 to read:

~~(N)~~1029.3 Assembly other exits. Other assembly exits shall be maintained in accordance with the applicable building code.

6. Delete Section 1029.4.

7. Change Section 1029.5 to read:

~~(N)~~1029.5 Interior balcony and gallery means of egress. Interior balcony and gallery means of egress shall be maintained in accordance with the applicable building code.

8. Change Section 1029.6 to read:

~~(N)~~1029.6 Capacity of aisle for assembly. The required capacity of aisles shall be maintained in accordance with the applicable building code.

9. Delete Section 1029.6.1.

10. Delete Section 1029.6.2 and Table 1029.6.2.

11. Delete Section 1029.6.2.1.

12. Delete Section 1029.6.2.2.

13. Delete Section 1029.6.2.3.

14. Delete Section 1029.6.3.

15. Change Section 1029.7 to read:

~~(N)~~1029.7 Travel distance. Travel distance shall be maintained in accordance with the applicable building code.

16. Change Section 1029.8 to read:

~~(N)~~1029.8 Common path of egress travel. The common path of egress travel shall be maintained in accordance with the applicable building code.

17. Delete Section 1029.8.1.

18. Change Section 1029.9 to read:

~~(N)~~1029.9 Assembly aisles are required. Assembly aisles shall be maintained in accordance with the applicable building code.

19. Change Section 1029.9.1 to read:

~~(N)~~1029.9.1 Minimum aisle width. The minimum clear width for aisles shall be maintained in accordance with the applicable building code.

20. Delete Section 1029.9.2.

21. Delete Section 1029.9.3.

22. Delete Section 1029.9.4.

23. Delete Section 1029.9.5

24. Delete Section 1029.9.6.

25. Delete Section 1029.9.7.

26. Delete Section 1029.9.8.

27. Change Section 1029.10 to read:

~~(N)~~1029.10 Transitions. Transitions between stairways and stepped aisles shall be maintained in accordance with the applicable building code.

28. Delete Section 1029.10.1.

29. Delete Section 1029.10.2.

30. Delete Section 1029.10.2.1.

31. Delete Section 1029.10.2.2.

32. Delete Section 1029.10.3.

33. Delete Section 1029.11.

34. Delete Section 1029.11.1.

35. Delete Section 1029.11.2.

36. ~~Change~~ Delete Section 1029.12 ~~to read:~~.

~~(N)1029.12 Aisle accessways. Aisle accessways for seating at tables shall maintained in accordance with the applicable building code.~~

37. Delete Section 1029.12.1.

38~~. Delete Section 1029.12.1.1.~~

3~~9. Delete Section 1029.12.1.2.~~

~~40.~~ Delete Section 1029.12.2.

~~41. Delete Section 1029.12.2.1 and Table 1029.12.2.1.~~

~~42. Delete Section 1029.12.2.2.~~

~~43.~~ 39. Change Section 1029.13 to read:

1029.13 Aisle accessways. Aisle accessways for seating at tables shall be maintained in accordance with the applicable building code.

~~(N)1029.13 Assembly aisle walking surfaces. Ramped and stepped aisles shall be maintained in accordance with the applicable building code.~~

~~44.~~ 40. Delete Section 1029.13.1.

~~45.~~ 41. Delete Section 1029.13.1.1.

~~46.~~ 42. Delete Section 1029.13.1.2.

~~47. Delete Section 1029.13.1.3.~~

~~48.~~ 43. Delete Section 1029.13.2.

~~49.~~ 44. Delete Section 1029.13.2.1 and Table 1029.13.2.1.

~~50.~~ 45. Delete Section 1029.13.2.2.

~~51. Delete Section 1029.13.2.2.1.~~

~~52. Delete Section 1029.13.2.3.~~

~~53. Delete Section 1029.13.2.4.~~

~~54. Delete~~ 46. Change Section 1029.14 to read.

1029.14 Assembly aisle walking surfaces. Ramped and stepped aisles shall be maintained in accordance with the applicable building code.

~~55.~~ 47. Delete Sections 1029.14.1 through 1029.15

48. Change Section ~~1029.15~~ 1029.16 to read:

~~(N)1029.15~~ 1029.16 Handrails. Handrails serving ramped aisles shall be maintained in accordance with the applicable building code.

~~56. Delete Section 1029.15.1.~~

~~57. Delete Section 1029.15.2.~~

~~58. Delete Section 1029.15.3.~~

~~59. Delete Section 1029.15.4.~~

~~60. Change Section 1029.16 to read:~~

~~(N)1029.16 Assembly guards. Guards adjacent to seating in a building, room or space used for assembly purposes shall be maintained in accordance with the applicable building code.~~

~~61~~ 49.~~Change~~ Delete Section 1029.16.1 ~~to read:~~.

~~(N)1029.16.1 Perimeter guards. Perimeter guards shall be maintained in accordance with the applicable building code.~~

~~62.~~ 50. Delete Section 1029.16.2.

~~63.~~ 51. Delete Section 1029.16.3.

~~64.~~ 52. Delete Section 1029.16.4.

53. Change Sections 1029.17 and 1029.17.1 to read:

1029.17 Assembly guards. Guards adjacent to seating in a building, room or space used for assembly purposes shall be maintained in accordance with the applicable building code.

1029.17.1 Perimeter guards. Perimeter guards shall be maintained in accordance with the applicable building code.

54. Delete Sections 1029.17.2 through 1029.17.4.

CC. The following changes shall be made to Section 1030, Emergency Escape and Rescue:

1. Change Section 1030.1 and delete Section 1030.1.1 ~~to read:~~.

~~(N)~~1030.1 General. Emergency escape and rescue components of a building shall be maintained in accordance with the applicable building code.

2. Change Section 1030.2 to read:

~~(N)~~1030.2 Minimum size. Emergency escape and rescue openings shall be maintained in accordance with the applicable building code.

3. Delete Section 1030.2.1.

4. Change Section 1030.3 to read:

~~(N)~~1030.3 Maximum height from floor. Emergency escape and rescue opening height shall be maintained in accordance with the applicable building code.

5. Change Section 1030.4 to read:

~~1030.4 Operational constraints. The operation of emergency escape and rescue openings shall be maintained in accordance with the applicable building code.~~

~~6. Change Section 1030.5 to read:~~

~~(N)1030.5~~ 1030.4 Window wells. Window wells shall be maintained in accordance with the applicable building code.

7. Delete Section ~~1030.5.1~~ 1030.4.1 and 1030.4.2.

8. ~~Delete~~ Change Section ~~1030.5.2~~ 1030.5 to read:~~.~~

1030.5 Operational constraints. The operation of emergency escape and rescue openings shall be maintained in accordance with the applicable building code.

13VAC5-51-138. ~~Ifc~~ IFC Chapter 11 Construction Requirements for Existing Buildings.

Delete Chapter 11 in its entirety.

13VAC5-51-138.1. IFC Chapter 12 Energy Systems.

A. Make the following changes to Section 1201, General.

1. Change Section 1201.1 and 1201.2 to read:

1201.1 Scope. The provisions of this chapter shall apply to the operation and maintenance of energy systems used for generating or storing energy.

1201.2 Electrical wiring and equipment. Electrical wiring and equipment used in connection with energy systems shall be maintained in accordance with the applicable building code.

2. Delete Section 1201.3.

B. Make the following changes to Section 1203, Emergency and standby power systems.

1. Change Sections 1203.1 and 1203.1.1 to read:

1203.1 General. Emergency power systems and standby power systems shall be maintained in accordance with the applicable building code.

1203.1.1 Generators. Emergency and standby power generators shall be listed.

2. Delete Section 1203.1.2 and 1203.1.3.

3. Change Section 1203.1.4 to read:

1203.1.4 Load transfer. Emergency power systems shall automatically provide secondary power within 10 seconds after primary power is lost unless specified otherwise by the applicable building code. Standby power systems shall automatically provide secondary power within 60 seconds after primary power is lost unless specified otherwise by the applicable building code.

4. Change Section 1203.1.5 to read:

1203.1.5 Load duration. Emergency power systems and standby power systems shall require power for a minimum duration of hours without being refueled or recharged, unless otherwise specified by the applicable building code.

5. Change Section 1203.1.6 to read:

1203.1.6 Uninterruptable power source. An uninterrupted source of power shall be provided for equipment where required by the manufacturer's instructions, the listing, the applicable building code, or the applicable referenced standards.

6. Change Section1203.1.7 to read:

1203.1.7 Interchangeability. Emergency power systems shall be an acceptable alternative for installations that require standby power systems when permitted by the applicable building code.

7. Delete Section 1203.1.8.

8. Change Section 1203.1.9 to read:

1203.1.9 Maintenance. Existing installations shall be maintained in accordance with the original approval and Section 1203.4.

9. Change Section 1203.2 to read:

1203.2 Specific equipment requirements. Emergency and standby power systems shall be maintained in accordance with Sections 1203.2.1 through 1203.2.18.

10. Change Section 1203.2.2 to read:

1203.2.2 Elevators and platform lifts. Standby power shall be maintained in accordance with NFPA 72 for elevators and platform lifts required by the applicable building code.

11. Delete Section 1203.2.3.

12. Change Section 1203.2.4 to read:

1203.2.4 Emergency voice or alarm communication systems. Emergency power shall be maintained for emergency voice or alarm communication systems as required by the applicable building code. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.

13. Change Section 1203.2.5 to read:

1203.2.5 Exit signs. Emergency power for exit signs shall be capable of powering the required load for a duration of not less than 90 minutes unless otherwise specified by the applicable building code.

14. Change Section 1203.2.6 to read:

1203.2.6 Gas detection systems. Emergency power and standby power shall be maintained for gas detection systems in accordance with the applicable building code.

15. Change Section 1203.2.7 to read:

1203.2.7 Group I-2 occupancies. Essential electrical systems for Group I-2 occupancies shall be maintained in accordance with NFPA 70 when required by the applicable building code.

16. Change Section 1203.2.8 to read:

1203.2.8 Group I-3 occupancies. Power-operated sliding doors or power-operated locks for swinging doors in Group I-3 occupancies shall be operable by a manual release mechanism at the door and emergency power provided for the doors and locks shall be maintained where required by the applicable building code.

17. Change Section 1203.2.9 to read:

1203.2.9 Hazardous materials. Emergency and standby power shall be maintained in accordance with NFPA 70 in occupancies with hazardous materials when required by the applicable building code.

18. Delete Section 1203.2.10.

19. Change Section 1203.2.11 to read:

1203.2.11 Horizontal sliding doors. Standby power shall be maintained in accordance with NFPA 70 for horizontal sliding doors as required by the applicable building code. The standby power supply shall have a capacity to operate not fewer than 50 closing cycles of the door unless otherwise specified by the applicable building code.

20. Change Section 1203.2.12 to read:

1203.2.12 Hydrogen fuel gas rooms. Standby power shall be maintained in accordance with NFPA 70 for hydrogen fuel gas rooms as required by the applicable building code.

21. Change Section 1203.2.13 Laboratory suites to read:

1203.2.13 Laboratory suites. Standby or emergency power for laboratory suites shall be maintained in accordance with the applicable building code.

22. Change Section 1203.2.14 to read:

1203.2.14 Means of egress illumination. Emergency power shall be maintained for means of egress illumination in accordance with the applicable building code.

23. Change Section 1203.2.15 to read:

1203.2.15 Membrane structures. Standby power shall be maintained for auxiliary inflation systems in permanent membrane structures in accordance with applicable building code. Auxiliary inflation systems shall be provided in temporary air-supported and air-inflated membrane structures in accordance with Section 3103.10.4.

24. Change Section 1203.2.16 to read:

1203.2.16 Semiconductor fabrication facilities. Emergency power shall be maintained in accordance with NFPA 70 for semiconductor fabrication facilities as required by the applicable building code.

25. Change Section 1203.2.17 to read:

1203.2.17 Smoke control systems. Standby power shall be maintained in accordance with NFPA 70 for smoke control as required by the applicable building code.

26. Change Section 1203.2.18 to read:

1203.2.18 Underground buildings. Emergency and standby power shall be maintained in accordance with NFPA 70 in underground buildings as required by the applicable building code.

27. Change Section 1203.3 to read:

1203.3 Critical circuits. Cables used for survivability of required critical circuits shall be listed. Electrical circuit protective systems shall be maintained in accordance with their listing requirements.

28. Change Section 1203.4 to read:

1203.4 Maintenance. Emergency and standby power systems shall be maintained in accordance with NFPA 70, NFPA 110, and NFPA 111 such that the system is capable of supplying service within the time specified for the type and duration required in accordance with the applicable building code.

29. Change Section 1203.5 to read:

1203.5 Operational inspection and testing. Emergency power systems, including all appurtenant components, shall be inspected and tested under load in accordance with NFPA 110, NFPA 70, and NFPA 111.

Exception: Where the emergency power system is used for standby power or peak load shaving, such use shall be recorded and shall be allowed to be substituted for scheduled testing of the generator set, provided that appropriate records are maintained.

30. Add Section 1203.7 to read:

1203.7 Testing of battery powered emergency lights and exit signs. Required emergency lighting utilizing battery powered emergency lights or exit signs, or both, shall be tested annually. The emergency lights and exit signs shall be tested for proper operation for the time period established in the building code in effect when the equipment was installed. Written records of tests shall be retained by the owner of the building for a minimum of two years after the test is conducted and shall be made available to the fire code official upon request.

C. Make the following changes to Section 1204, Solar photovoltaic power systems.

1. Change Section 1204.1 to read:

~~(N)~~1204.1 General. Solar photovoltaic power systems shall be maintained in accordance with Sections 1204.2 through 1204.5 and the applicable building code.

2. Change Section 1204.2 to read:

~~(N)~~1204.2 Access and pathways. Roof access, pathways, and spacing requirements shall be maintained in accordance with the applicable building code.

3. Delete Sections 1204.2.1 through 1204.3.3

4. Change Section 1204.4 to read:

~~(N)~~1204.4 Ground-mounted photovoltaic arrays. A clear, brush-free area of 10 feet (3048 mm) shall be maintained for ground-mounted photovoltaic arrays.

D. Make the following changes to Section 1205, Stationary fuel cell power systems.

1. Change Section 1205.1 to read:

1205.1 General. Stationary fuel cell power systems shall be maintained in accordance with the applicable building code.

2. Delete section 1205.2 and 1205.3.

3. Change Section 1205.4 to read:

1205.4 Maintenance. Stationary fuel cell power systems shall be maintained in accordance with the applicable building code, NFPA 70 and NFPA 853, the manufacturer's instructions, and the listing. Stationary fuel cell power systems fueled by hydrogen shall be maintained in accordance with the applicable building code, NFPA 2 and NFPA 70, the manufacturer's installation instructions, and the listing.

4. Delete Sections 1205.5 through 1205.6.2 and 1205.8 through 1205.13.1.

E. Make the following changes to Section 1206, Electric storage energy systems.

1. Change Section 1206.2 to read:

1206.2 Stationary storage battery systems. Stationary storage battery systems shall be maintained in accordance with the applicable building code.

2. Delete Sections 1206.2.1 through 1206.2.4 including Table 1206.2 and change Section 1206.2.7 to read:

1206.2.7 Testing, maintenance and repair. Storage batteries and associated equipment and systems shall be tested and maintained in accordance with the manufacturer's instructions and the applicable building code.

3. Delete Sections 1206.2.8 through 1206.2.8.5.1.

4. Delete Sections 1206.2.8.7 through 1206.2.12.6 including Table 1206.2.9.

5. Change Section 1206.3 to read:

1206.3 Capacitor energy storage systems. Capacitor energy storage systems shall be maintained in accordance with the applicable building code.

6. Delete Sections 1206.3.1 through 1206.3.2.3.

7. Delete Sections 1206.3.2.6 through 1206.3.5.4.

8. Change Section 1206.3.6 to read:

1206.3.6 Testing, maintenance and repair. Capacitors and associated equipment and systems shall be tested maintained and repaired in accordance with the manufacturer's instructions and the applicable building code.

13VAC5-51-138.4. ~~Ifc~~ IFC Chapter 20 Aviation Facilities.

A. The following change shall be made to Section 2001, General:

Change Section 2001.3 to read:

2001.3 Permits. For permits to operate aircraft-refueling vehicles, application of flammable or combustible finishes and hot work, see Section 107.2.

B. The following changes shall be made to Section 2007, Helistops and Heliports:

1. Change Section 2007.1 to read:

~~(N)~~2007.1 General. Helistops and heliports shall be maintained in accordance with the applicable building code.

2. Change Section 2007.4 to read:

2007.4 Exits. Exits and stairways shall be maintained in accordance with the applicable building code.

3. Change Section 2007.5 to read:

~~(N)~~2007.5 Standpipe systems. Where provided, standpipe systems shall be maintained in accordance with the applicable code.

4. Change Section 2007.6 to read:

~~(N)~~2007.6 Foam protection. Where provided, foam fire-protection systems shall be maintained in accordance with the applicable building code.

13VAC5-51-138.8. ~~Ifc~~ IFC Chapter 21 Dry Cleaning.

A. The following change shall be made to Section 2101, General:

Change Section 2101.2 to read:

2101.2 Permit required. Permits shall be required as set forth in Section 107.2.

B. The following change shall be made to Section 2103, Classifications:

Change Section 2103.3 to read:

2103.3 Design. The occupancy classification, design and construction of dry cleaning plants shall be maintained in accordance with the applicable building code.

C. The following changes shall be made to Section 2104, General Requirements:

1. Change Section 2104.2.1 to read:

~~(N)~~2104.2.1 Ventilation. Ventilation shall be maintained in accordance with the applicable building code.

2. Change Section 2104.2.3 to read as follows:

2104.2.3 Electrical wiring and equipment. Electrical wiring and equipment in dry cleaning rooms or other locations subject to flammable vapors shall be maintained in accordance with the applicable building code.

D. The following changes shall be made to Section 2105, Operating Requirements:

1. Change Section 2105.2.3 to read:

~~(N)~~2105.2.3 Ventilation. Ventilation shall be maintained in accordance with the applicable building code.

2. Change Section 2105.3 to read:

~~(N)~~2105.3 Types IV and V systems. Types IV and V dry cleaning systems shall be maintained in accordance with the applicable building code.

E. The following change shall be made to Section 2106, Spotting and Pretreating:

Change Section 2106.3 to read as follows:

2106.3 Class II or III solvents. Scouring, brushing, and spotting and pretreating shall be permitted to be conducted with Class II or III solvents. The maximum quantity of Class II or III solvents permitted at any work station shall be 1 gallon (4 L).

F. The following changes shall be made to Section 2107, Dry Cleaning Systems:

1. Change Section 2107.1 to read as follows:

2107.1 General equipment requirements. Dry cleaning systems, including dry cleaning units, washing machines, stills, drying cabinets, tumblers and their appurtenances, including pumps, piping, valves, filters and solvent coolers, shall be maintained in accordance with NFPA 32.

2. Delete Section 2107.2.

3. Change ~~Section~~ Sections 2107.2.1 and 2107.2.2 to read:

2107.2.1 Fire-fighting access. Where required by the applicable building code, access shall be maintained from one side of type II dry cleaning rooms, for fire-fighting and fire control purposes in accordance with Section 503.

~~(N)~~2107.2.2 Number of means of egress. The number and means of egress for Type II dry cleaning rooms shall be maintained in accordance with the applicable building code.

4. Change Section 2107.2.3 to read as follows:

2107.2.3 Spill control and secondary containment. Curbs, drains or other provisions for spill control and secondary containment shall be maintained in accordance with the applicable building code.

5. Change Section 2107.3 to read as follows:

2107.3 Solvent storage tanks. Solvent storage tanks for Classes II, IIIA and IIIB liquids shall be maintained in accordance with the applicable building code.

G. The following changes shall be made to Section 2108, Fire Protection:

1. Change Section 2108.1 to read as follows:

2108.1 General. Fire protection systems, devices, and equipment shall be maintained in accordance with the applicable building code.

2. Change Section 2108.2 to read:

~~(N)~~2108.2 Automatic sprinkler system. Where installed, an automatic sprinkler system shall be maintained in accordance with the applicable building code.

3. Delete Section 2108.3.

13VAC5-51-139. ~~Ifc~~ IFC Chapter 22 Combustible Dust-Producing Operations.

A. Change Section 2201.2 to read:

2201.2 Permits. Permits shall be required for combustible dust-producing operations as set forth in Section 107.2.

B. Delete Sections 2203.1 and 2303.2.

13VAC5-51-140. ~~Ifc~~ IFC Chapter 23 Motor Fuel-Dispensing Facilities and Repair Garages.

A. The following changes shall be made to Section 2301, General:

1. Change Section 2301.1 to read:

2301.1 Scope. The operation and maintenance of automotive motor fuel-dispensing facilities, marine motor fuel-dispensing facilities, fleet vehicle motor fuel-dispensing facilities, aircraft motorvehicle fuel-dispensing facilities, and repair garages shall be in accordance with this chapter. Such operations shall include both those that are accessible to the public and private operations.

2. Change Section 2301.2 to read:

2301.2 Permits. Permits shall be required as set forth in Section 107.2.

3. Delete Section 2301.3.

4. Change Section 2301.4 to read:

~~(N)~~2301.4 Indoor motor fuel-dispensing facilities. Motor fuel-dispensing facilities located inside buildings shall be maintained in accordance with NFPA 30A and the applicable building code.

5. Change Section 2301.5 to read:

~~(N)~~2301.5 Electrical. Electrical wiring and equipment shall be maintained in accordance with NFPA 30A and the applicable building code.

6. Change Section 2301.6 to read:

2301.6 Heat-producing appliances. Heat-producing appliances shall be suitable for the locations in which they are installed and shall comply with NFPA 30A.

B. The following changes shall be made to Section 2303, Location of Dispensing Devices:

1. Change Section 2303.1 to read:

~~(N)~~2303.1 Location of dispensing devices. Dispensing devices shall be maintained in accordance with the applicable building code.

2. Change Section 2303.2 ~~to read~~ and delete Section 2303.2.1~~:~~.

~~(N)~~2303.2 Emergency disconnect switches. Emergency disconnect switches shall be maintained in accordance with the applicable building code.

C. The following changes shall be made to Section 2304, Dispensing Operations:

1. Change Section 2304.2.2 to read:

~~(N)~~2304.2.2 Emergency controls. Approved emergency controls shall be provided in accordance with the applicable building code.

2. Change Section 2304.3.2 to read:

~~(N)~~2304.3.2 Dispensers. Dispensing devices shall be maintained in accordance with the applicable building code.

3. Change Section 2304.3.3 to read:

2304.3.3 Emergency controls. Approved emergency controls shall be maintained in accordance with the applicable building code. Emergency controls shall be of a type that is only manually resettable.

4. Change Section 2304.3.5 to read:

2304.3.5 Emergency procedures. An approved emergency procedures sign, in addition to the signs required by Section 2305.6, shall be posted and maintained in a conspicuous location and shall read:

IN CASE OF FIRE SPILL OR RELEASE
1. USE EMERGENCY PUMP SHUTOFF
2. REPORT THE ACCIDENT!
FIRE DEPARTMENT TELEPHONE NO.________
FACILITY ADDRESS:_______________________

D. The following changes shall be made to Section 2305, Operational Requirements:

1. Change Section 2305.2.4 to read:

2305.2.4 Emergency shutoff valves. Automatic emergency shutoff valves shall be checked not less than once each year by manually tripping the hold-open linkage.

2. Change Section 2305.2.5 to read:

2305.2.5 Leak detectors. Leak detection devices shall be checked and tested not less than annually in accordance with the manufacturer's specifications to ensure proper installation and operation.

3. Change Section 2305.4 to read:

2305.4 Sources of ignition. Smoking and open flames shall be prohibited within 20 feet (6096 mm) of a fuel dispensing device. The engines of vehicles being fueled shall be shut off during fueling. Electrical equipment shall be in accordance with NFPA 70.

E. The following changes shall be made to Section 2306, Flammable and Combustible Liquid Motor Fuel-Dispensing Facilities:

1. Change Section 2306.1 to read:

2306.1 General. Operation and maintenance of flammable and combustible liquid motor fuel-dispensing facilities shall be in accordance with Chapter 57 and Sections 2306.2 through 2306.6.3 and other applicable provisions of this code.

2. Change Section 2306.2.1.1 to read:

2306.2.1.1 Inventory control and leak detection for underground tanks. Accurate inventory records shall be maintained on underground fuel storage tanks for indication of possible leakage from tanks and piping. The records shall be kept at the premises or made available for inspection by the fire official within 24 hours of a written or verbal request and shall include records for each tank. Where there is more than one system consisting of tanks serving separate pumps or dispensers for a product, the inventory record shall be maintained separately for each tank system.

Owners and operators of underground fuel storage tanks shall provide release detection for tanks and piping that routinely contain flammable and combustible liquids in accordance with one of the following methods:

1. Monthly inventory control to detect a release of at least 1.0% of flow-through plus 130 gallons.

2. Manual tank gauging for tanks with 2,000 gallon capacity or less when measurements are taken at the beginning and ending of a 36-hour to 58-hour period during which no liquid is added to or removed from the tank.

3. Tank tightness testing capable of detecting a 0.1 gallon per hour leak rate.

4. Automatic tank gauging that tests for loss of liquid.

5. Vapor monitoring for vapors within the soil of the tank field.

6. Groundwater monitoring when the groundwater is never more than 20 feet from the ground surface.

7. Interstitial monitoring between the underground tank and a secondary barrier immediately around or beneath the tank.

8. Other approved methods that have been demonstrated to be as effective in detecting a leak as the methods listed above.

A consistent or accidental loss of product shall be immediately reported to the fire official.

3. Change Section 2306.2.2 to read:

~~(N)~~2306.2.2 Aboveground tanks located inside buildings. Aboveground tanks for the storage of Classes I, II and IIIA liquid fuels located in buildings shall be maintained in accordance with the applicable building code.

4. Change Section 2306.2.3 to read:

~~(N)~~2306.2.3 Aboveground tanks located outside above grade. Aboveground tanks located outside shall be maintained in accordance with the applicable building code.

5. Delete Table 2306.2.3.

6. Change Section 2306.2.4 to read:

~~(N)~~2306.2.4 Aboveground tanks located in above-grade vaults or below-grade vaults. Aboveground tanks located in above-grade vaults or below-grade vaults shall be maintained in accordance with the applicable building code.

7. Delete Section 2306.2.4.1.

8. Change Section 2306.2.4.2 to read:

~~(N)~~2306.2.4.2 Fleet vehicle motor fuel-dispensing facilities. Tanks storing liquids at a fleet vehicle motor fuel-dispensing facility shall be maintained in accordance with the applicable building code.

9. Change Section 2306.2.6 to read:

~~(N)~~2306.2.6 Special enclosures. Special enclosures shall be maintained in accordance with the applicable building code.

10. Change Section 2306.5 to read:

~~(N)~~2306.5 Secondary containment. Aboveground tanks provided with drainage control or diking shall be maintained in accordance with Chapter 57 and the applicable building code.

11. Change Section 2306.6 to read:

~~(N)~~2306.6 Piping, valves, fittings and ancillary equipment for use with flammable or combustible liquids. The design, fabrication, assembly, testing and inspection of piping, valves, fittings and ancillary equipment for use with flammable or combustible liquids shall be maintained in accordance with the applicable building code.

12. Change Section 2306.6.2 to read:

~~(N)~~2306.6.2 Piping, valves, fittings and ancillary equipment for aboveground tanks for Classes I, II and III liquids. Piping, valves, fittings and ancillary equipment for aboveground tanks shall be maintained in accordance with the applicable building code.

13. Delete Section 2306.6.2.1.

14. Change Section 2306.6.2.2 to read:

~~(N)~~2306.6.2.2 Fill-pipe connections. The fill pipe for aboveground tanks shall be maintained in accordance with the applicable building code.

15. Change Section 2306.6.2.3 to read:

~~(N)~~2306.6.2.3 Overfill protection. Overfill protection shall be in accordance with the applicable building code.

16. Change Section 2306.6.2.4 to read:

~~(N)~~2306.6.2.4 Siphon prevention. An approved antisiphon method shall be maintained in accordance with the applicable building code.

17. Change Section 2306.6.2.5 to read:

~~(N)~~2306.6.2.5 Emergency relief venting. Aboveground storage tanks, tank compartments, and enclosed secondary containment spaces shall be maintained in accordance with the applicable building code.

18. Change Section 2306.6.2.6 to read:

~~(N)~~2306.6.2.6 Spill containers. Spill containers shall be maintained in accordance with the applicable building code.

19. Change Section 2306.6.3 to read:

~~(N)~~2306.6.3 Piping, valves, fittings and ancillary equipment for underground tanks. Piping, valves, fittings and ancillary equipment for underground tanks shall be maintained in accordance with the applicable building code.

20. Change Section 2306.7 to read:

~~(N)~~2306.7 Fuel-dispensing systems for flammable or combustible liquids. Fuel-dispensing systems for flammable or combustible liquid fuels shall be maintained in accordance with the applicable building code.

21. Delete Section 2306.7.1.

22. Delete Section 2306.7.2.

23. Change Section 2306.7.3 to read:

~~(N)~~2306.7.3 Mounting of dispensers. Dispensing devices, except those installed on top of a protected aboveground tank that qualifies as vehicle-impact resistant, shall be maintained in accordance with the applicable building code.

24. Change Section 2306.7.4 to read:

~~(N)~~2306.7.4 Dispenser emergency shutoff valve. Dispenser emergency shutoff valves shall be maintained in accordance with the applicable building code.

25. Change Section 2306.7.5 to read:

~~(N)~~2306.7.5 Dispenser hose. Dispenser hoses shall be maintained in accordance with the applicable building code.

26. Change Section 2306.7.5.1 to read:

~~(N)~~2306.7.5.1 Emergency breakaway devices. Emergency breakaway devices shall be maintained in accordance with the applicable building code.

27. Change Section 2306.7.6 to read:

~~(N)~~2306.7.6 Fuel delivery nozzles. Fuel delivery nozzles shall be maintained in accordance with the applicable building code.

28. Delete Section 2306.7.6.1.

29. Change Section 2306.7.7 to read:

~~(N)~~2306.7.7 Remote pumping systems. Remote pumping systems for liquid fuels shall be maintained in accordance with the applicable building code.

30. Change Section 2306.7.7.1 to read:

~~(N)~~2306.7.7.1 Leak detection. Leak detection devices shall be maintained in accordance with the applicable building code.

31. Delete Section 2306.7.7.2.

32. Change Section 2306.7.9 to read:

~~(N)~~2306.7.9 Vapor-recovery and vapor-processing systems. Vapor-recovery and vapor-processing systems shall be maintained in accordance with the applicable building code.

33. Change Section 2306.7.9.1 to read:

~~(N)~~2306.7.9.1 Vapor-balance systems. Vapor-balance systems shall be maintained in accordance with the applicable building code.

34. Change Section 2306.7.9.1.1 to read:

~~(N)~~2306.7.9.1.1 Dispensing devices. Dispensing devices shall be maintained in accordance with the applicable building code.

35. Change Section 2306.7.9.1.2 to read:

~~(N)~~2306.7.9.1.2 Vapor-return line closeoff. Vapor-return line closeoffs shall be maintained in accordance with the applicable building code.

36. Change Section 2306.7.9.1.3 to read:

~~(N)~~2306.7.9.1.3 Piping. Piping in vapor-balance systems shall be maintained in accordance with the applicable building code.

37. Change Section 2306.7.9.1.4 to read:

~~(N)~~2306.7.9.1.4 Flexible joints and shear joints. Flexible joints and shear joints shall be maintained in accordance with the applicable building code.

38. Delete Section 2306.7.9.1.5.

39. Change Section 2306.7.9.2 to read:

~~(N)~~2306.7.9.2 Vapor-processing systems. Vapor-processing systems shall be maintained in accordance with the applicable building code.

40. Change Section 2306.7.9.2.1 to read:

~~(N)~~2306.7.9.2.1 Equipment. Equipment in vapor-processing systems, including hose nozzle valves, vapor pumps, flame arresters, fire checks or systems for prevention of flame propagation, controls, and vapor-processing equipment, shall be maintained in accordance with the applicable building code.

41. Delete Section 2306.7.9.2.2.

42. Delete Section 2306.7.9.2.2.1.

43. Change Section 2306.7.9.2.2.2 to read:

~~(N)~~2306.7.9.2.2.2 Physical protection. Physical protection for vapor-processing equipment shall be maintained in accordance with the applicable building code.

44. Delete Section 2306.7.9.2.2.3.

45. Delete Section 2306.7.9.2.3.

46. Change Section 2306.7.9.2.4 to read:

~~(N)~~2306.7.9.2.4 Piping. Piping in a mechanical-assist system shall be maintained in accordance with the applicable building code.

47. Change Section 2306.8 to read:

~~(N)~~2306.8 Alcohol-blended fuel-dispensing operations. Alcohol-blended fuel-dispensing systems shall be maintained in accordance with the applicable building code.

48. Delete Section 2306.8.2.

49. Delete Section 2306.8.3.

~~50. Delete Section 2306.8.4.~~

F. The following changes shall be made to Section 2307, Liquefied Petroleum Gas Motor Fuel-Dispensing Facilities:

1. Change Section 2307.1 to read:

~~(N)~~2307.1 General. Operation and maintenance of motor fuel-dispensing facilities for liquefied petroleum gas (LP-gas) fuel shall be in accordance with this section and other applicable provisions of this code.

2. Delete Section 2307.2.

3. Delete Section 2307.2.1.

4. Delete Section 2307.2.2.

5. Change Section 2307.3 to read:

2307.3 Attendants. Motor fuel-dispensing operations for LP-gas shall be conducted by qualified attendants or by persons trained in the proper handling of LP-gas.

6. Change Section 2307.4 to read:

~~(N)~~2307.4 Location of dispensing operations and equipment. LP-gas containers shall be located in accordance with the applicable building code.

7. Delete Section 2307.5.

8. Delete Section 2307.6.

9. Delete Section 2307.6.1.

10. Change Section 2307.6.2 to read:

~~(N)~~2307.6.2 Hoses. Hoses and piping for the dispensing of LP-gas shall be maintained in accordance with the applicable building code.

11. Delete Section 2307.6.3.

12. Change Section 2307.7 to read:

~~(N)~~2307.7 Public fueling of motor vehicles. Self-service LP-gas dispensing systems, including key, code, and card lock dispensing systems, shall be limited to the filling of permanently mounted containers providing fuel to the LP-gas powered vehicle.

The requirements for self-service LP-gas dispensing systems shall be in accordance with the following:

> 1. The arrangement and operation of the transfer of product into a vehicle shall be in accordance with this section and Chapter 61.
>
> 2. The owner of the LP-gas motor fuel-dispensing facility or the owner's designee shall provide for the safe operation of the system and the training of users.
>
> 3. Portable fire extinguishers shall be provided in accordance with Section 2305.5.
>
> 4. Warning signs shall be provided in accordance with Section 2305.6.

5. The area around the dispenser shall be maintained in accordance with Section 2305.7.

G. The following changes shall be made to Section 2308, Compressed Natural Gas Motor Fuel-Dispensing Facilities:

1. Change Section 2308.1 to read:

2308.1 General. Motor fuel-dispensing facilities for compressed natural gas (CNG) fuel shall be maintained in accordance with the applicable building code.

2. Change Section 2308.2.2 to read:

~~(N)~~2308.2.2 Listed equipment. Hoses, hose connections, dispensers, gas detection systems, and electrical equipment used for CNG shall be listed. Vehicle-fueling connections shall be listed and labeled and maintained in accordance with the applicable building code.

3. Delete Section 2308.3.

4. Delete Section 2308.3.1.

5. Change Section 2308.5 to read:

~~(N)~~2308.5 Pressure regulators. Pressure regulators shall be maintained in accordance with the applicable building code.

6. Change Section 2308.6 to read:

~~(N)~~2308.6 Valves. Gas piping to equipment shutoff valves shall be maintained in accordance with the applicable building code.

7. Change Section 2308.7 to read:

~~(N)~~2308.7 Emergency shutdown control. Emergency shutdown controls shall be maintained in accordance with the applicable building code.

H. The following changes shall be made to Section 2309, Hydrogen Motor Fuel-Dispensing and Generation Facilities:

1. Change Section 2309.1 to read:

2309.1 General. Operation and maintenance of hydrogen motor fuel-dispensing and generation facilities shall be in accordance with this section and other applicable provisions of this code. Where a fuel-dispensing facility includes a repair garage, the repair operation shall comply with Section 2311.

2. Change Section 2309.2 to read:

~~(N)~~2309.2 Equipment. Equipment used for the generation, compression, storage, or dispensing of hydrogen shall be maintained in accordance with the applicable building code.

3. Change Section 2309.2.1 to read:

~~(N)~~2309.2.1 Approved equipment. Cylinders, containers, and tanks; pressure relief devices, including pressure valves; hydrogen vaporizers; pressure regulators; and piping used for gaseous hydrogen systems shall be maintained in accordance with the applicable building code.

4. Change Section 2309.2.2 to read:

~~(N)~~2309.2.2 Listed or approved equipment. Hoses, hose connections, compressors, hydrogen generators, dispensers, detection systems, and electrical equipment used for hydrogen shall be listed or approved for use with hydrogen and maintained in accordance with the applicable building code.

5. Change Section 2309.2.3 to read:

~~(N)~~2309.2.3 Electrical equipment. Electrical installations shall be maintained in accordance with the applicable building code.

6. Change Section 2309.3 to read:

~~(N)~~2309.3 Location on property. Location of dispensing equipment shall be maintained in accordance with the applicable building code.

7. Change Section 2309.1.1. to read:

~~(N)~~2309.3.1.1 Outdoors. Generation, compression, or storage equipment shall be maintained in accordance with the applicable building code.

8. Change Section 2309.3.1.2 to read:

~~(N)~~2309.3.1.2 Indoors. Generation, compression, storage and dispensing equipment shall be maintained in accordance with the applicable building code.

9. Change Section 2309.3.1.3 to read:

~~(N)~~2309.3.1.3 Gaseous hydrogen storage. Storage of gaseous hydrogen shall be maintained in accordance with the applicable building code.

10. Change Section 2309.3.1.4 to read:

~~(N)~~2309.3.1.4 Liquefied hydrogen storage. Storage of liquefied hydrogen shall be maintained in accordance with the applicable building code.

11. Change Section 2309.3.1.5 to read:

~~(N)~~2309.3.1.5 Canopy tops. Gaseous hydrogen compression and storage equipment located on top of motor fuel-dispensing facility canopies shall be maintained in accordance with the applicable building code.

12. Delete Section 2309.3.1.5.1.

13. Change Section 2309.3.1.5.2 to read:

~~(N)~~2309.3.1.5.2 Fire-extinguishing systems. Fire-extinguishing provided for fuel-dispensing areas under canopies shall be maintained in accordance with the applicable building code.

14. Delete Section 2309.3.1.5.3.

15. Delete Section 2309.3.1.5.4.

16. Delete Section 2309.3.2.

17. Change Section 2309.4.1 to read:

~~(N)~~2309.4.1 Dispensing systems. Dispensing systems shall be maintained in accordance with the applicable building code.

18. Change Section 2309.5 to read:

~~(N)~~2309.5 Safety precautions. Safety precautions at hydrogen motor fuel-dispensing and generation facilities shall be in accordance with Sections 2309.5.1 through 2309.5.3.

19. Change Section 2309.5.2 to read:

~~(N)~~2309.5.2 Emergency shutoff valves. Manual emergency shutoff valves shall be maintained in accordance with the applicable building code.

20. Change Section 2309.5.3 to read:

~~(N)~~2309.5.3 Emergency shutdown controls. Emergency shutdown controls shall be maintained in accordance with the applicable building code.

21. Delete Section 2309.5.3.1.

22. Change Section 2309.6 to read:

2309.6 Repairs, purging, defueling and discharge. The purging, defueling or discharge activities associated with hydrogen motor fuel supply systems and tanks shall be in accordance with Chapters 53 and 58 and NFPA 2.

Exception: The fuel supply piping from the fuel storage tank to the engine compartment on a motor vehicle or forklift.

~~Change Section 2309.6.1.2.1.2 to read:~~

~~(N)2309.6.1.2.1.2 Vent pipe maximum diameter. Vent pipe diameter shall be maintained in accordance with the applicable building code.~~

~~23. Change Section 2309.6.1.2.1.3 to read:~~

~~(N)2309.6.1.2.1.3 Maximum flow rate. The maximum rate of hydrogen flow through the vent pipe system shall be maintained in accordance with the applicable building code.~~

~~24. Delete Section 2309.6.1.2.2.~~

~~25. Delete Section 2309.6.1.2.3.~~

~~26. Change Section 2309.6.1.2.4 to read:~~

~~(N)2309.6.1.2.4 Grounding and bonding. Grounding and bonding of cylinders, containers or tanks, and piping shall be maintained in accordance with the applicable building code.~~

~~27. Change Section 2309.6.2 to read:~~

~~(N)2309.6.2 Repair of hydrogen piping. Piping systems containing hydrogen shall not be opened to the atmosphere for repair without first purging the piping with an inert gas to achieve 1% hydrogen or less by volume.~~

I. The following changes shall be made to Section 2310, Marine Motor Fuel-Dispensing Facilities:

1. Change Section 2310.1 to read:

2310.1 General. The construction of marine motor fuel-dispensing facilities shall be in accordance with this section and other applicable provisions of this code.

2. Change Section 2310.2 to read:

~~(N)~~2310.2 Storage and handling. The storage and handling of Class I, II or IIIA liquids at marine motor fuel-dispensing facilities shall be maintained in accordance with the applicable building code.

3. Change Section 2310.2.1 to read:

~~(N)~~2310.2.1 Class I, II or IIIA liquid storage. Class I, II or IIIA liquids stored inside of buildings used for marine motor fuel-dispensing facilities shall be stored in accordance with the applicable building code.

4. Change Section 2310.2.2 to read:

~~(N)~~2310.2.2 Class II or IIIA liquid storage and dispensing. Class II or IIIA liquids stored or dispensed inside of buildings used for marine motor fuel-dispensing facilities shall be stored in and dispensed in accordance with the applicable building code.

5. Change Section 2310.2.3 to read:

~~(N)~~2310.2.3 Heating equipment. Heating equipment installed in Class I, II or IIIA liquid storage or dispensing areas shall be maintained in accordance with the applicable building code.

6. Change Section 2310.2.3.3 to read:

~~(N)~~2310.3.3 Hoses and nozzles. Hoses and nozzles shall be maintained in accordance with the applicable building code.

7. Change Section 2310.3.5 to read:

~~(N)~~2310.3.5 Liquefied petroleum gas. Liquefied petroleum gas cylinders shall not be filled at marine motor fuel-dispensing facilities unless approved.

8. Change Section 2310.6 to read:

~~(N)~~2310.6 Fire protection. Fire protection features for marine motor fuel-dispensing facilities shall be maintained in accordance with the applicable building code.

J. The following changes shall be made to Section 2311, Repair Garages:

1. Change Section 2311.1 to read:

2311.1 General. Operation and maintenance of repair garages shall comply be in accordance with this section and other applicable provisions of this code. Repair garages for vehicles that use more than one type of fuel shall comply with the applicable provisions of this section for each type of fuel used.

Where a repair garage includes a motor fuel-dispensing facility, the fuel-dispensing operation shall comply with the requirements of this chapter for motor fuel-dispensing facilities.

2. Change Section 2311.2 to read:

~~(N)~~2311.2 Storage and use of flammable and combustible liquids. The storage and use of flammable and combustible liquids in repair garages shall be maintained in accordance with the applicable building code.

3. Change Section 2311.2.3 to read:

~~(N)~~2311.2.3 Drainage and disposal of liquids and oil soaked waste. Contents of oil separators, traps and floor drainage systems shall be collected at sufficiently frequent intervals and removed from the premises to prevent oil from being carried into the sewers.

4. Change Section 2311.3.1 to read:

~~(N)~~2311.3.1 Equipment. Appliances and equipment installed in a repair garage shall be maintained in accordance with the applicable building code.

5. Change Section 2311.4 to read:

~~(N)~~2311.4 Below-grade areas. Pits and below-grade work areas in repair garages shall be maintained in accordance with the applicable building code.

6. Delete Section 2311.4.1.

7. Change Section 2311.4.2 to read:

~~(N)~~2311.4.2 Means of egress. Means of egress for pits and below-grade work areas shall be maintained in accordance with the applicable building code.

8. Change Section 2311.4.3 to read:

~~(N)~~2311.4.3 Ventilation. Where Class I liquids or LP-gas are stored or used within a building having a basement or pit wherein flammable vapors could accumulate, the basement or pit mechanical ventilation, where provided, shall be maintained in accordance with the applicable building code.

9. Change Section ~~2311.7.1 and 2311.8.8~~ 2311.8.2 to read:

~~(N)2311.7.1~~ 2311.8.2 Ventilation. Ventilation required for repair garages used for the repair of ~~natural gas-fueled vehicles or~~ hydrogen-fueled vehicles shall be maintained in accordance with the applicable building code.

Exception: Repair garages with natural ventilation when approved.

10. Delete ~~Section 2311.7.1.1~~ Sections 2311.8.3 through 2311.8.6.

11. Change Section 2311.8.8 to read:

2311.8.8 Ventilation. Ventilation required for repair garages used for the repair of vehicles fueled by CNG, LNG, or other lighter-than-air motor fuels, other than hydrogen, shall be maintained in accordance with the applicable building code.

~~Change Section 2311.7.1.2 to read:~~

~~(N)2311.7.1.2 Operation. The mechanical ventilation system shall be maintained in accordance with the applicable building code.~~

12. Delete Section 2311.8.8.1

13. Change Section ~~2311.7.2~~ 2311.8.8.2 to read:

2311.8.8.2 Operation. The mechanical ventilation system shall be maintained in accordance with the applicable building code.

14. Change Section 2311.8.9 to read:

~~(N)2311.7.2~~ 2311.8.9 Gas detection system. Gas detection systems required for repair garages used for repair of vehicles fueled by nonodorized gases, including hydrogen and nonodorized liquefied natural gas, shall be maintained in accordance with the applicable building code.

~~13.~~ 15. Delete ~~Section 2311.7.2.1~~ Section 2311.8.9.1 through 2311.8.10.

~~14. Delete Section 2311.7.2.1.1.~~

~~15. Delete Section 2311.7.2.2.~~

~~16. Delete Section 2311.7.2.3.~~

13VAC5-51-140.5. ~~Ifc~~ IFC Chapter 24 Flammable Finishes.

A. The following change shall be made to Section 2401, General:

Change Section 2401.3 to read:

2401.3 Permits. Permits shall be required as set forth in Section 107.2.

B. The following changes shall be made to Section 2403, Protection of Operations:

1. Change Section 2403.2.1 to read:

~~(N)~~2403.2.1 Electrical wiring and equipment. Electrical wiring and equipment shall be maintained in accordance with the applicable building code.

2. Change Section 2403.2.1.1 to read:

~~(N)~~2403.2.1.1 Flammable vapor areas. Electrical wiring and equipment in flammable vapor areas shall be of an explosion proof type approved for use in such hazardous locations and maintained in accordance with the applicable building code.

3. Change Section 2403.2.1.2 to read:

~~(N)~~2403.2.1.2 Areas subject to deposits of residues. Flammable vapor areas or drying operations that are subject to splashing or dripping of liquids shall be specifically approved for locations containing deposits of readily ignitable residue and explosive vapors.

4. Change Section 2403.2.1.3 to read:

~~(N)~~2403.2.1.3 Areas adjacent to spray booths. Electrical wiring and equipment located outside of, but within 5 feet (1524 mm) horizontally and 3 feet (914 mm) vertically of, openings in a spray booth or a spray room shall be maintained in accordance with the applicable building code.

5. Change Section 2403.2.5 to read:

~~(N)~~2403.2.5 Grounding. The grounding of metal parts of spray booths, exhaust ducts, and piping systems conveying Class I or II liquids shall be maintained in accordance with the applicable building code

C. The following changes shall be made to Section 2404, Spray Finishing:

1. Change Section 2404.1 to read:

~~(N)~~2404.1 General. The application of flammable or combustible liquids by means of spray apparatus in continuous or intermittent processes shall be in accordance with the requirements of Sections 2403 and 2404.

2. Delete Section 2404.2.

3. Delete Section 2404.3.

4. Change Section 2404.3.1 to read:

~~(N)~~2404.3.1 Spray rooms. Spray rooms shall be maintained in accordance with the applicable building code.

5. Change Section 2404.3.1.1 to read:

~~(N)~~2404.3.1.1 Floor. Combustible floor construction in spray rooms shall be maintained in accordance with the applicable building code.

6. Change Section 2404.3.2 to read:

~~(N)~~2404.3.2 Spray booths. Spray booths shall be maintained in accordance with the applicable building code.

7. Delete Section 2404.3.2.1.

8. Change Section 2404.3.2.2 to read:

~~(N)~~2404.3.2.2 Surfaces. The interior surfaces of spray booths shall be maintained in accordance with the applicable building code.

9. Change Section 2404.3.2.3 to read:

~~(N)~~2404.3.2.3 Floor. Combustible floor construction in spray booths shall be maintained in accordance with the applicable building code.

10. Change Section 2404.3.2.4 to read:

~~(N)~~2404.3.2.4 Means of egress. Means of egress shall be maintained in accordance with the applicable building code.

11. Change Section 2404.3.2.5 to read:

~~(N)~~2404.3.2.5 Clear space. A clear space of not less than 3 feet (914 mm) shall be maintained on all sides of the spray booth. This clear space shall be kept free of any storage or combustible construction.

12. Delete Section 2404.3.2.6.

13. Change Section 2404.3.3 to read:

~~(N)~~2404.3.3 Spraying spaces. Spraying spaces shall be maintained in accordance with the applicable building code.

14. Change Section 2404.3.3.1 to read:

~~(N)~~2404.3.3.1 Floor. Combustible floor construction in spraying spaces shall be maintained in accordance with the applicable building code.

15. Change Section 2404.4 to read:

~~(N)~~2404.4 Fire protection. Automatic fire-extinguishing systems provided for spray booths shall be maintained in accordance with the applicable building code.

16. Change Section 2404.6.2.1 to read:

~~(N)~~2404.6.2.1 Glass panels. Panels for luminaires or for observation shall be maintained in accordance with the applicable building code.

17. Change Section 2404.6.2.2 to read:

~~(N)~~2404.6.2.2 Exterior luminaires. Luminaires attached to the walls or ceilings of a flammable vapor area, but outside of any classified area and separated from the flammable vapor areas by vapor-tight glass panels, shall be maintained in accordance with the applicable building code.

18. Change Section 2404.6.2.3 to read:

~~(N)~~2404.6.2.3 Integral luminaires. Luminaires that are an integral part of the walls or ceiling of a flammable vapor area are allowed to be separated from the flammable vapor area by glass panels that are an integral part of the luminaire. Such luminaires shall be maintained in accordance with the applicable building code.

19. Change Section 2404.7 to read:

~~(N)~~2404.7 Ventilation. Mechanical ventilation of flammable vapor areas shall be maintained in accordance with the applicable building code.

20. Change Section 2404.7.1 to read:

~~(N)~~2404.7.1 Operation. Where provided, mechanical ventilation shall be kept in operation at all times while spraying operations are being conducted and for a sufficient time thereafter to allow vapors from drying coated articles and finishing material residue to be exhausted.

21. Delete Section 2404.7.2.

22. Change Section 2404.7.3 to read:

~~(N)~~2404.7.3 Air velocity. The required air velocity for ventilation systems shall be maintained in accordance with the applicable building code.

23. Change Section 2404.7.3.1 to read:

~~(N)~~2404.7.3.1 Open-face or open-front spray booth. For spray application operations conducted in an open-face or open-front spray booth, the ventilation system shall be maintained in accordance with the applicable building code.

24. Change Section 2404.7.3.2 to read:

~~(N)~~2404.7.3.2 Enclosed spray booth or spray room with openings for product conveyance. For spray application operations conducted in an enclosed spray booth or spray room with openings for product conveyance, the ventilation system shall be maintained in accordance with the applicable building code.

25. Delete Section 2404.7.5.

26. Change Section 2404.7.6 to read:

~~(N)~~2404.7.6 Termination point. The termination point for exhaust ducts discharging to the atmosphere shall be maintained in accordance with the applicable building code.

27. Change Section 2404.7.7 to read:

2404.7.7 Fan motors and belts. Electric motors driving exhaust fans shall not be placed inside booths or ducts, unless approved. Fan rotating elements shall be nonferrous or nonsparking or the casing shall consist of, or be lined with, such material. Belts shall not enter the duct or booth unless the belt and pulley within the duct are tightly enclosed.

28. Change Section 2404.7.8 to read:

~~(N)~~2404.7.8 Filters. Air intake filters that are part of a wall or ceiling assembly shall be maintained.

29. Change Section 2404.7.8.1 to read:

~~(N)~~2404.7.8.1 Supports. Supports and holders for filters shall be maintained.

30. Change Section 2404.7.8.3 to read:

~~(N)~~2404.7.8.3 Maintaining air velocity. The required air velocity shall be maintained in accordance with the applicable building code.

31. Change Section 2404.7.8.4 to read:

~~(N)~~2404.7.8.4 Filter rolls. Filter rolls for spray booths shall be maintained in accordance with applicable building code.

32. Change Section 2404.7.8.7 to read:

~~(N)~~2404.7.8.7 Waterwash spray booths. Waterwash spray booths shall be maintained in accordance with the applicable building code.

33. Change Section 2404.8 to read:

~~(N)~~2404.8 Interlocks. Interlocks for spray application finishes shall be maintained in accordance with the applicable building code.

34. Delete Section 2404.8.1.

35. Change Section 2404.8.1.1 to read:

~~(N)~~2404.8.1.1 Alarm station. Where required, a manual fire alarm and emergency system shutdown station shall be maintained in accordance with the applicable building code.

36. Delete Section 2404.8.1.2.

37. Delete Section 2404.8.2.

38. Change Section 2404.9.3 to read:

~~(N)~~2404.9.3 Ventilation. Positive mechanical ventilation providing a minimum of six complete air changes per hour shall be maintained in accordance with the applicable building code.

39. Change Section 2404.9.4 to read:

~~(N)~~2404.9.4 Electrical wiring. Electrical wiring within 10 feet (3048 mm) of the floor and 20 feet (6096 mm) horizontally of the limited spraying space shall be designed for Class I, Division 2 locations in accordance with the applicable building code.

D. The following changes shall be made to Section 2405, Dipping Operations:

1. Delete Section 2405.2.

2. Delete Section 2405.3.

3. Change Section 2405.3.1 to read:

~~(N)~~2405.3.1 Overflow. Overflow piping required for dip tanks shall be maintained in accordance with the applicable building code.

4. Change Section 2405.3.2 to read:

~~(N)~~2405.3.2 Bottom drains. Bottom drains required for dip tanks shall be maintained in accordance with the applicable building code. Manual operation shall be from a safe, accessible location. Where gravity flow is not practicable, automatic pumps shall be provided.

5. Change Section 2405.4 to read:

~~(N)~~2405.4 Fire protection. Dip tank operations shall be protected in accordance with the applicable building code.

6. Change Section 2405.4.1 to read:

~~(N)~~2405.4.1 Fixed fire-extinguishing equipment. Fixed fire-extinguishing equipment required for dip tanks shall be maintained in accordance with the applicable building code.

7. Change Section 2405.4.1.1 to read:

~~(N)~~2405.4.1.1 Fire-extinguishing system. Fire-extinguishing systems provided for dip tanks maintained in accordance with the applicable building code.

8. Change Section 2405.7 to read:

~~(N)~~2405.7 Ventilation of flammable vapor areas. Ventilation provided for flammable vapor areas shall be maintained in accordance with the applicable building code.

9. Delete Section 2405.9.1.

10. Change Section 2405.9.2 to read:

~~(N)~~2405.9.2 Hoods. Hoods provided for tanks shall be maintained in accordance with the applicable building code.

11. Delete Section 2405.9.3.

12. Change Section 2405.9.4 to read:

~~(N)~~2405.9.4 Fire protection. Fire protection provided hardening and tempering tanks shall be maintained in accordance with the applicable building code.

13. Delete Section 2405.10.1.

14. Change Section 2405.11 to read:

~~(N)~~2405.11 Roll-coating operations. Roll-coating operations shall be maintained in accordance with the applicable building code.

E. The following changes shall be made to Section 2406, Powder Coating:

1. Change Section 2406.2 to read:

~~(N)~~2406.2 Location. Powder coating operations shall be conducted in enclosed powder coating rooms, enclosed powder coating facilities that are ventilated, or ventilated spray booths and in accordance with applicable building code.

2. Delete Section 2406.3.

3. Change Section 2406.4 to read:

~~(N)~~2406.4 Fire protection. Fire-extinguishing systems provided for areas used for powder coating shall be maintained in accordance with the applicable building code.

4. Delete Section 2406.4.1.

5. Change Section 2406.6.4 to read:

~~(N)~~2406.6.4 Grounding and bonding. Grounding and bonding provided for powder coating operations shall be maintained in accordance with the applicable building code.

6. Change Section 2406.7 to read:

~~(N)~~2406.7 Ventilation. Exhaust ventilation shall be maintained in accordance with the applicable building code.

F. The following changes shall be made to Section 2407, Electrostatic Apparatus:

1. Change Section 2407.2 to read:

~~(N)~~2407.2 Location and clear space. A sign stating the sparking distance shall be conspicuously posted near the assembly. The location and clear space required for electrostatic apparatus and devices shall be maintained in accordance with the applicable building code and manufacturer's instructions.

2. Delete Section 2407.3.

3. Change Section 2407.3.1 to read:

~~(N)~~2407.3.1 Barriers. Booths, fencing, railings or guards shall be in accordance with the applicable building code.

4. Change Section 2407.4 to read:

~~(N)~~2407.4 Fire protection. Fire-extinguishing systems provided for areas used for electrostatic spray finishing with fixed equipment shall be maintained in accordance with the applicable building code.

5. Change Section 2407.4.1 to read:

~~(N)~~2407.4.1 Protection for automated liquid electrostatic spray application equipment. Flame detection apparatus required for automated liquid electrostatic spray application equipment shall be maintained in accordance with the applicable building code.

6. Change Section 2407.7 to read:

~~(N)~~2407.7 Ventilation. Ventilation provided for flammable vapor areas shall be maintained in accordance with the applicable building code.

7. Change Section 2407.8 to read:

~~(N)~~2407.8 Emergency shutdown. Emergency shutdown controls shall be maintained in accordance with the applicable building code.

8. Change Section 2407.9 to read:

~~(N)~~2407.9 Ventilation interlock. Ventilation interlock required for electrostatic equipment shall be maintained in accordance with the applicable building code.

G. The following change shall be made to Section 2408, Organic Peroxides and Dual-Component Coatings:

Delete Section 2408.2.

H. The following changes shall be made to Section 2409, Indoor Manufacturing of Reinforced Plastics:

1. Change Section 2409.3 to read:

~~(N)~~2409.3 Fire protection. Automatic sprinkler systems provided for resin application areas shall be maintained in accordance with the applicable building code.

2. Change Section 2409.6 to read:

~~(N)~~2409.6 Ventilation. Mechanical ventilation shall be maintained in accordance with the applicable building code.

3. Change Section 2409.6.1 to read:

~~(N)~~2409.6.1 Local ventilation. Local ventilation shall be maintained in accordance with the applicable building code.

13VAC5-51-141. ~~Ifc~~ IFC Chapter 25 Fruit and Crop Ripening.

A. The following changes shall be made to Section 2501, General:

1. Change Section 2501.2 to read:

2501.2 Permits. Permits shall be required as set forth in Section 107.2.

2. Change Section 2501.3 to read:

2501.3 Ethylene generators. Approved ethylene generators shall be operated and maintained in accordance with the applicable building code.

B. The following change shall be made to Section 2503, Ethylene Gas:

Change Section 2503.2 to read:

~~(N)~~2503.2 Dispensing. Valves controlling discharge of ethylene shall be maintained in accordance with the applicable building code.

C. The following changes shall be made to Section 2504, Sources of Ignition:

1. Change Section 2504.1 to read:

~~(N)~~2504.1 Ignition prevention. Sources of ignition shall be controlled or protected in accordance with the applicable building code.

2. Change Section 2504.2 to read:

~~(N)~~2504.2 Electrical wiring and equipment. Electrical wiring and equipment, including luminaires, shall be maintained in accordance with the applicable building code.

3. Change Section 2504.3 to read:

~~(N)~~2504.3 Static electricity. Bonding and grounding provided for containers, piping and equipment shall be maintained in accordance with the applicable building code.

4. Change Section 2504.5 to read:

~~(N)~~2504.5 Heating. Heating shall be maintained in accordance with the applicable building code.

D. The following changes shall be made to Section 2506, Ethylene Generators:

1. Change Section 2506.1 to read:

~~(N)~~2506.1 Ethylene generators. Ethylene generators shall be listed and labeled by an approved testing laboratory, approved, and used only in approved rooms in accordance with the ethylene generator manufacturer's instructions. The listing evaluation shall include documentation that the concentration of ethylene gas does not exceed 25% of the lower explosive limit (LEL).

2. Change Section 2506.2 to read:

~~(N)~~2506.2 Ethylene generator rooms. Ethylene generator rooms shall be maintained in accordance with the applicable building code.

13VAC5-51-141.5. ~~Ifc~~ IFC Chapter 26 Fumigation and Insecticidal Fogging.

Change Section 2601.2 to read:

2601.2 Permits. Permits shall be required as set forth in Section 107.2.

13VAC5-51-142. ~~Ifc~~ IFC Chapter 27 Semiconductor Fabrication Facilities.

A. Change Section 2701.1 to read:

2701.1 Scope. Semiconductor fabrication facilities and comparable research and development areas classified as Group H-5 shall comply with this chapter to the extent that the provisions of this chapter relate to operation and maintenance and not to the construction of Group H-5 buildings or structures.

B. Delete Section 2701.4.

C. Change Section 2701.5 to read:

2701.5 Permits. Permits shall be required as set forth in Section 107.2.

D. Change Section 2703.1.3 to read:

~~(N)~~2703.1.3 Signals. Emergency equipment and alarm and detection systems providing signals to emergency control stations shall be maintained in accordance with the applicable building code.

E. Change Section 2703.2.2 to read:

2703.2.2 General requirements. In addition to the requirements in Section 2703.2, systems, equipment and processes shall also comply with Section 5003.2~~,~~ and other applicable provisions of this code.

F. Delete Sections 2703.3 and 2703.3.1.

G. Change Section 2703.3.2 through 2703.3.8 to read:

~~(N)~~2703.3.2 Pass-throughs in exit access corridors. Pass-throughs in exit access corridors shall be in accordance with the applicable building code.

~~(N)~~2703.3.3 Liquid storage rooms. Liquid storage rooms shall be maintained in accordance with the applicable building code.

~~(N)~~2703.3.4 HPM rooms. Hazardous production materials (HPM) rooms shall be maintained in accordance with the applicable building code.

~~(N)~~2703.3.5 Gas cabinets. Gas cabinets shall be maintained in accordance with the applicable building code.

~~(N)~~2703.3.6 Exhausted enclosures. Exhausted enclosures shall be maintained in accordance with the applicable building code.

~~(N)~~2703.3.7 Gas rooms. Gas rooms shall be maintained in accordance with the applicable building code.

~~(N)~~2703.3.8 Service corridors. Service corridors shall be maintained in accordance with the applicable building code.

H. Change Sections 2703.7 and 2703.7.1 to read:

~~(N)~~2703.7 Electrical wiring and equipment. Electrical wiring and equipment in HPM facilities shall be maintained in accordance with the applicable building code.

~~(N)~~2703.7.1 Fabrication areas. Electrical wiring and equipment in fabrication areas shall be maintained in accordance with the applicable building code.

I. Delete Section 2703.7.2.

J. Change Section 2703.7.3 to read:

~~(N)~~2703.7.3 HPM rooms, gas rooms, and liquid storage rooms. Electrical wiring and equipment in HPM rooms, gas rooms, and liquid storage rooms shall be maintained in accordance with the applicable building code.

K. Change Section 2703.7.10 to read:

~~(N)~~2703.10 Automatic sprinkler system. Automatic sprinkler systems shall be maintained in accordance with the applicable building code.

L. Delete Sections 2703.10.1 and 2703.10.1.1.

M. Delete Sections 2703.10.2 through 2703.10.4.4.1.

N. Change Sections 2703.10.4.4.2 and 2703.10.4.4.3 to read:

~~(N)~~2703.10.4.4.2 Control valve. Control valves provided for sprinklers installed in exhaust ducts shall be maintained in accordance with the applicable building code.

~~(N)~~2703.10.4.4.3 Drainage. Drainage provided to remove sprinkler water discharged in exhaust ducts shall be maintained.

O. Delete Section 2703.10.4.4.4.

P Change Sections 2703.10.5 through 2703.12 to read:

~~(N)~~2703.10.5 Sprinkler alarms and supervision. Automatic sprinkler systems shall be maintained in accordance with the applicable building code.

~~(N)~~2703.11 Manual fire alarm system. Manual fire alarm systems shall be maintained in accordance with the applicable building code.

~~(N)~~2703.12 Emergency alarm system. Emergency alarm systems shall be maintained in accordance with the applicable building code.

Q. Delete Sections 2703.12.1 and 2703.12.1.1.

R. Change Sections 2703.12.1.2 and 2703.12.1.3 to read:

~~(N)~~2703.12.1.2 Corridors and interior exit stairways and ramps. Emergency alarms for corridors, interior exit stairways and ramps, and exit passageways shall be maintained in accordance with the applicable building code.

~~(N)~~2703.12.1.3 Liquid storage rooms, HPM rooms and gas rooms. Emergency alarms for liquid storage rooms, HPM rooms, and gas rooms shall be maintained in accordance with the applicable building code.

S. Delete Sections 2703.12.2 and 2703.12.3.

T. Change Section 2703.13 to read:

~~(N)~~2703.13 ~~Continuous gas~~ Gas detection systems. ~~Continuous gas~~ Gas detection systems shall be maintained in accordance with the applicable building code.

U. Delete Sections 2703.13.1 through 2703.13.2.2.

V. Change Section 2703.14 to read:

~~(N)~~2703.14 Exhaust ventilation systems for HPM. Exhaust ventilation systems and materials for exhaust ducts utilized for the exhaust of HPM shall be maintained in accordance with the applicable building code.

W. Delete Sections 2703.14.1 and 2703.14.2.

X. Change Section 2703.15 to read:

~~(N)~~2703.15 Emergency power system. Emergency power ~~system~~ systems shall be maintained in accordance with the applicable building code.

Y. Delete Section 2703.15.1.

Z. Change Sections 2703.15.2 through 2704.1 to read:

~~(N)~~2703.15.2 Exhaust ventilation systems. Exhaust ventilation systems shall be maintained in accordance with the applicable building code.

~~(N)~~2703.16 Subatmospheric pressure gas systems. Subatmospheric pressure gas systems (SAGS) shall be maintained in accordance with the applicable building code.

~~(N)~~2704.1 General. Storage of hazardous materials shall comply with Section 2703 and this section and other applicable provisions of this code to the extent that such requirements are operational in nature and do not affect how a building is constructed.

AA. Change Section 2704.2.2.1 to read:

2704.2.2.1 Storage and use in fabrication areas. The maximum quantities of hazardous materials stored or used in a single fabrication area shall not exceed the quantities set forth by the applicable building code.

BB. Delete Table 2704.2.2.1.

CC. Change Section 2704.3.1 to read:

2704.3.1 HPM storage. The indoor storage of HPM in quantities greater than those listed in Sections 5003.1.1 and 3404.3.4 shall be in a room complying with the requirements of this code for a liquid storage room, HPM room, or gas room as appropriate for the materials stored.

DD. Change Section 2705.1 to read:

2705.1 General. The use and handling of hazardous materials shall comply with this section, Section 2703, and other applicable provisions of this code to the extent that such requirements are operational in nature and do not affect how a building is constructed.

EE. Change Section 2705.2.3.2 to read:

~~(N)~~2705.2.3.2 Protection of vessels. Vessels containing hazardous materials located in or connected to a workstation shall be protected as follows:

1. HPM: Vessels containing HPM shall be protected from physical damage and shall not project from the workstation.

2. Compressed gases: Protection for compressed gas vessels shall also comply with Section 5303.5.

3. Cryogenic fluids: Protection for cryogenic fluid vessels shall also comply with Section 5503.5.
FF. Change Section 2705.3.1 to read:

~~(N)~~2705.3.1 Corridors and enclosures for stairways and ramps. Corridors and enclosures for exit stairways and ramps in new fabrication areas shall not contain HPM, except as permitted in corridors by Section 2705.3.2 and the applicable building code.

GG. Change Section 2705.3.2.1 to read:

2705.3.2.1 Fabrication area alterations. Where existing fabrication areas are altered or modified in existing buildings, HPM is allowed to be transported in existing corridors where such corridors comply with the applicable building code.

HH. Delete Section 2705.3.3.

13VAC5-51-142.5. ~~Ifc~~ IFC Chapter 28 Lumber Yards and Agro-Industrial, Solid Biomass, and Woodworking Facilities.

A. Change Section 2801.2 to read:

2801.2 Permit. Permits shall be required as set forth in Section 107.2.

B. Change Sections 2803.1 through 2803.3 to read:

~~(N)~~2803.1 Open yards. Open yards around structures required by the applicable building code shall be maintained.

~~(N)~~2803.2 Dust control. Equipment or machinery located inside buildings that generates or emits combustible dust equipped with an approved dust collection and exhaust system shall be maintained in accordance with the applicable building code. Equipment or systems that are used to collect, process or convey combustible dusts shall be provided with an approved explosion control system.

~~(N)~~2803.2.1 Explosion venting. Explosion venting required for dust explosion hazards shall be maintained in accordance with the applicable building code.

~~(N)~~2803.3 Waste removal. Waste removal systems required for sawmills, planning mills and other woodworking plants shall be maintained in accordance with the applicable building code.

Exception: Manual waste removal where approved.

C. Change Section 2803.4 to read:

~~(N)~~2803.4 Electrical equipment. Electrical wiring and equipment shall be maintained in accordance with the applicable building code.

D. Change Sections 2804.2, and 2804.2.1 to read:

~~(N)~~2804.2 Fire alarms. Where provided, fire alarms maintained in accordance with the applicable building code.

~~(N)~~2804.2.1 Manual fire alarms. Where installed, manual fire alarm systems shall be maintained in accordance with the applicable building code.

E. Change Section 2804.4 to read:

~~(N)~~2804.4 Automatic sprinkler systems. Automatic sprinkler systems shall be maintained in accordance with the applicable ~~building code~~ NFPA 13 standard.

F. Change Section 2805.2 to read:

~~(N)~~2805.2 Dryer protection. Dryers shall be maintained in accordance with the applicable building code. Deluge heads shall be inspected quarterly for pitch buildup. Deluge heads in dryers shall be flushed during regular maintenance for functional operation.

G. Change Section 2807.2 to read:

2807.2 Size of piles. Piles shall not exceed 60 feet (18 288 mm) in height, 300 feet (91 440 mm) in width, and 500 feet (152 m) in length. Piles shall be separated from adjacent piles or other exposures by approved fire apparatus access roads.

Exception: The fire code official is authorized to allow the pile size to be increased where additional approved fire protection is provided in accordance with Chapter 9.

H. Change Section 2807.3 to read:

~~(N)~~2807.3 Pile fire protection. Automatic sprinkler protection provided in conveyor tunnels and combustible enclosures that pass under a pile shall be maintained in accordance with the applicable building code.

I. Change Section 2808.7 to read:

~~(N)~~2808.7 Pile fire protection. Automatic sprinkler protection provided in conveyor tunnels and combustible enclosures that pass under a pile shall be maintained in accordance with the applicable building code.

13VAC5-51-143.5. ~~Ifc~~ IFC Chapter 29 Manufacture of Organic Coatings.

A. Change Section 2901.2 to read:

2901.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Delete Section 2903.1.

C. Delete Section 2903.2.

D. Change Section 2903.4 to read:

2903.4 Fire protection systems. Fire protection systems shall be maintained, periodically inspected, and tested in accordance with Chapter 9.

E. Change Section 2903.10 to read:

2903.10 Drainage. Drainage facilities shall be maintained to direct flammable and combustible liquid leakage and fire protection water to an approved location away from the building, any other structure, any storage area, or adjoining premises.

F. Change Section 2903.11 to read:

~~(N)~~2903.11 Alarm system. Alarm systems shall be maintained in accordance with the applicable building code.

G. Change Section 2904.1 to read:

~~(N)~~2904.1 Wiring and equipment. Electrical wiring and equipment shall be maintained in accordance with the applicable building code.

H. Change Section 2904.3 to read:

~~(N)~~2904.3 Bonding. Bonding provided for equipment including tanks, machinery and piping shall be maintained in accordance with the applicable building code.

I. Change Section 2904.3.1 to read:

~~(N)~~2904.3.1 Piping. Electrically isolated sections of metallic piping or equipment shall be maintained in accordance with the applicable building code.

J. Change Section 2904.4 to read:

~~(N)~~2904.4 Ground. Metal framing of buildings shall be grounded in accordance with the applicable building code.

K. Delete Section 2905.1.

L. Change Section 2905.4 to read:

~~(N)~~2905.4 Explosion control. Explosion control shall be maintained in accordance with the applicable building code and maintenance provisions of NFPA 35.

M. Change Section 2905.5 to read:

~~(N)~~2905.5 Ventilation. Enclosed structures in which Class I liquids are processed or handled shall be ventilated in accordance with the applicable building code.

N. Change Section 2906.1 to read:

~~(N)~~2906.1 Mills. Mills operating with close clearances that process flammable and heat-sensitive materials, such as nitrocellulose, shall be maintained in accordance with the applicable building code.

O. Change Section 2909.2 to read:

~~(N)~~2909.2 Tank storage. Tank storage for flammable and combustible liquids located inside of structures shall be limited to storage areas at or above grade that are separated from the processing area in accordance with the applicable building code. Processing equipment containing flammable and combustible liquids and storage in quantities essential to the continuity of the operations shall not be prohibited in the processing area.

P. Change Section 2909.4 to read:

~~(N)~~2909.4 Nitrocellulose storage. Nitrocellulose storage shall be located on a detached pad or in a separate structure or a room enclosed in accordance with the applicable building code.

Q. Change Section 2909.6 to read:

2909.6 Finished products. Finished products that are flammable or combustible liquids shall be stored outside of structures, in a separate structure, or in a room separated from the processing area where such storage is permitted under the applicable building code. The storage of finished products shall be in tanks or closed containers in accordance with Chapter 57.

13VAC5-51-144. ~~Ifc~~ IFC Chapter 30 Industrial Ovens.

A. Change Section 3001.1 to read:

~~(N)~~3001.1 Scope. This chapter shall apply to the maintenance and operation of industrial ovens and furnaces. Industrial ovens and furnaces shall comply with the applicable provisions of NFPA 86 and this chapter. The terms "ovens" and "furnaces" are used interchangeably in this chapter.

B. Change Section 3001.2 to read:

3001.2 Permits. Permits shall be required as set forth in Section 107.2.

C. Change Section 3003.1 to read:

~~(N)~~3003.1 Ventilation. Enclosed rooms or basements containing industrial ovens or furnaces shall be maintained in accordance with the applicable building code.

D. Delete Section 3003.4.

E. Change Section 3004.1 to read:

~~(N)~~3004.1 Fuel-gas piping. Fuel-gas piping serving industrial ovens shall be maintained in accordance with the applicable building code.

F. Delete Section 3004.2.

G. Change Section 3004.2.1 to read:

~~(N)~~3004.2.1 Fuel supply lines. Valves for fuel supply lines shall be maintained in accordance with the applicable building code.

H. Delete Section 3004.3.

I. Change Sections 3005.1, 3006.1 and 3006.2 to read:

~~(N)~~3005.1 Shut down. Interlocks shall be maintained in accordance with the applicable building code.

~~(N)~~3006.1 Required protection. Fire-extinguishing systems provided for Classes A and B ovens that contain, or are utilized for the processing of, combustible materials shall be maintained in accordance with the applicable building code.

~~(N)~~3006.2 Fixed fire-extinguishing systems. Fixed fire-extinguishing systems shall be maintained in accordance with the applicable building code.

13VAC5-51-144.2. ~~Ifc~~ IFC Chapter 31 Tents, Temporary Special Even Structures and Other Membrane Structures.

A. The following change shall be made to Section 3101, General:
Change Section 3101.1 to read:

3101.1 Scope. Tents, temporary special event structures and temporary stage canopies, and membrane structures shall comply with this chapter. The provisions of Section 3103 are applicable only to temporary tents and membrane structures. The provisions of Section 3104 and 3106 are applicable to temporary and permanent tents and membrane structures. Other temporary structures shall comply with the applicable building code.

B. The following changes shall be made to Section 3103, Temporary Tents and Membrane Structures:

1. Change Section 3103.1 to read:

~~(N)~~3103.1 General. Tents and membrane structures used for temporary periods shall comply with this section. Other temporary structures erected for a period of 180 days or less shall comply with the applicable building code.

2. Change Section 3103.2 to read:

~~(N)~~3103.2 Approval required. Tents and membrane structures having an area in excess of 900 square feet (84 m^2) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official in accordance with Table 107.2.

3. ~~Change~~ Add Section 3103.2.1 ~~to read~~ and delete Section 3103.3.1:

3103.2.1 Multiple tents. The aggregate area of multiple tents separated by less than 12 feet (3658 mm) shall not exceed 900 square feet unless approved in accordance with Section 3103.2.

4. Change Section 3103.4 to read:

3103.4 Permits. Permits shall be required as set forth in Section 107.2.

5. Change Section 3103.9.1 through 3103.9.3 to read:

3103.9.1 Tents and membrane structures exceeding one story. Tents and membrane structures exceeding one story shall be designed and constructed to comply with the applicable building code.

3103.9.2 Tents and membrane structures greater than 7,500 square feet. Tents and membrane structures greater than 7,500 square feet shall be designed and constructed to comply with applicable building code.

3103.9.3 Tents and membrane structures with an occupant load greater than 1,000. Tents and membrane structures with an occupant load greater than 1,000 shall be designed and constructed to comply with applicable building code.

C. The following changes shall be made to Section 3104, Temporary and Permanent Tents and Membrane:

1. Change Section 3104.1 to read:

3104.1 General. Tents and membrane structures, both temporary and permanent, shall be in accordance with this section. Permanent tents and membrane structures shall also comply with the applicable building code.

2. Change Section 3104.2 to read:

3104.2 Flame propagation performance treatment. Before a permit is granted, the owner or agent shall file a certificate executed by an approved testing laboratory certifying that the tents and membrane structures and their appurtenances; sidewalls, drops and tarpaulins; floor coverings, bunting, and combustible decorative materials and effects, including sawdust where used on floors or passageways, are composed of material meeting the flame propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701 or shall be treated with a flame retardant in an approved manner and meet the flame propagation performance criteria of Test Method 1 or Test Method 2, as appropriate, of NFPA 701, and that such flame propagation performance criteria are effective for the period specified by the permit.

3. Change Section 3104.4 to read:

3104.4 Certification. An affidavit or affirmation shall be submitted and a copy retained on the premises on which the tent or air-supported structure is located. The affidavit shall attest to all of the following information relative to the flame propagation performance criteria of the fabric

1. Names and address of the owners of the tent or air-supported structure.

2. Date the fabric was last treated with flame-retardant solution.

3. Trade name or kind of chemical used in treatment.

4. Name of person or firm treating the material.

5. Name of testing agency and test standard by which the fabric was tested.

4. Change Section 3104.13 to read:

3104.13 Fire protection equipment. Fire hose lines, water supplies, and other auxiliary fire equipment shall be maintained at the site in such numbers and sizes as approved

5. Change Section 3104.14 to read:

3104.14 Occupant load factors. The occupant load allowed in an assembly structure, or portion thereof, shall be determined in accordance with Chapter 10 or applicable building code.

6. Change Section 3104.15.1 to read:

3104.15.1 Installation. Heating or cooking equipment tanks, piping, hoses, fittings, valves, tubing, and other related components shall be installed as specified by the applicable building code and shall be approved.

7. Change Section 3104.15.2 to read:

3104.15.2 Venting. Gas, liquid and solid fuel-burning equipment designed to be vented shall be vented to the outside air as specified by the applicable building code and shall be approved. Such vents shall be equipped with approved spark arresters where required. Where vents or flues are used, all portions of the tent or membrane structure shall be not less than 12 inches (305 mm) from the flue or vent.

8. Change Section 3104.16.1 to read:

3104.16.1 General. LP-gas equipment such as tanks, piping, hoses, fittings, valves, tubing and other related components shall be approved and in accordance with Chapter 61 and with the applicable building code.

D. The following changes shall be made to Section 3105, Temporary ~~State Canopies~~ Special Event Structures:

1. Change Section 3105.1 to read:

~~(N)~~3105.1 General. Operation and maintenance of temporary ~~stage canopies~~ special event structures shall be in accordance with Section 3104, Sections 3105.2 through ~~3105.8~~ 3105.9, and ANSI E1.21.

2. Change Section 3105.2 to read:

~~(N)~~3105.2 Approval. Temporary stage canopies in excess of 400 square feet (37 m^2) shall not be erected for any purpose without first obtaining approval and a permit from the building official.

3. Change Section 3105.5 to read:

~~(N)~~3105.5 Required documents. Documents shall be submitted to the building official where required by the USBC.

4. Change Section 3105.6.2 to read:

~~(N)~~3105.6.2 Inspection report. The inspecting agency or individual shall furnish an inspection report to the building official and fire code official. The inspection report shall indicate that the temporary stage canopy was inspected and was or was not installed in accordance with the approved construction documents. Discrepancies shall be brought to the immediate attention of the installer for correction. Where any discrepancy is not corrected, it shall be brought to the attention of the building official and fire code official and the designated responsible party.

5. Change Section 3105.7 to read:

~~(N)~~3105.7 Means of egress. The means of egress for temporary stage canopies shall comply with Chapter 10 and the applicable building code.

6. Delete Section 3105.8.

7. Change Section 3106.2.2 to read:

3106.2.2 Permits. An operational permit shall be required as set forth in Section 107.2.

13VAC5-51-144.4. ~~Ifc~~ IFC Chapter 32 High-Piled Combustible Storage.

A. The following changes shall be made to Section 3201, General:

1. Change Section 3201.1 to read:

~~(N)~~3201.1 Scope. Maintenance and operational aspects of high-piled combustible storage shall be in accordance with this chapter. In addition to the requirements of this chapter, the following material-specific requirements shall apply:

1. Aerosols shall be in accordance with Chapter 51.

2. Flammable and combustible liquids shall be in accordance with Chapter 57.

3. Hazardous materials shall be in accordance with Chapter 50.

4. Storage of combustible paper records shall be in accordance with the applicable NFPA 13 standard.

5. Storage of combustible fibers shall be in accordance with Chapter 37.

6. General storage of combustible material shall be in accordance with Chapter 3.

2. Change Section 3201.2 to read:

3201.2 Permits. A permit shall be required as set forth in Section 107.2.

3. ~~Change~~ Delete Section 3201.3 through 3201.3.2 ~~to read:~~.

~~(N)3201.3 Construction documents.~~

B. The following changes shall be made to Section 3204, Designation of High-Piled Storage Areas:

1. Change Section 3204.1 to read:

~~(N)~~3204.1 General. The ~~operational~~ operation and maintenance of high-piled storage areas, and portions of high-piled storage areas intended for storage, shall be maintained in accordance with the applicable building code.

2. Delete Section 3204.2.

C. The following changes shall be made to Section 3206, General Fire Protection and Life Safety Features:

1. Change Section 3206.1 to read:

~~(N)~~3206.1 General. Fire protection and life safety features for high-piled storage areas shall be maintained in accordance with the applicable building code.

2. Delete Section 3206.2 3206.2.1 and Table 3206.2.

3. Delete Section 3206.3.

4. Delete Section 3206.3.1.

5. Delete Section 3206.3.2.

6. Delete Section 3206.3.2.1.

7. ~~Delete Section 3206.3.2.2.~~

~~8.~~ Change Section 3206.4 to read:

~~(N)~~3206.4 Automatic sprinklers. Automatic sprinkler systems shall be maintained in accordance with the applicable building code.

~~(N)~~3206.4.1 Pallets. The requirements based on the presence of pallets shall be maintained in accordance with the applicable building code.

~~9.~~ 8. Change Section 3206.4.1.1 to read:

~~(N)~~3206.4.1.1 Plastic pallets. Plastic pallets listed and labeled in accordance with UL 2335 or FM 4996 shall be treated as wood pallets.

~~10.~~ 9. Change Section 3206.5 to read:

~~(N)~~3206.5 Fire detection. Fire detection provided for high-piled storage areas shall be maintained in accordance with the applicable building code.

~~11.~~ 10. Change Section 3206.6 to read:

~~(N)~~3206.6 Building access. Where building access is required, it shall be maintained in accordance with the applicable building code.

~~12.~~ 11. Change Section ~~3206.6.1~~ 3206.7 ~~to read:~~.

~~(N)3206.6.1~~ 3206.7 Access doors. Access doors shall be maintained in accordance with the applicable building code.

12. Delete Sections 3206.7.1 through 3206.7.3.

13. Change Section ~~3206.6.1.1~~ 3206.7.5 to read:

~~(N)3206.6.1.1~~ 3206.7.5 Number of doors required. The minimum number of doors shall be maintained in accordance with the applicable building code.

14. Change Section ~~3206.6.1.2~~ 3206.7.6 to read:

~~(N)3206.6.1.2~~ 3206.7.6 Door size and type. Access doors shall be maintained in accordance with the applicable building code. Roll-up doors shall not be used unless approved.

15. Delete Section ~~3206.1.3~~ Sections 3206.7.7 and 3206.7.8.

16. Change Section ~~3206.7~~ 3206.8 to read:

~~(N)3206.7~~ 3206.8 Smoke and heat removal. Where smoke and heat removal is required, it shall be maintained in accordance with the applicable building code.

17. Change Section ~~3206.8~~ 3206.9 to read:

~~(N)3206.8~~ 3206.9 Fire department hose connections. Where a standpipe system is required for exit passageways, it shall be maintained in accordance with the applicable building code.

18. Change Section ~~3206.9~~ 3206.10 to read:

~~(N)3206.9~~ 3206.10 Aisles. Aisles separating storage piles or racks shall be maintained in accordance with the applicable building code.

19. Change Section ~~3206.9.1~~ 3206.10.1 to read:

~~(N)3206.9.1~~ 3206.10.1 Width. Aisle width shall be maintained in accordance with the applicable building code.

20. Change Section ~~3206.9.1.1~~ 3206.10.1.1 to read:

~~(N)3206.9.1.1~~ 3206.10.1.1 Sprinklered buildings. Aisles in sprinklered buildings shall be maintained in accordance with the applicable building code.

21. Change Section ~~3206.9.1.2~~ 3206.10.1.2 to read:

~~(N)3206.9.1.2~~ 3206.10.1.2 Nonsprinklered buildings. Aisles in nonsprinklered buildings shall be maintained in accordance with the applicable building code.

22. Change Section ~~3206.9.2~~ 3206.10.2 to read:

~~(N)3206.9.2~~ 3206.10.2 Clear height. The required aisle width shall be maintained in accordance with the applicable building code. Rack structural supports and catwalks are allowed to cross aisles at a minimum height of 6 feet 8 inches (2032 mm) above the finished floor level, provided that such supports do not interfere with fire department hose stream trajectory.

23. Delete Section ~~3206.9.3~~ 3206.10.3.

D. The following changes shall be made to Section 3207, Solid-Piled and Shelf Storage:

1. Change Section 3207.2 to read:

~~(N)~~3207.2 Fire protection. Where automatic sprinklers are provided, they shall be maintained in accordance with the applicable building code.

2. Change Section 3207.2.1 to read:

~~(N)~~3207.2.1 Shelf storage. Shelf storage greater than 12 feet (3658 mm) but less than 15 feet (4572 mm) in height shall be in accordance with the fire protection requirements set forth in the applicable building code. Shelf storage 15 feet (4572 mm) or more in height shall be protected in an approved manner as required by this code and the applicable building code.

3. Change Section 3207.3 to read:

~~(N)~~3207.3 Pile dimension and height limitations. Pile dimensions, the maximum permissible storage height and pile volume shall be in accordance with the applicable building code.

4. Change Section 3207.4 to read:

~~(N)~~3207.4 ~~Array~~ Arrays. Where an automatic sprinkler system design utilizes protection based on a closed array, array clearances shall be maintained as specified by the standard used.

E. The following changes shall be made to Section 3208, Rack Storage:

1. Change Section 3208.2 to read:

~~(N)~~3208.2 Fire protection. Where automatic sprinklers are provided, they shall be maintained in accordance with the applicable ~~building code~~ NFPA 13 standard.

2. Change Section 3208.2.2 to read:

~~(N)~~3208.2.2 Racks with solid shelving. Racks with solid shelving having an area greater than 20 square feet (1.9 m^2), measured between approved flue spaces at all four edges of the shelf, shall be in accordance with this section.

Exceptions:

1. Racks with mesh, grated, slatted or similar shelves having uniform openings not more than 6 inches (152 mm) apart, comprising not less than 50% of the overall shelf area, and with approved flue spaces are allowed to be treated as racks without solid shelves.

2. Racks used for the storage of combustible paper records with solid shelving shall be in accordance with the applicable building code.

3. Change Section 3208.2.2.1 to read:

~~(N)~~3208.2.2.1 Fire protection. Fire protection for racks with solid shelving shall be in accordance with the applicable building code.

4. Delete Section 3208.3 and Table 3208.3.

5. Change Section 3208.3.1 to read:

~~(N)~~3208.3.1 Flue space protection. Where required by the fire code official, flue spaces required by the applicable building code, in single-row, double-row, or multiple-row rack storage installations shall be equipped with approved devices to protect the required flue spaces. Such devices shall not be removed or modified.

6. Change Section 3208.4 to read:

~~(N)~~3208.4 Column protection. Protection for steel building columns shall be maintained in accordance with the applicable building code.

7. Change Section 3208.5 to read:

~~(N)~~3208.5 Extra-high-rack storage systems. Approval shall be obtained prior to installing extra high rack combustible storage.

8. Change Section 3208.5.1 to read:

~~(N)~~3208.5.1 Fire protection. Fire protection provided for buildings with extra high rack combustible storage shall be maintained in accordance with the applicable building code.

F. The following changes shall be made to Section 3209, Automated Storage:

1. Change Section 3209.2 to read:

~~(N)~~3209.2 Automatic sprinklers. Where automatic sprinklers are provided, they shall be maintained in accordance with the applicable ~~building code~~ NFPA 13 standard.

2. Change Section 3209.3 to read:

~~(N)~~3209.3 Carousel storage. High-piled storage areas having greater than 500 square feet (46 m^2) of carousel storage shall be maintained in accordance with the applicable building code.

3. Change Section 3209.4 to read:

~~(N)~~3209.4 Automated rack storage. High-piled storage areas with automated rack storage shall be maintained in accordance with the applicable building code. The switch shall be clearly identified and shall be in a location approved.

G. The following change shall be made to Section 3210, Specialty Storage:

Change Section 3210.1 to read:

~~(N)~~3210.1 General. Records storage facilities used for the rack or shelf storage of combustible paper records shall be in accordance with the applicable building code. Palletized storage of records shall be in accordance with the applicable building code.

13VAC5-51-144.5. Chapter 33 Fire Safety During Construction and Demolition.

Change Section 3314.1 to read:

3314.1 Completion before occupancy. In buildings where an automatic sprinkler system is required by this code or the applicable building code, it shall be unlawful to occupy any portion of a building or structure until the automatic sprinkler system installation has been tested and approved, except as provided in Section 106.

13VAC5-51-144.6. ~~Ifc~~ IFC Chapter 34 Tire Rebuilding and Tire Storage.

A. Change Section 3401.1 to read:

3401.1 Scope. The maintenance and operation of tire rebuilding plants, tire storage, and tire byproduct facilities shall comply with this chapter, other applicable requirements of this code, and NFPA 13, as originally approved. Tire storage in buildings shall also comply with Chapter 32.

B. Change Section 3401.2 to read:

3401.2 Permit required. Permits shall be required as set forth in Section 107.2.

C. Change Section 3403.1 to read:

~~(N)~~3403.1 Construction. Tire rebuilding plants shall comply with the requirements of the applicable building code.

D. Delete Section 3403.2.

E. Change Section 3406.1 to read:

3406.1 Required access. New and existing tire storage yards shall be provided with fire apparatus access roads in accordance with Section 503 and Section 3406.2.

13VAC5-51-144.7. ~~Ifc~~ IFC Chapter 35 Welding and Other Hot Work.

Change Section 3501.2 to read:

3501.2 Permits. Permits shall be required as set forth in Section 107.2.

13VAC5-51-144.8. ~~Ifc~~ IFC Chapter 36 Marinas.

A. Change Section to read:

~~(N)~~3603.5 Electrical equipment. Electrical equipment shall be maintained in accordance with its listing, Section 605 of this code, and NFPA 303 as required for wet, damp, and hazardous locations.

B. Change Section 3604.2 to read:

~~(N)~~3604.2 Standpipes. Standpipes provided for marinas and boatyards shall be maintained in accordance with the applicable building code.

13VAC5-51-144.9. ~~Ifc~~ IFC Chapter 37 Combustible Fibers.

A. Change Section 3701.3 to read:

3701.3 Permits. Permits shall be required as set forth in Section 107.2.

B. Change Section 3703.5 to read:

~~(N)~~3703.5 Dust collection. Dust collection and exhaust systems required or provided for equipment or machinery that generates or emits combustible fibers shall be maintained in accordance with the applicable building code.

C. Change Section 3704.3 to read:

~~(N)~~3704.3 Storage of more than 100 cubic feet to 500 cubic feet. Loose combustible fibers in quantities exceeding 100 cubic feet (3 m^3) but not exceeding 500 cubic feet (14 m^3) shall be stored in rooms in accordance with the applicable building code.

D. Change Section 3704.4 to read:

~~(N)~~3704.4 Storage of more than 500 cubic feet to 1,000 cubic feet. Loose combustible fibers in quantities exceeding 500 cubic feet (14 m^3) but not exceeding 1,000 cubic feet (28 m^3) shall be stored in rooms in accordance with the applicable building code.

E. Change Section 3704.5 to read:

~~(N)~~3704.5 Storage of more than 1,000 cubic feet. Loose combustible fibers in quantities exceeding 1,000 cubic feet (28 m^3) shall be stored in rooms in accordance with the applicable building code.

13VAC5-51-145. ~~Ifc~~ IFC Chapter 50 Hazardous Materials - General Provisions.

A. The following changes shall be made to Section 5001, General:

1. Change Section 5001.1 to read:

5001.1 Scope. Prevention, control and mitigation of dangerous conditions related to storage, dispensing, use and handling of hazardous materials shall be in accordance with this chapter for operational usage. Quantities within buildings shall be maintained in accordance with the applicable building code.

This chapter shall apply to all hazardous materials, including those materials regulated elsewhere in this code, except that where specific requirements are provided in other chapters, those specific requirements shall apply in accordance with the applicable chapter. Where a material has multiple hazards, all hazards shall be addressed.

Exceptions:

1. In retail or wholesale sales occupancies, the quantities of medicines, foodstuff or consumer products, and cosmetics containing not more than 50% by volume of water-miscible liquids and with the remainder of the solutions not being flammable shall not be limited, provided such materials are packaged in individual containers not exceeding 1.3 gallons (5 L).

2. Quantities of alcoholic beverages in retail or wholesale sales occupancies shall not be limited providing the liquids are packaged in individual containers not exceeding 1.3 gallons (5 L).

3. Application and release of pesticide and agricultural products and materials intended for use in weed abatement, erosion control, soil amendment, or similar applications where applied in accordance with the manufacturer's instructions and label directions.

4. The offsite transportation of hazardous materials where in accordance with U.S. Department of Transportation regulations.

5. Building materials not otherwise regulated by this code.

6. Refrigeration systems (see Section 606).

7. Stationary storage battery systems regulated by Section 608.

8. The display, storage, sale or use of fireworks and explosives in accordance with Chapter 56.

9. Corrosives utilized in personal and household products in the manufacturer's original consumer packaging in Group M occupancies.

10. The storage of distilled spirits and wines in wooden barrels and casks.

11. The use of wall-mounted dispensers containing alcohol-based hand rubs classified as Class I or II liquids where in accordance with Section 5705.5.

2. Delete Section 5001.1.1.

3. Change Section 5001.3.3.9 to read:

~~(N)~~5001.3.3.9 Reliable power source. Where a power supply is relied upon to prevent or control an emergency condition that could endanger people or property, the power supply shall be maintained in accordance with the applicable building code.

4. Change Section 5001.3.3.10 to read:

~~(N)~~5001.3.3.10 Ventilation. Where ventilation is required by the applicable building code maintained.

5. Change Section 5001.5 to read:

5001.5 Permits. Permits shall be required as set forth in Section 107.2.

6. Add the following language to the end of Section 5001.5.1 to read:

The HMMP shall be maintained onsite for use by emergency responders and shall be updated not less than annually.

7. Add the following language to the end of Section 5001.5.2 to read:

The HMIS shall be maintained onsite or readily available through another means where approved by the fire code official for use by temporary responders, and shall be updated not less than annually.

8. Add Sections 5001.5.3, 5001.5.3.1, and 5001.5.3.2 to read:

5001.5.3 Repository container. When a HMMP or HMIS is required, the owner or operator shall provide a repository container (lock box) or other approved means for the storage of items required in Sections 5001.5.1 and 5001.5.2 so as to be readily available to emergency response personnel.

5001.5.3.1 Location and identification. The repository container (lock box) shall be located, installed and identified in an approved manner.

5001.5.3.2 Keying. All repository containers (lock boxes) shall be keyed as required by the fire code official.

9. Add Section 5001.7, including subsections, to read:

5001.7 Operational requirements for Group B teaching and research laboratories. Teaching and research laboratories in Group B educational occupancies above the 12th grade utilizing Section 430 of the USBC, Part I, Construction, or Section 306.1 of the USBC, Part II, Existing Buildings, shall comply with this section and other applicable requirements of this code. In the case of conflicts between the requirements of Section 430 of the USBC, Part I, Construction, or Section 6 306.1 of the USBC, Part II, Existing Buildings, and provisions of this code other than those set out in this section, Section 430 of the USBC, Part I, Construction, or Section 306.1 of the USBC, Part II, Existing Buildings, as applicable, shall govern.

5001.7.1 Chemical safety reviews. Operating and emergency procedures planning and documentation shall be as set out in Sections 5001.3.3.11 through 5001.3.3.17. Such documentation shall be prepared by laboratory safety personnel or special experts and shall be made available in the workplace for reference and review by employees. Copies of such documentation shall be furnished to the fire code official for review upon request.

5001.7.2 Hazardous materials handling. Receiving, transporting on site, unpacking, and dispensing of hazardous materials shall be carried out by persons trained in proper handling of such materials and shall be performed in accordance with Chapters 50 through 67, as applicable.

5001.7.3 Hazard identification signage. Warning signs for other than building components shall be provided in accordance with Section 5003.5.

5001.7.4 Maintenance of equipment, machinery, and processes. Maintenance of equipment, machinery, and processes used with hazardous materials shall comply with Section 5003.2.6.

5001.7.5 Time sensitive materials. Containers of materials that have the potential to become hazardous during prolonged storage shall be dated when first opened and shall be managed in accordance with NFPA 45, Section 8.2.4.4.1.

5001.7.6 Maintenance of storage, dispensing, use, and handling requirements. Storage, dispensing, use, and handling requirements in the USBC, Part I, Construction, or the USBC, Part II, Existing Buildings, shall be maintained. Operational requirements not affecting the manner of construction shall comply with this chapter and Chapters 51 through 67, as applicable.

5001.7.7 Hazardous wastes. Storage, dispensing, use, and handling of hazardous waste shall comply with this chapter and Chapters 51 through 67, as applicable.

5001.7.8 Container size. The maximum container size for all hazardous materials shall be 5.3 gallons (20 L) for liquids, 50 pounds (23 kg) for solids, 100 cubic feet (2.8. m^3) for health hazard gases per Table 5003.1.1(2), and 500 cubic feet (14 m^3) for all other gases in accordance with Table 5003.1.1(1).

Exception: Hazardous waste collection containers, for other than Class I and Class II flammable liquids, are permitted to exceed 5.3 gallons (20 L) where approved.

5001.7.9 Density. Quantities of Class I, II, and IIIA combustible or flammable liquids in storage and use within control areas or laboratory suites shall not exceed 8 gallons per 100 square feet (30 L/9.3 m^2) of floor area, with not more than 4 gallons per 100 square feet (15 L/9.3 m^2) being in use. Quantities of Class I flammable liquids in storage and use shall not exceed 4 gallons per 100 square feet (15 L/9.3 m^2) of floor area with not more than 2 gallons (7.5 L) being in use. The maximum in use in open systems is limited to 10% of these quantities. Densities shall be reduced by 25% on the 4th-floor through 6th-floor levels above grade plane of the building and 50% above the 6th-floor level. The density is to be reduced to 50% of these values for buildings that are not protected throughout with an approved automatic fire sprinkler system. Regardless of the density, the maximum allowable quantity per control area or laboratory suite shall not be exceeded.

Exception: Density limits may be exceeded in designated hazardous waste collection areas or rooms within a control area or laboratory suite, but stored quantities shall not exceed the maximum allowable quantity per laboratory suite or control area.

5001.7.10 Restricted materials in storage. Storage of pyrophorics and Class 4 oxidizers prohibited by Table 5003.1.1(1) in existing buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the USBC, Part I, Construction, shall be allowed within a control area at 25% of the limits in Table 5003.1.1(1) for a building equipped throughout with an automatic sprinkler system, with no additional increases allowed, provided that such materials are stored in accordance with all of the following:

1. Containers shall be completely sealed and stored according to the manufacturer's recommendations.

2. Storage shall be within approved hazardous materials storage cabinets in accordance with Section 5003.8.7 or shall be located in an inert atmosphere glove box in accordance with NFPA 45, Section 7.11.

3. The storage cabinet or glove box shall not contain any storage of incompatible materials.

5001.7.11 Restricted materials in use. Use of pyrophorics and Class 4 oxidizers prohibited by Table 5003.1.1(1) in existing buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 of the USBC, Part I, Construction, shall be allowed within a control area at 25% of the limits in Table 5003.1.1(1) for buildings equipped throughout with an automatic sprinkler system, with no additional increases allowed, provided that such materials are used in accordance with all of the following:

1. Use shall be within an approved chemical fume hood listed in accordance with UL 1805, or in an inert atmosphere glove box in accordance with NFPA 45, Section 7.11, or other approved equipment designed for the specific hazard of the material.

2. Combustible materials shall be kept at least 2 feet (610 mm) away from the work area, except for those items directly related to the research.

3. A portable fire extinguisher appropriate for the specific material shall be provided within 20 feet (6096 mm) of the use in accordance with Section 906.

B. The following changes shall be made to Section 5003, General Requirements:

1. Add a new "Permissible fireworks" row to Table 5003.1.1(1) and change footnotes d and f to read:

Permissible fireworks	1.4G	H-3	125[d,e,l]	N/A	N/A	N/A	N/A	N/A	N/A	N/A

d. Maximum allowable quantities shall be increased 100% in buildings equipped throughout with an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard. Where Note e applies, the increase for both Notes shall be applied accumulatively.

f. Quantities shall not be limited in a building equipped throughout with an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard.

2. Change footnote d of Table 5003.1.1(2) and Delete Sections 5003.1.3 and 5003.1.4.

d. Maximum allowable quantities shall be increased 100% in buildings equipped throughout with an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard. Where Note e applies, the increase for both Notes shall be applied accumulatively.

3. Change Section 5003.2 to read:

~~(N)~~5003.2 Systems, equipment and processes. Systems, equipment and processes utilized for storage, dispensing, use or handling of hazardous materials shall be maintained in accordance with the applicable building code.

4. Change Section 5003.2.1 to read:

~~(N)~~5003.2.1 Design and construction of containers, cylinders and tanks. Portable containers and cylinders shall be designed and constructed in accordance with approved standards. Containers, cylinders, and other means used for containment of hazardous materials shall be of an approved type. Pressure vessels not meeting U.S. Department of Transportation requirements for transportation shall comply with the ASME Boiler and Pressure Vessel Code.

Tanks shall be maintained in accordance with the applicable building code.

5. Change Section 5003.2.2 to read:

~~(N)~~5003.2.2 Piping, tubing, valves and fittings. Piping, tubing, valves, and fittings conveying hazardous materials shall be maintained in accordance with the applicable building code.

6. Delete Section 5003.2.2.1.

7. Change Section 5003.2.2.2 to read:

~~(N)~~5003.2.2.2 Additional regulations for supply piping for health-hazard materials. Supply piping and tubing for gases and liquids shall be maintained in accordance with the applicable building code.

8. Change Section 5003.2.3 to read:

~~(N)~~5003.2.3 Equipment, machinery and alarms. Equipment and machinery associated with the use, storage or handling of hazardous materials shall be listed or approved.

9. Change Section 5003.2.4 to read:

~~(N)~~5003.2.4 Installation of tanks. Installation of tanks shall be in accordance with Sections 5003.2.4.1 through 5003.2.4.2.1.

10. Change Section 5003.2.4.1 to read:

~~(N)~~5003.2.4.1 Underground tanks. Underground tanks used for the storage of liquid hazardous materials shall be maintained in accordance with the applicable building code.

11. Change Section 5003.2.4.2 to read:

~~(N)~~5003.2.4.2 Aboveground tanks. Aboveground stationary tanks used for the storage of hazardous materials shall be maintained in accordance with the requirements for outdoor storage of the particular material involved.

12. Delete Section 5003.2.7.

13. Change Section 5003.2.8 to read:

~~(N)~~5003.2.8. Seismic protection. Where provided, bracing and anchoring for machinery and equipment utilizing hazardous materials shall be maintained in accordance with the applicable building code.

14. 5003.2.9.1 Equipment, devices and systems requiring testing. The following equipment, systems, and devices shall be tested in accordance with Sections 5003.2.9 and 5003.2.9.2.

> 1. Gas detection systems, alarms, and automatic emergency shutoff valves required by Section 6004.2.2.10 for highly toxic and toxic gases.

2. Limit control systems for liquid level, temperature and pressure required by Sections 5004.8 and 5005.1.4.

3. Emergency alarm systems and supervision required by Sections 5004.9 and 5005.4.4.

4. Monitoring and supervisory systems required by the applicable building code.

5. Manually activated shutdown controls required by the applicable building code for compressed gas systems conveying pyrophoric gases.

15. Change Section 5003.3.1.4 to read:

5003.3.1.4 Responsibility for cleanup. The person, firm, or corporation responsible for an unauthorized discharge shall institute and complete all actions necessary to remedy the effects of such unauthorized discharge, whether sudden or gradual, at no cost to the jurisdiction. The fire code official may require records and receipts to verify cleanup and proper disposal of unauthorized discharges. When deemed necessary by the fire code official, cleanup may be initiated by the fire department or by an authorized individual or firm. Costs associated with such cleanup shall be the responsibility of the owner, operator, or other person responsible for the unauthorized discharge.

Note: Owners and operators of certain underground and aboveground petroleum storage tanks may have access to the Virginia Petroleum Storage Tank Fund for reimbursement of some cleanup costs associated with petroleum discharges from these tanks. See Article 10 (§ 62.1-44.34:10 et seq.) of Title 62.1of the Code of Virginia.

16. Delete Section 5003.8.

17. Change Section 5003.8.1 to read:

~~(N)~~5003.8.1 Buildings. Buildings, or portions thereof, in which hazardous materials are stored, handled or used shall be maintained in accordance with the applicable building code.

18. Delete Section 5003.8.2 and Table 5003.8.2.

19. Change Section 5003.8.3 to read:

~~(N)~~5003.8.3 Control areas. Control areas shall comply with Sections 5003.8.3.2 through 5003.8.3.4.

20. Delete Section 5003.8.3.1.

21. Change Section 5003.8.3.2 to read:

~~(N)~~5003.8.3.2 Percentage of maximum allowable quantities. The percentage of maximum allowable quantities of hazardous materials per control area allowed at each floor level within a building shall be maintained in accordance with the applicable building code.

22. Delete Table 5003.8.3.2.

23. Change Section 5003.8.3.3 to read:

~~(N)~~5003.8.3.3 Number. The maximum number of control areas per floor within a building shall be maintained in accordance with the applicable building code.

24. Change Section 5003.8.3.4 to read:

~~(N)~~5003.8.3.4 Fire-resistance-rating requirements. The required fire-resistance rating for control areas shall be maintained in accordance with the applicable building code.

25. Delete Section 5003.8.3.5 through 5003.8.3.5.3.

26. Delete Section 5003.8.4.

27. Delete Section 5003.8.4.1.

28. Change Section 5003.8.4.2 to read:

~~(N)~~5003.8.4.2 Ventilation system. The ventilation system for gas rooms shall be maintained in accordance with the applicable building code.

29. Change Section 5003.8.5 to read:

~~(N)~~5003.8.5 Exhausted enclosures. Where an exhausted enclosure is used to increase maximum allowable quantity per control area, the exhausted enclosure shall be maintained in accordance with the applicable building code.

30. Delete Section 5003.8.5.1.

31. Change Section 5003.8.5.2 to read:

~~(N)~~5003.8.5.2 Ventilation. The ventilation system for exhausted enclosures shall be maintained in accordance with the applicable building code.

32. Change Section 5003.8.5.3 to read:

~~(N)~~5003.8.5.3 Fire-extinguishing system. Fire-extinguishing systems required for exhaust enclosures shall be maintained in accordance with the applicable building code.

33. Change Section 5003.8.6.2 to read:

~~(N)~~5003.8.6.2 Ventilation. The ventilation system for gas cabinets shall be maintained in accordance with the applicable building code.

34. Change Section 5003.9.9 to read:

~~(N)~~5003.9.9 Shelf storage. Shelving shall be maintained in accordance with the applicable building code.

35. Change Section 5003.11 to read:

~~(N)~~5003.11 Group M storage and display and Group S storage. The aggregate quantity of nonflammable solid and nonflammable or noncombustible liquid hazardous materials stored and displayed within a single control area of a Group M occupancy, or an outdoor control area, or stored in a single control area of a Group S occupancy shall be maintained in accordance with the applicable building code.

36. Change Section 5003.11.1 to read:

~~(N)~~5003.11.1 Maximum allowable quantity per control area in Group M or S occupancies. The aggregate amount of nonflammable solid and nonflammable or noncombustible liquid hazardous materials stored and displayed within a single control area of a Group M occupancy or stored in a single control area of a Group S occupancy shall not exceed the amounts set forth in the applicable building code.

37. Delete Table 5003.11.1.

38. Change Section 5003.11.2 to read:

~~(N)~~5003.11.2 Maximum allowable quantity per outdoor control area in Group M or S occupancies. The aggregate amount of nonflammable solid and nonflammable or noncombustible liquid hazardous materials stored and displayed within a single outdoor control area of a Group M occupancy shall not exceed the amounts set forth in the applicable building code.

39. Change Section 5003.11.3 to read:

~~(N)~~5003.11.3 Storage and display. Storage and display shall be maintained in accordance with the applicable building code.

40. Delete Section 5003.11.3.1.

41. Change Section 5003.11.3.2 to read:

~~(N)~~5003.11.3.2 Storage and display height. Display height shall not exceed 6 feet (1829 mm) above the finished floor in display areas of Group M occupancies unless approved by the applicable building code. Storage height shall not exceed 8 feet (2438 mm) above the finished floor in storage areas of Group M and Group S occupancies unless approved by the applicable building code.

42. Change Section 5003.11.3.4 to read:

~~(N)~~5003.11.3.4 Racks and shelves. Racks and shelves used for storage or display shall be maintained in accordance with the applicable building code.

43. Change Section 5003.11.3.8 to read:

~~(N)~~5003.11.3.8 Floors. Floors shall be maintained in accordance with the applicable building code.

C. The following changes shall be made to Section 5004, Storage:

1. Change Section 5004.1 to read:

~~(N)~~5004.1 Scope. Storage of hazardous materials shall be maintained in accordance with the applicable building code. Retail and wholesale storage and display of nonflammable solid and nonflammable and noncombustible liquid hazardous materials in Group M occupancies and Group S storage shall be maintained in accordance with the applicable building code.

2. Change Section 5004.2 to read:

~~(N)~~5004.2 Spill control and secondary containment for liquid and solid hazardous materials. Spill control and secondary containment for rooms, buildings or areas used for the storage of liquid or solid hazardous materials shall be maintained in accordance with the applicable building code.

Exception: Outdoor storage of containers on approved containment pallets in accordance with Section 5004.2.3.

3. Delete Section 5004.2.1.

4. Delete Section 5004.2.2 and Table 5004.2.2.

5. Delete Section 5004.2.2.1.

6. Delete Section 5004.2.2.3.

7. Delete Section 5004.2.2.5.

8. Change Section 5004.2.2.6 to read:

~~(N)~~5004.2.2.6 Drainage system design. Drainage systems shall be in accordance with the applicable building code.

9. Change Section 5004.3 to read:

~~(N)~~5004.3 Ventilation. Ventilation required for indoor storage areas and storage buildings shall be maintained in accordance with the applicable building code.

10. Delete Section 5004.3.1.

11. Change Section 5004.5 to read:

~~(N)~~5004.5 Automatic sprinkler systems. Automatic sprinkler systems for the storage of hazardous materials shall be maintained in accordance with the applicable building code.

12. Change Section 5004.6 to read:

~~(N)~~5004.6 Explosion control. Explosion control for storage rooms, areas and buildings shall be maintained in accordance with the applicable building code.

13. Change Section 5004.7 to read:

~~(N)~~5004.7 Standby or emergency power. Standby or emergency power shall be maintained in accordance with the applicable building code.

14. Delete Section 5004.7.1.

15. Delete Section 5004.7.2.

16. Change Section 5004.8 to read:

~~(N)~~5004.8 Limit controls. Limit controls shall be maintained in accordance with the applicable building code.

17. Delete Section 5004.8.1.

18. Delete Section 5004.8.2.

19. Change Section 5004.9 to read:

~~(N)~~5004.9 Emergency alarm. Emergency alarm systems shall be maintained in accordance with the applicable building code.

20. Delete Section 5004.10.

21. Delete Section 5004.12.

22. Change Section 5004.13 to read:

~~(N)~~5004.13 Weather protection. Where overhead noncombustible construction is provided for sheltering outdoor hazardous material storage areas, such storage shall not be considered indoor storage where the area is constructed in accordance with the requirements for weather protection as required by the applicable building code.

Exception: Storage of explosive materials shall be considered as indoor storage.

D. The following changes shall be made to Section 5005, Use, Dispensing and Handling:

1. Change Section 5005.1 to read:

~~(N)~~5005.1 General. Use, dispensing and handling of hazardous materials shall be maintained in accordance with the applicable building code.

2. Delete Section 5005.1.2.

3. Change Section 5005.1.3 to read:

~~(N)~~5005.1.3 Spill control and secondary containment for hazardous material liquids. Where required by the applicable building code, spill control and secondary containment shall be maintained in accordance with the applicable building code.

4. Change Section 5005.1.4 to read:

~~(N)~~5005.1.4 Limit controls. Limit controls shall be maintained in accordance with the applicable building code.

5. Delete Section 5005.1.4.1.

6. Delete Section 5005.1.4.2.

7. Delete Section 5005.1.4.3.

8. Delete Section 5005.1.4.4.

9. Change Section 5005.1.5 to read:

~~(N)~~5005.1.5 Standby or emergency power. Standby or emergency power shall be maintained in accordance with the applicable building code.

10. Delete Section 5005.1.5.1.

11. Delete Section 5005.1.6.

12. Change Section 5005.1.7 to read:

~~(N)~~5005.1.7 Lighting. Lighting provided for use, dispensing and handling of hazardous materials shall be maintained in accordance with the applicable building code.

13. Change Section 5005.1.8 to read:

~~(N)~~5005.1.8 Fire-extinguishing systems. Fire-extinguishing systems for rooms or areas in which hazardous materials are dispensed or used shall be maintained in accordance with the applicable building code.

14. Change Section 5005.1.9 ~~to read~~ and delete Section 5005.1.11 and 5005.1.12.~~:~~

~~(N)~~5005.1.9 Ventilation. Ventilation for indoor dispensing and use areas shall be maintained in accordance with the applicable building code.

15. Change Section 5005.2.1 to read:

5005.2 Indoor dispensing and use. Indoor dispensing and use of hazardous materials shall be in buildings complying with the International Building Code and in accordance with Section 5005.1, Sections 5005.2.1 through 5005.2.1.4, and Sections 5005.2.2.1 through 5005.2.2.4.

16. Change Section 5005.2.1.3 to read:

5005.2.1.3 Spill control for hazardous material liquids. Buildings, rooms, or areas where hazardous material liquids are dispensed into vessels exceeding a 1.3-gallon (5 L) capacity or used in open systems exceeding a 5.3-gallon (20 L) capacity shall be provided with spill control in accordance with the applicable building code.

17. Change Section 5005.2.1.4 to read:

~~(N)~~5005.2.1.4 Secondary containment for hazardous material liquids. Where required by the applicable building code, secondary containment for buildings, rooms or areas where hazardous material liquids are dispensed or used in open systems shall be maintained in accordance with the applicable building code.

18. Delete Table 5005.2.1.4.

19. Delete Section 5005.2.2.

20. Change Section 5005.2.2.1 to read:

~~(N)~~5005.2.2.1 Ventilation. Ventilation for closed systems shall be maintained in accordance with the applicable building code.

21. Change Section 5005.2.2.2 to read:

~~(N)~~5005.2.2.2 Explosion control. Explosion control shall be maintained in accordance with the applicable building code.

22. Change Section 5005.2.2.3 to read:

~~(N)~~5005.2.2.3 Spill control for hazardous material liquids. Spill control for buildings, rooms or areas where hazardous material liquids are used shall be maintained in accordance with the applicable building code.

23. Change Section 5005.2.2.4 to read:

~~(N)~~5005.2.2.4 Secondary containment for hazardous material liquids. Secondary containment for buildings, rooms or areas where hazardous material liquids are used shall be maintained in accordance with the applicable building code.

24. Change Section 5005.3.4 to read:

5005.3.4 Spill control for hazardous material liquids in open systems. Outdoor areas where hazardous material liquids are dispensed in vessels exceeding a 1.3-gallon (5 L) capacity or used in open systems exceeding a 5.3-gallon (20 L) capacity shall be provided with spill control in accordance with the applicable building code.

25. Change Section 5005.3.5 to read:

5005.3.5 Secondary containment for hazardous material liquids in open systems. Where required, outdoor areas where hazardous material liquids are dispensed or used in open systems shall be provided with secondary containment in accordance with the applicable building code where the capacity of an individual vessel or system or the capacity of multiple vessels or systems exceeds the following:

1. Individual vessel or system: greater than 1.3 gallons (5 L).

2. Multiple vessels or systems: greater than 5.3 gallons (20 L).

26. Change Section 5005.3.6 to read:

5005.3.6 Spill control for hazardous material liquids in closed systems. Outdoor areas where hazardous material liquids are used in closed systems exceeding 55 gallons (208 L) shall be provided with spill control in accordance with the applicable building code.

27. Change Section 5005.3.7 to read:

5005.3.7 Secondary containment for hazardous material liquids in closed systems. Where required, outdoor areas where hazardous material liquids are dispensed or used in closed systems shall be provided with secondary containment in accordance with the applicable building code where the capacity of an individual vessel or system or the capacity of multiple vessels or systems exceeds the following:

1. Individual vessel or system greater than 55 gallons (208 L).

2. Multiple vessels or systems greater than 1,000 gallons (3785 L).

28. Change Section 5005.3.9 to read:

5005.3.9 Weather protection. Where overhead noncombustible construction is provided for sheltering outdoor hazardous material use areas, such use shall not be considered indoor use where the area is constructed in accordance with the requirements for weather protection as required in the applicable building code.

Exception: Use of explosive materials shall be considered as indoor use.

29. Change Section 5005.4 to read:

~~(N)~~5005.4 Handling. Handling of hazardous materials shall be maintained in accordance with the applicable building code.

30. Change Section 5005.4.1 to read:

~~(N)~~5005.4.1 Quantities exceeding the maximum allowable quantity per control area. Handling of hazardous materials in outdoor locations in amounts exceeding the maximum allowable quantity per the applicable building code shall be in accordance with Sections 5001, 5003, 5005.1 and 5005.4.

31. Change Section 5005.4.2 to read:

~~(N)~~5005.4.2 Quantities not exceeding the maximum allowable quantity per control area. Handling of hazardous materials in outdoor locations in amounts not exceeding the maximum allowable quantity per the applicable building code shall be in accordance with Sections 5001 and 5003.

32. Change Section 5005.4.4 to read:

~~(N)~~5005.4.4 Dispensing, use and handling. Where hazardous materials having a hazard ranking of 3 or 4 are being transported through corridors, interior exit stairways or ramps or exit passageways, such transportation shall be in accordance with the applicable building code.

13VAC5-51-145.5. ~~Ifc~~ IFC Chapter 51 Aerosols.

A. Change Section 5101.1 to read:

5101.1 Scope. The provisions of this chapter and NFPA 30B shall apply to the manufacturing, storage and display of aerosol products. Manufacturing of aerosol products using hazardous materials shall also comply with Chapter 50.

B. Change Section 5101.2 to read:

5101.2 Permit required. Permits shall be required as set forth in Section 107.2.

C. Change Sections 5104.1, 5104.1.1, 5104.1.2.1, ~~and~~ 5104.2 and 5104.2.2 to read:

~~(N)~~5104.1 General. The inside storage of Levels 2 and 3 aerosol products shall be maintained in accordance with the applicable building code.

5104.1.1 Plastic containers. Aerosol products in plastic containers larger than 4 fluid ounces (118 ml), but not to exceed 33.8 fluid ounces (1000 ml), shall be allowed only where in accordance with this section. The commodity classification shall be Class III commodities, as defined in the applicable NFPA 13 standard where any of the following conditions are met:

1. Base product has no fire point where tested in accordance with ASTM D 92, and nonflammable propellant.

2. Base product has no sustained combustion as tested in accordance with Appendix H, "Method of Testing for Sustained Combustibility," in U.S. Department of Transportation 49 CFR Part 173, and nonflammable propellant.

3. Base product contains up to 20 percent by volume (15.8 percent by weight) of ethanol or isopropyl alcohol, or both, in an aqueous mix, and nonflammable propellant.

4. Base product contains 4 percent by weight or less of an emulsified flammable liquefied gas propellant within an aqueous base. The propellant shall remain emulsified for the life of the product. Where such propellant is not permanently emulsified, the propellant shall be nonflammable.

5104.1.2.1 Storage, use or handling. The storage, use or handling of plastic aerosol X products shall be prohibited unless otherwise specified by the applicable building code.

~~(N)~~5104.2 Storage in Groups A, B, E, F, I and R. Storage of aerosol products in occupancies in Groups A, B, E, F, I and R shall be maintained in accordance with the applicable building code.

5104.2.2 Aerosol cooking spray products. Storage of aerosol cooking spray products in A, B, E, F and R occupancies shall not be more than 1,000 pounds (454 kg) net weight unless otherwise specified by the applicable building code.

D. Change Section 5104.3 and 5104.3.1 to read:

~~(N)~~5104.3 Storage in general purpose warehouses. Aerosol storage in general purpose warehouses shall be maintained in accordance with the applicable building code.

~~(N)~~5104.3.1 Nonsegregated storage. Nonsegregated storage areas shall be maintained in accordance with the applicable building code.

E. Delete Table 5104.3.1.

F. Change Section 5104.3.2 to read:

~~(N)~~5104.3.2 Segregated storage. Segregated storage areas shall be maintained in accordance with the applicable building code.

G. Delete Table 5104.3.2.

H. Change Section 5104.3.2.1 and 5104.3.2.2 to read:

~~(N)~~5104.3.2.1 Chain link fence enclosures. Chain link fence enclosures shall be maintained in accordance with the applicable building code.

~~(N)~~5104.3.2.2 Aisles. The minimum aisle requirements for segregated storage in general purpose warehouses shall be maintained in accordance with the applicable building code.

I. Delete Table 5104.3.2.2.

J. Change ~~Section 5104.4~~ Sections 5104.3.3 through 5104.4.3 to read:

5104.3.3 Aerosol cooking spray products. Solid pile, palletized or rack storage of aerosol cooking spray products in a general purpose warehouse shall not be more than 2,500 pounds (1135 kg) net weight, unless protected in accordance with NFPA 30B or otherwise specified by the applicable building code.

~~(N)~~5104.4 Storage in aerosol warehouses. The total quantity of Levels 2 and 3 aerosol products in a warehouse utilized for the storage, shipping and receiving of aerosol products shall maintained in accordance with the applicable building code.

~~(N)~~5104.4.1 Automatic sprinkler system. Where provided, automatic sprinkler systems protecting aerosol warehouses shall be maintained in accordance with the applicable building code.

~~(N)~~5104.4.2 Pile and palletized storage aisles. Travel distance and aisles serving pile and palletized storage shall be maintained in accordance with the applicable building code.

~~(N)~~5104.4.3 Rack storage aisles. Rack storage shall be maintained in accordance with the applicable building code.

K. Delete Section 5104.4.4.

L. Change Section 5104.5 to read:

~~(N)~~5104.5 Storage in inside flammable liquid storage rooms. Inside flammable liquid storage rooms shall be maintained in accordance with the applicable building code.

M. Delete Sections 5104.5.1 and 5104.5.2.

N. Change Sections 5104.6 and 5104.6.1 to read:

~~(N)~~5104.6 Storage in liquid warehouses. The storage of aerosol products in liquid warehouses shall be maintained in accordance with the applicable building code.

~~(N)~~5104.6.1 Containment. Spill control or drainage shall be maintained in accordance with the applicable building code.

O. Delete Section 5104.6.2.

P. Change Sections 5104.6.3 and 5104.7 to read:

~~(N)~~5104.6.3 Opening protection into segregated storage areas. Fire doors or gates opening into the segregated storage area shall be maintained in accordance with the applicable building code.

~~(N)~~5104.7 Storage in Group M occupancies. Storage of aerosol products in occupancies in Group M shall be maintained in accordance with the applicable building code.

Q. Delete Table 5104.7, and Sections 5104.8.1 and 5104.8.2.

R. Change Sections 5104.8, 5106.1 and 5106.2.1 to read:

5104.8 Storage of aerosol cooking spray products. Aerosol cooking spray products shall be permitted to be stored in a general purpose warehouse in accordance with the applicable building code.

~~(N)~~5106.1 General. This section shall apply to the maintenance of retail display of aerosol products.

~~(N)~~5106.2.1 Maximum quantities in retail display areas. Quantities of aerosol products in retail display areas shall be maintained in accordance with the applicable building code.

S. Delete Table 5106.2.1.

T. Change Section 5106.2.2 and 5106.2.3 to read:

5106.2.2 Aerosol cooking spray storage. The storage of aerosol cooking spray products shall comply with the applicable building code.

~~(N)5106.2.2~~ 5106.2.3 Display of ~~containers~~ aerosol products. Aerosol containers shall be stacked in accordance with the applicable building code.

U. Delete Section ~~5106.2.3~~ 5106.2.4.

V. Change Sections ~~5106.2.4~~ 5106.2.5 through 5106.4.1 to read:

~~(N)5106.2.4~~ 5106.2.5 Retail display automatic sprinkler system. Where an automatic sprinkler system is required for the protected retail display of aerosol products, the wet-pipe automatic sprinkler system shall be in accordance with the applicable ~~building code~~ NFPA 13 standard.

~~(N)~~5106.3 Aerosol display and normal merchandising exceeding 8 feet (2438 mm) high. Aerosol display and merchandising exceeding 8 feet in height shall be in accordance with Sections 5106.3.1 through 5106.3.3.

~~(N)~~5106.3.1 Maximum quantities in retail display areas. Aerosol products in retail display areas shall not exceed quantities approved under the applicable building code.

~~(N)~~5106.3.2 Automatic sprinkler protection. Where provided, automatic sprinkler protection for aerosol display and merchandising areas shall be maintained in accordance with the applicable building code.

~~(N)~~5106.3.3 Separation of aerosol areas. Separation of aerosol areas shall be maintained in accordance with the applicable building code.

~~(N)~~5106.4 Maximum quantities in storage areas. Aerosol products in storage areas adjacent to retail display areas shall not exceed the quantities approved under the applicable building code.

W. Delete Table 5106.4.

X. Change Sections 5106.5 and 5106.5.1 to read:

~~(N)~~5106.5 Special protection design for Levels 2 and 3 aerosols adjacent to flammable and combustible liquids in double-row racks. The display and merchandising of aerosols adjacent to flammable and combustible liquids in double-row racks shall be maintained in accordance with the applicable building code.

~~(N)~~5106.5.1 Fire protection. Where required, fire protection for the display and merchandising of aerosols in double-row racks shall be maintained in accordance with the applicable building code.

Y. ~~Delete Section 5106.2.3.~~

~~Z.~~ Delete Section 5106.5.2.

~~AA.~~ Z. Change Sections 5106.5.3 through 5106.5.6 to read:

~~(N)~~5106.5.3 Shelving. Shelving in racks shall be maintained in accordance with the applicable building code.

~~(N)~~5106.5.4 Aisles. Aisles shall be maintained between rows of racks and adjacent solidly piled or palletized merchandise in accordance with the applicable building code.

~~(N)~~5106.5.5 Flue spaces. Flue spaces in racks shall be maintained in accordance with the applicable building code.

~~(N)~~5106.5.6 Horizontal barriers. Horizontal barriers shall be maintained in accordance with the applicable building code.

~~BB.~~ AA. Delete Sections 5106.5.7 and 5106.5.8.

~~CC.~~ BB. Change Section 5107.1 to read:

~~(N)~~5107.1 General. Manufacturing facilities shall be maintained in accordance with the applicable building code.

13VAC5-51-146.5. ~~Ifc~~ IFC Chapter 53 Compressed Gases.

A. Change Section 5301.1 to read:

5301.1 Scope. Storage, use and handling of compressed gases in compressed gas containers, cylinders, tanks and systems shall comply with the applicable building code, this chapter, and the use and handling provisions of NFPA 55, including those gases regulated elsewhere in this code. Partially full compressed gas containers, cylinders or tanks containing residual gases shall be considered as full for the purposes of the controls required.

Liquefied natural gas for use as a vehicular fuel shall also comply with NFPA 52 and NFPA 59A.

Compressed gases classified as hazardous materials shall also comply with Chapter 50 for general requirements and chapters addressing specific hazards, including Chapters 58 (Flammable Gases), 60

(Highly Toxic and Toxic Materials), 63 (Oxidizers, Oxidizing Gases and Oxidizing Cryogenic Fluids), and 64 (Pyrophoric Materials).

Compressed hydrogen (CH_2) for use as a vehicular fuel shall also comply with Chapters 23 and 58 of this code and NFPA 2.

Cutting and welding gases shall also comply with Chapter 35.

LP-gas shall also comply with Chapter 61.

Exceptions:

1. Gases used as refrigerants in refrigeration systems (see Section 606).

2. Compressed natural gas (CNG) for use as a vehicular fuel shall comply with Chapter 23, NFPA 52, and the International Fuel Gas Code.

3. Cryogenic fluids shall comply with Chapter 55.

B. Change Section 5301.2 to read:

5301.2 Permits. Permits shall be required as set forth in Section 107.2.

C. Change Section 5303.16 to read:

~~(N)~~5303.16 Vaults. Vaults shall be maintained in accordance with the applicable building code.

D. Delete Sections 5303.16.1 through 5303.16.3.

E. Delete Section 5303.16.5.

F. Delete Sections 5303.16.7 through 5303.16.10.

G. Delete Sections 5303.16.12 and 5303.16.14.

H. Change Sections 5305.5 and 5306.2 to read:

~~(N)~~5305.5 Venting. Venting shall be maintained in accordance with the applicable building code.

~~(N)~~5306.2 Interior supply location. Medical gases shall be stored in areas approved under the applicable building code.

I. Delete Sections 5306.2.1 and 5306.2.2.

J. Change ~~Section 5307.2~~ Sections 5307.1 through 5307.4.4 ~~to read~~ and delete Sections 5307.4.1, 5307.4.3.1 and 5307.4.6:

5307.1 General. Compressed gases in storage or use not regulated by the material-specific provisions of Chapters 6, 54, 55, and 60 through 67, including asphyxiant, irritant and radioactive gases, shall comply with this section in addition to other requirements of this chapter.

5307.2 Ventilation. Ventilation for indoor storage and use areas and storage buildings shall be maintained in accordance with the applicable building code.

5307.3 Insulated liquid carbon dioxide systems used in beverage dispensing applications. Insulated liquid carbon dioxide systems with more than 100 pounds (45.4 kg) of carbon dioxide used in beverage dispensing applications shall comply with Section 5307.3.1.

5307.3.1 Ventilation. Mechanical ventilation for areas with carbon dioxide systems shall be maintained in accordance with the applicable building code.

5307.3.2 Gas detection system. Gas detection systems for insulated carbon dioxide systems shall be maintained in accordance with the applicable building code.

5307.4 Carbon dioxide enrichment systems. The maintenance of carbon dioxide enrichment systems with more than 100 pounds (45.4 kg) of carbon dioxide, and carbon dioxide enrichment systems with any quantity of carbon dioxide having a remote fill connection, shall comply with Sections 5307.4.2 through 5307.4.7.

5307.4.2 Equipment. Pressure relief, vent piping, fill indicators, fill connections, vent terminations, piping systems and the storage, use and handling of the carbon dioxide shall be in accordance with the applicable building code.

5307.4.3 Gas detection system. Gas detection systems for carbon dioxide enrichment systems shall be maintained in accordance with the applicable building code.

5307.4.4 Pressurization and ventilation. Pressurization and ventilation of rooms or indoor areas in which carbon dioxide enrichment is provided shall be maintained in accordance with the applicable building code.

~~5307.2 Permits. Permits shall be required as set forth in Section 107.2.~~

~~K. Delete Section 5307.5.~~

~~L. Change Sections 5307.5.1 and 5307.5.2 to read:~~

~~(N)5307.5.1 Ventilation. Mechanical ventilation shall be maintained in accordance with the applicable building code.~~

~~(N)5307.5.2 Emergency alarm system. Where required under the applicable building code, emergency alarm systems shall be maintained.~~

~~M. Delete Section 5308.1.~~

~~N. Change Section 5308.2 to read:~~

~~(N)5308.2 Ventilation. Where mechanical ventilation is required, it shall be maintained in accordance with the applicable building code.~~

13VAC5-51-147. ~~Ifc~~ IFC Chapter 54 Corrosive Materials.

A. Change Sections 5401.1 and 5401.2 to read:

5401.1 Scope. Maintenance and operational aspects of the storage and use of corrosive materials shall be in accordance with this chapter. Compressed gases shall also comply with Chapter 53.

Exceptions:

1. Display and storage in Group M and storage in Group S occupancies complying with Section 5003.11.

2. Stationary storage battery systems in accordance with Section 608.

3. This chapter shall not apply to R-717 (ammonia) where used as a refrigerant in a refrigeration system (see Section 606).

5401.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Change Sections 5403.1 and 5403.2 to read:

5403.1 Quantities not exceeding the maximum allowable quantity per control area. The storage and use of corrosive materials in amounts not exceeding the maximum allowable quantity per control area shall be in accordance with the applicable building code.

5403.2 Quantities exceeding the maximum allowable quantity per control area. The storage and use of corrosive materials in amounts exceeding the maximum allowable quantity per control area shall be in accordance with the applicable building code.

C. Change Sections 5404.1.1 and 5404.2.1 to read:

~~(N)~~5404.1.1 Liquid-tight floor. Liquid-tight floors shall be maintained in accordance with the applicable building code.

~~(N)~~5404.2.1 Aboveground outside storage tanks. Aboveground outside storage tanks shall be maintained in accordance with the applicable building code.

D. Change Section 5405.1.2 to read:

~~(N)~~5405.1.2 Ventilation. Where required, mechanical exhaust ventilation shall be maintained in accordance with the applicable building code.

13VAC5-51-147.5. ~~Ifc~~ IFC Chapter 55 Cryogenic Fluids.

A. Change Sections 5501.1 and 5501.2 to read:

5501.1 Scope. Maintenance and operational aspects of the storage, use and handling of cryogenic fluids shall comply with this chapter and NFPA 55. Cryogenic fluids classified as hazardous materials shall also comply with the general requirements of Chapter 50. Partially full containers containing residual cryogenic fluids shall be considered as full for the purposes of the controls required.

Exceptions:

1. Fluids used as refrigerants in refrigeration systems (see Section 606).

2. Liquefied natural gas (LNG), which shall comply with NFPA 59A.

Oxidizing cryogenic fluids, including oxygen, shall comply with Chapter 63, as applicable.

Flammable cryogenic fluids, including hydrogen, methane and carbon monoxide, shall comply with Chapters 23 and 58, as applicable.

Inert cryogenic fluids, including argon, helium and nitrogen, shall comply with ANSI/CGA P-18.

5501.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Change Section 5503.1.2 to read:

~~(N)~~5503.1.2 Concrete containers. Barrier materials and membranes used in connection with concrete, but not functioning structurally, shall be compatible with the materials contained.

C. Change Sections 5503.5.2 and 5503.6 to read:

~~(N)~~5503.5.2 Securing of containers. Stationary containers shall be secured to foundations in accordance with the applicable building code. Portable containers subject to shifting or upset shall be secured. Nesting shall be an acceptable means of securing containers.

~~(N)~~5503.6 Electrical wiring and equipment. Electrical wiring and equipment shall be maintained in accordance with the applicable building code.

D. Change Section 5504.2.1 to read:

~~(N)~~5504.2.1 Stationary containers. Stationary containers shall be maintained in accordance with the applicable building code.

E. Delete Section 5504.2.1.2.

F. Change Sections 5504.2.1.3, 5504.2.2.2, and 5504.2.2.3 to read:

~~(N)~~5504.2.1.3 Ventilation. Ventilation required in storage areas for stationary containers shall be maintained in accordance with the applicable building code.

~~(N)~~5504.2.2.2 Construction of indoor areas. Rooms or areas used for the storage of cryogenic fluids in portable containers shall be maintained in accordance with the applicable building code.

~~(N)~~5504.2.2.3 Ventilation. Ventilation shall be maintained in accordance with the applicable building code.

G. Change Sections 5505.4.1 and 5505.4.1.1 to read:

~~(N)~~5505.4.1 Dispensing areas. Dispensing of cryogenic fluids with physical or health hazards shall be conducted in approved locations.

~~(N)~~5505.4.1.1 Ventilation. Ventilation required in areas where cryogenic fluids are dispensed shall be maintained in accordance with the applicable building code.

Exception: Cryogenic fluids that can be demonstrated not to create harmful vapors.

13VAC5-51-150. ~~Ifc~~ IFC Chapter 56 Explosives and Fireworks.

A. Change exception 4 in Section 5601.1 to read:

> 4. The possession, storage, and use of not more than 15 pounds (6.81 kg) of commercially manufactured sporting black powder, 20 pounds (9 kg) of smokeless powder and any amount of small arms primers for hand loading of small arms ammunition for personal consumption.

B. Add exceptions 10, 11 and 12 to Section 5601.1 to read:

> 10. The storage, handling, or use of explosives or blasting agents pursuant to the provisions of Title 45.1 of the Code of Virginia.
>
> 11. The display of small arms primers in Group M when in the original manufacturer's packaging.
>
> 12. The possession, storage and use of not more than 50 pounds (23 kg) of commercially manufactured sporting black powder, 100 pounds (45 kg) of smokeless powder, and small arms primers for hand loading of small arms ammunition for personal consumption in Group R-3 or R-5, or 200 pounds (91 kg) of smokeless powder when stored in the manufacturer's original containers in detached Group U structures at least 10 feet (3048 mm) from inhabited buildings and are accessory to Group R-3 or R-5.

C. Change exception 4 in Section 5601.1.3 to read:

> 4. The possession, storage, sale, handling and use of permissible fireworks where allowed by applicable local or state laws, ordinances and regulations provided such fireworks comply with CPSC 16 CFR, Parts 1500-1507, and DOTn 49 CFR, Parts 100-178, for consumer fireworks.

D. Add exception 5 to Section 5601.1.3 to read:

> 5. The sale or use of materials or equipment when such materials or equipment is used or to be used by any person for signaling or other emergency use in the operation of any boat, railroad train or other vehicle for the transportation of persons or property.

E. Change entire Section 5601.2 to read:

5601.2 Permit required. Permits shall be required as set forth in Section 107.2 and regulated in accordance with this section. The manufacture, storage, possession, sale and use of fireworks or explosives shall not take place without first applying for and obtaining a permit.

5601.2.1 Residential uses. No person shall keep or store, nor shall any permit be issued to keep, possess or store, any fireworks or explosives at any place of habitation, or within 100 feet (30,480 mm) thereof.
Exception: Storage of smokeless propellant, black powder, and small arms primers for personal use and not for resale in accordance with Section 5606.

5601.2.2 Sale and retail display. Except for the Armed Forces of the United States, Coast Guard, National Guard, federal, state and local regulatory, law enforcement and fire agencies acting in their official capacities, explosives shall not be sold, given, delivered or transferred to any person or company not in possession of a valid permit. The holder of a permit to sell explosives shall make a record of all transactions involving explosives in conformance with Section 5603.2 and include the signature of any receiver of the explosives. No person shall construct a retail display nor offer for sale explosives, explosive materials, or fireworks upon highways, sidewalks, public property, or in assembly or educational occupancies.

5601.2.3 Permit restrictions. The fire official is authorized to limit the quantity of explosives, explosive materials, or fireworks permitted at a given location. No person, possessing a permit for storage of explosives at any place, shall keep or store an amount greater than authorized in such permit. Only the kind of explosive specified in such a permit shall be kept or stored.

5601.2.3.1 Permit applicants. As a condition of a permit as provided for in Section 107.5, the fire official shall not issue a permit to manufacture, store, handle, use or sell explosives or blasting agents to any applicant who has not provided on the permit application the name and signature of a designated individual as representing the applicant. When, as provided for in Section 107.2 or 107.6, a permit is required to conduct a fireworks display, as a condition of permit as provided for in Section 107.5, the fire official shall not issue a permit to design, setup or conduct a fireworks display to any applicant who has not provided on the permit application the name and signature of a designated individual as representing the applicant.

If the applicant's designated individual changes or becomes no longer qualified to represent the applicant as responsible management or designated individual, the applicant shall notify the fire official who issued the permit on the change of status of the designated individual. The notice is to be made prior to the use of any explosives or conducting a fireworks display but in no case shall the notification occur more than seven days after the change of status and shall provide the name of another designated individual. The fire official may revoke or require the reissuance of a permit based on a change of permit conditions or status or inability to provide another designated individual.

5601.2.3.1.1 BCC. The SFMO shall process all applications for a BCC for compliance with § 27-97.2 of the Code of Virginia and will be the sole provider of a BCC. Using forms provided by the SFMO, a BCC may be applied for and issued to any person who submits to the completion of a background investigation by providing fingerprints and personal descriptive information to the SFMO. The SFMO shall forward the fingerprints and personal descriptive information to the Central Criminal Records Exchange for submission to the Federal Bureau of Investigation for the purpose of obtaining a national criminal history records check regarding such applicant.

5601.2.3.1.2 Issuance of a BCC. The issuance of a BCC shall be denied if the applicant or designated person representing an applicant has been convicted of any felony, whether such conviction occurred under the laws of the Commonwealth, or any other state, the District of Columbia, the United States or any territory thereof, unless his civil rights have been restored by the Governor or other appropriate authority.

5601.2.3.1.3 Fee for BCC. The fee for obtaining or renewing a BCC from the SFMO shall be $150 plus any additional fees charged by other agencies for fingerprinting and for obtaining a national criminal history record check through the Central Criminal Records Exchange to the Federal Bureau of Investigation.

5601.2.3.1.4 Revocation of a BCC. After issuance of a BCC, subsequent conviction of a felony will be grounds for immediate revocation of a BCC, whether such conviction occurred under the laws of the Commonwealth, or any other state, the District of Columbia, the United States or any territory thereof. The BCC shall be returned to the SFMO immediately. An individual may reapply for his BCC if his civil rights have been restored by the Governor or other appropriate authority.

5601.2.4 Financial responsibility. Before a permit is issued, as required by Section 5601.2, the applicant shall file with the jurisdiction a corporate surety bond in the principal sum of $500,000 or a public liability insurance policy for the same amount, for the purpose of the payment of all damages to persons or property which arise from, or are caused by, the conduct of any act authorized by the permit upon which any judicial judgment results. The legal department of the jurisdiction may specify a greater amount when conditions at the location of use indicate a greater amount is required. Government entities shall be exempt from this bond requirement.

5601.2.4.1 Blasting. Before approval to do blasting is issued, the applicant for approval shall file a bond or submit a certificate of insurance in such form, amount, and coverage as determined by the legal department of the jurisdiction to be adequate in each case to indemnify the jurisdiction against any and all damages arising from permitted blasting but in no case shall the value of the coverage be less than $1,000,000.

Exception: Filing a bond or submitting a certificate of liability insurance is not required for blasting on real estate parcels of five or more acres conforming to the definition of "real estate devoted to agricultural use" or "real estate devoted to horticultural use" in § 58.1-3230 of the Code of Virginia and conducted by the owner of such real estate.

5601.2.4.2 Fireworks display. The permit holder shall furnish a bond or certificate of insurance in an amount deemed adequate by the legal department of the jurisdiction for the payment of all potential damages to a person or persons or to property by reason of the permitted display, and arising from any acts of the permit holder, the agent, employees or subcontractors, but in no case shall the value of the coverage be less than $1,000,000.

F. Change entire Section 5601.4 to read:

5601.4 Qualifications. Persons in charge of magazines, blasting, fireworks display, or pyrotechnic special effect operations shall not be under the influence of alcohol or drugs which impair sensory or motor skills, shall be at least 21 years of age and possess knowledge of all safety precautions related to the storage, handling or use of explosives, explosive materials or fireworks.

5601.4.1 Certification of blasters and pyrotechnicians. Certificates as a restricted blaster, unrestricted blaster or pyrotechnician will be issued upon proof of successful completion of an examination approved by the SFMO commensurate to the certification sought and completion of a background investigation for compliance with § 27-97.2 of the Code of Virginia. The applicant for certification shall submit proof to the SFMO of the following experience:

1. For certification as a restricted blaster, at least one year under direct supervision by a certified unrestricted blaster, certified restricted blaster or other person(s) approved by the SFMO.

2. For certification as an unrestricted blaster, at least one year under direct supervision by a certified unrestricted blaster or other person or persons approved by the SFMO.

3. For certification as a pyrotechnician, aerial, or pyrotechnician, proximate, applicant was in responsible charge of or has assisted in the documented design, setup and conducting of a fireworks display on at least six occasions within the 24 months immediately preceding the application for certification.

The SFMO shall process all certification applicants for compliance with § 27-97.2 of the Code of Virginia and will be the sole provider of blaster and pyrotechnician certifications.

Exception: The use of explosives by the owner of real estate parcels of five or more acres conforming to the definition of "real estate devoted to agricultural use" or "real estate devoted to horticultural use" in § 58.1-3230 of the Code of Virginia when blasting on such real estate.

5601.4.2 Certification issuance. The issuance of a certification as a blaster or pyrotechnician shall be denied if the applicant has (i) been convicted of any felony, whether such conviction occurred under the laws of the Commonwealth, or any other state, the District of Columbia, the United States or any territory thereof, unless his civil rights have been restored by the Governor or other appropriate authority, (ii) has not provided acceptable proof or evidence of the experience required in Section 5601.4.1, or (iii) has not provided acceptable proof or evidence of the continued training or education required in Section 5601.4.5.

5601.4.3 Fee for certification. The fee for obtaining or renewing a blaster or pyrotechnician certificate from the SFMO shall be $150 plus any additional fees charged by other agencies for fingerprinting and for obtaining a national criminal history record check through the Central Criminal Records Exchange to the Federal Bureau of Investigation.

5601.4.3.1 Fee for replacement certificate. A written request for a replacement blaster or pyrotechnician certificate shall be accompanied by the payment of an administrative fee in the amount of $20 made payable to the Treasurer of Virginia. Verbal requests shall not be accepted.

5601.4.4 Revocation of a blaster or pyrotechnician certification. After issuance of a blaster or pyrotechnician certification, subsequent conviction of a felony will be grounds for immediate revocation of a blaster or pyrotechnician certification, whether such conviction occurred under the laws of the Commonwealth, or any other state, the District of Columbia, the United States or any territory thereof. The certification shall be returned to the SFMO immediately. An individual may subsequently reapply for his blaster or pyrotechnician certification if his civil rights have been restored by the Governor or other appropriate authority.

5601.4.5 Expiration and renewal of a BCC, or blaster or pyrotechnician certification. A certificate for an unrestricted blaster, restricted blaster or pyrotechnician shall be valid for three years from the date of issuance. A BCC shall be valid for three years from the date of issuance. Renewal of the unrestricted blaster certificate will be issued upon proof of at least 16 accumulated hours of continued training or education in the use of explosives within three consecutive years and a background investigation for compliance with § 27-97.2 of the Code of Virginia. Renewal of the restricted blaster certificate will be issued upon proof of at least eight accumulated hours of continued training or education in the use of explosives within three consecutive years and a background investigation for compliance with § 27-97.2 of the Code of Virginia. Renewal of the pyrotechnician certificate will be issued upon proof of at least 12 accumulated hours of continued training or education in the subject areas of explosives storage; the design, setup or conduct of a fireworks display within three consecutive years; and a background investigation for compliance with § 27-97.2 of the Code of Virginia. The continued training or education required for renewal of a blaster or pyrotechnician certificate shall be obtained during the three years immediately prior to the certificate's published expiration date. Failure to renew a blaster or pyrotechnician certificate in accordance with this section shall cause an individual to obtain another blaster or pyrotechnician certificate upon compliance with Section 5601.4.1 to continue engaging in the unsupervised use of explosives or conducting a fireworks display.

5601.4.6 Denial, suspension or revocation of a certificate. If issuance or renewal of a blaster or pyrotechnician certificate is denied, or upon the filing of a complaint against an applicant or certificate holder for non-performance, or performance in violation of the SFPC and the appropriate referenced NFPA 495, 1123 or 1126 standards, the State Fire Marshal may convene a three-member panel to hear the particulars of the complaint or denial. The three-member panel will be comprised of the following persons:

1. A Virginia certified fire official, excluding any person certified as a blaster or pyrotechnician, or who is on the staff of the SFMO.

2. A Virginia certified blaster or pyrotechnician whose certification is the same as that of the person to whom a complaint is lodged, and who is not associated in any way with the person against whom a complaint is lodged and whose work or employer is geographically remote, as much as practically possible, from the person to whom a complaint is lodged.

3. A member of the general public who does not have a vested financial interest in conducting a fireworks display, or the manufacture, sale, storage, or use of explosives.

Upon the State Fire Marshal convening such panel, the hearing is to commence within 60 calendar days of the filing of the complaint or denial. The three-member panel is to hear the complaint and render a written recommendation to the State Fire Marshal for certificate issuance, no action, revocation, or suspension of a certificate for a period not to exceed six months. Notwithstanding the discretionary decision and action to convene such panel, the State Fire Marshal reserves the authority to choose an action that may be contrary to the panel's recommendation. A written decision of the State Fire Marshal is to be delivered to the party within 14 days of the hearing's conclusion. If the certificate is denied, revoked, or suspended by the SFMO, in accordance with Section 112.9, the party may file an appeal with the State Review Board. The party's appeal to State Review Board must be filed within 14 calendar days of the receipt of the State Fire Marshal's written decision to deny, revoke, or suspend. The denial, revocation, or suspension of a license is independent of any criminal proceedings that may be initiated by any state or local authority.

5601.4.6.1 Replacement of revoked certificate. Any person whose certificate as a pyrotechnician or blaster was revoked upon cause may apply for certification as a pyrotechnician or blaster six months or more from the date of the revocation and upon compliance with Section 5601.4.1. All elements of Section 5601.4.1 are required to be obtained and dated after the date of revocation.
5601.4.6.2 Return of suspended certificate. Any certificate that was suspended upon cause will be reinstated at the end of the suspension period without change to its expiration date.

G. Change Section 5601.7 to read:

5601.7 Seizure. The fire official is authorized to remove or cause to be removed or disposed of in an approved manner, at the expense of the owner, fireworks offered or exposed for sale, stored, possessed or used in violation of this chapter.

H. Change Section 5601.8.1.1 to read:

5601.8.1.1 Mass-detonating explosives (Division 1.1, 1.2 or 1.5). The total net explosive weight of mass-detonating explosives (Division 1.1, 1.2 or 1.5) shall be used. See Table 5604.5.2(1) as appropriate.
Exception: Where the TNT equivalence of the explosive material has been determined, the equivalence is allowed to be used to establish the net explosive weight.

I. Change Section 5601.8.1.3 to read:

5601.8.1.3 Combinations of mass-detonating and non-mass-detonating explosives (excluding Division 1.4). Combination of mass-detonating and non-mass-detonating explosives (excluding Division 1.4) shall be as follows:

1. Where Divisions 1.1 and 1.2 explosives are located in the same site, determine the distance for the total quantity considered first as Division 1.1 and then as Division 1.2. The required distance is the greater of the two. Where the Division 1.1 requirements are controlling and the TNT equivalence of the Division 1.2 is known, the TNT equivalent weight of the Division 1.2 items

shall be allowed to be added to the total explosive weight of Division 1.1 items to determine the net explosive weight for Division 1.1 distance determination. See Table 5604.5.2(2) as appropriate.

2. Where Divisions 1.1 and 1.3 explosives are located in the same site, determine the distances for the total quantity considered first as Division 1.1 and then as Division 1.3. The required distance is the greater of the two. Where the Division 1.1 requirements are controlling and the TNT equivalence of the Division 1.3 is known, the TNT equivalent weight of the Division 1.3 items shall be allowed to be added to the total explosive weight of Division 1.1 items to determine the net explosive weight for Division 1.1 distance determination. See Table 5604.5.2(1) or Table 5604.5.2(2) as appropriate.

3. Where Divisions 1.1, 1.2 and 1.3 explosives are located in the same site, determine the distances for the total quantity considered first as Division 1.1, next as Division 1.2 and finally as Division 1.3. The required distance is the greatest of the three. As allowed by subdivisions 1 and 2 of this subsection, TNT equivalent weights for Division 1.2 and Division 1.3 items are allowed to be used to determine the net weight of explosives for Division 1.1 distance determination. Table 5604.5.2(1) shall be used where TNT equivalency is used to establish the net explosive weight.

4. For composite pyrotechnic items Division 1.1 and Division 1.3, the sum of the net weights of the pyrotechnic composition and the explosives involved shall be used. See Tables 5604.5.2(1) and 5604.5.2(2).

J. Change Section 5605.6.4.1 to read:

5605.6.4.1 Magazines. Magazines used for storage in processing areas shall be in accordance with the requirements of Section 5604.5.1. Explosive materials shall be removed to appropriate storage magazines for unattended storage at the end of the work day. The contents of indoor magazines shall be added to the quantity of explosives contained at individual workstations and the total quantity of material stored, processed or used shall be utilized to establish the intraplant separation distances indicated by Table 5604.5.2(3) as appropriate.

K. Change Section 5606.5.2.1 to read:

5606.5.2.1 Smokeless propellant. Commercial stocks of smokeless propellants shall be stored as follows:

1. Quantities exceeding 20 pounds (9 kg), but not exceeding 100 pounds (45 kg) shall be stored in portable wooden boxes having walls of not less than 1 inch (25 mm) nominal thickness or equivalent.

2. Quantities exceeding 100 pounds (45 kg), but not exceeding 800 pounds (363 kg), shall be stored in storage cabinets having walls not less than 1 inch (25 mm) nominal thickness or equivalent. Not more than 400 pounds (182 kg) shall be stored in any one cabinet, and cabinets shall be separated by a distance of at least 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of at least 1 hour.

3. Storage of quantities exceeding 800 pounds (363 kg), but not exceeding 5,000 pounds (2270 kg) in a building shall comply with all of the following:

3.1. The storage is inaccessible to unauthorized personnel.

3.2. Smokeless propellant shall be stored in nonportable storage cabinets having wood walls not less than 1 inch (25 mm) nominal thickness or equivalent and having shelves with not no more than 3 feet (914 mm) of vertical separation between shelves.

3.3. No more than 400 pounds (182 kg) is stored in any one cabinet.

3.4. Cabinets shall be located against walls with at least 40 feet (12 192 mm) between cabinets.

3.5. The minimum required separation between cabinets may be reduced to 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades must extend a minimum of 10 feet (3048 mm) outward, be firmly attached to the wall and be constructed of steel not less than 1/4 inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick or concrete block.

3.6. Smokeless propellant shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids or oxidizing materials by a distance of 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of 1 hour.

3.7. The building shall be equipped throughout with an automatic sprinkler system installed in accordance with the applicable ~~building code~~ NFPA 13 standard.

4. Smokeless propellants not stored in according to Item 1, 2, or 3 shall be stored in a Type 2 or 4 magazine in accordance with Section 5604 and NFPA 495.

L. Change Section 5606.5.2.3 to read:

5606.5.2.3 Small arms primers. Commercial stocks of small arms primers shall be stored as follows:

1. Quantities not to exceed 750,000 small arms primers stored in a building shall be arranged such that not more than 100,000 small arms primers are stored in any one pile and piles are not less than 15 feet (4572 mm) apart.

2. Quantities exceeding 750,000 small arms primers stored in a building shall comply with all of the following:

2.1. The warehouse or storage building ~~shall not be accessible~~ is not open to unauthorized personnel.

2.2. Small arms primers shall be stored in cabinets. Not more than 200,000 small arms primers shall be stored in any one cabinet.

2.3. Shelves in cabinets shall have vertical separation of not less than 2 feet (610 mm).

2.4. Cabinets shall be located against walls of the warehouse or storage room with not less than 40 feet (12 192 mm) between cabinets. The minimum required separation between cabinets shall be allowed to be reduced to 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades shall be firmly attached to the wall and shall be constructed of steel not less than 1/4 inch thick (6.4 mm), 2-inch (51 mm) nominal thickness wood, brick or concrete block.

2.5. Small arms primers shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids or oxidizing materials by a distance of 25 feet (7620 mm) by a fire partition having a fire-resistance rating of 1 hour.

2.6. The building shall be protected throughout with an automatic sprinkler system installed in accordance with the applicable ~~building code~~ NFPA 13 standard.

3. Small arms primers not stored in accordance with Item 1 or 2 of this section shall be stored in a magazine meeting the requirements of Section 5604 and NFPA 495.

M. Add the following to the list of definitions in Section 5602.1:

Background clearance card (BCC).

Blaster, restricted.

Blaster, unrestricted.

Design.

Designated individual.

Fireworks.

Fireworks, 1.4G.

Fireworks, 1.3G.

Permissible fireworks.

Pyrotechnician (fireworks operator).

Pyrotechnician, aerial.

Pyrotechnician, proximate.

Responsible management.

Smokeless propellants.

Sole proprietor.

N. Change Section 5603.4 to read:

5603.4 Accidents. Accidents involving the use of explosives, explosive materials, and fireworks, which result in injuries or property damage, shall be immediately reported by the permit holder to the fire code official and State Fire Marshal.

O. Change Section 5605.1 to read:

5605.1 General. The restricted and unrestricted manufacture, assembly and testing of explosives, ammunition, blasting agents and fireworks shall comply with the requirements of this section, NFPA 495, NFPA 1124, or NFPA 1126.

Exceptions:

1. The hand loading of small arms ammunition prepared for personal use and not offered for resale.

2. The mixing and loading of blasting agents at blasting sites in accordance with NFPA 495.

P. Add Section 5605.1.1 to read:

5605.1.1 Permits. Permits for the restricted and unrestricted explosives manufacture, assembly and testing of explosives, ammunition, blasting agents and fireworks shall be required as set forth in Section 107.2 and regulated in accordance with this section. A permit for unrestricted explosives manufacturing of any explosive material shall be prohibited unless such manufacture is authorized by a federal license and conducted in accordance with recognized safety practices. All restricted explosives manufacturing shall comply with the instructions provided by the supplier of the components used in the manufacture of the explosive material.

Exceptions:

1. Any recreational use of reactive targets is not required to obtain a permit for restricted explosives manufacture or explosives use when such manufacture and use complies with all of the following:

1.1. The manufacture and use is limited to one pound or less per unit on private property with the permission of the property owner and used no closer than 500 feet from a roadway or structure;

1.2. The manufacture of the reactive target complies with the instructions provided by the producer of the components used in the manufacture;

1.3. The reactive target manufactured is for immediate use without any residual storage or transportation; and

1.4. The exploding or use of the target is in conformance with its intended purpose by the manufacturer of the reactive target and does not involve the deliberate destruction of any property, vehicle, structure or animal life.

2. The owner of real estate parcels of five or more acres conforming to the definition of "real estate devoted to agricultural use" or "real estate devoted to horticultural use" in § 58.1-3230 of the Code of Virginia is not required to obtain a permit for restricted explosives manufacture when such manufacture complies with all of the following:

2.1. The manufacture of the explosives is conducted by the owner of such real estate;

2.2. The manufacture of the explosives complies with the instructions provided by the producer of the components used in the manufacture;

2.3. The explosive used does not include reactive targets;

2.4. The reactive target manufactured is for immediate use without any residual storage or transportation; and

2.5. A permit to use explosives has been obtained in accordance with Section 107.2.

3. An applicant that is performing nonpersonal, business work is not required to obtain a permit for restricted explosives manufacture when such manufacture complies with all of the following:

3.1. The applicant's certified blaster who manufactures the explosives complies with the instructions provided by the producer of the components used in the manufacture;

3.2. The explosive used does not include the use of reactive targets;

3.3. The explosive material manufactured is for immediate use without any residual storage or transportation; and

3.4. A permit to use explosives has been obtained in accordance with Section 107.2.

Q. Delete Section 5605.3.

R. Change Section 5605.4 to read:

~~(N)~~5605.4 Separation of manufacturing operating buildings from inhabited buildings, public traffic routes and magazines. Where an operating building on an explosive materials plant site is designed to contain explosive materials, such a building shall be maintained in accordance with the applicable building code.

S. Change Section 5605.5 to read:

~~(N)~~5605.5 Buildings and equipment. Buildings or rooms that exceed the maximum allowable quantity per control area of explosive materials shall be operated in accordance with this section.

Exception: Fireworks manufacturing buildings constructed and operated in accordance with NFPA 1124.

T. Delete Table 5605.3.

U. Change Section 5605.6.4 to read:

~~(N)~~5605.6.4 Quantity limits. The quantity of explosives at any particular work station shall be limited to that posted on the load limit signs for the individual work station. The total quantity of explosives for multiple workstations shall not exceed that established by the intraplant distances in accordance with the applicable building code.

V. Change Section 5606.4 to read:

5606.4 Storage in residences. Propellants for personal use in quantities not exceeding 50 pounds (23 kg) of black powder or 100 pounds (45 kg) of smokeless powder shall be stored in original containers in occupancies limited to Groups R-3 and R-5, or 200 pounds (91 kg) of smokeless powder when stored in the manufacturer's original containers in detached Group U structures that are at least 10 feet from inhabited buildings and are accessory to Group R-3 or R-5. In other than Group R-3 or R-5, smokeless powder in quantities exceeding 20 pounds (9 kg) but not exceeding 50 pounds (23 kg) shall be kept in a wooden box or cabinet having walls of at least one inch (25 mm) nominal thickness or equivalent.

W. Delete Sections 5606.4.1, 5606.4.2, and 5606.4.3.

X. Change Section 5606.5.1.1 to read:

5606.5.1.1 Smokeless propellant. No more than 100 pounds (45 kg) of smokeless propellants, in containers of 8 pounds (3.6 kg) or less capacity, shall be displayed in Group M occupancies.

Y. Delete Section 5606.5.1.3.

Z. Change Section 5606.5.2.1 to read:

5606.5.2.1 Smokeless propellant Commercial stocks of smokeless propellants shall be stored as follows:

1. Quantities exceeding 20 pounds (9 kg), but not exceeding 100 pounds (45 kg) shall be stored in portable wooden boxes having walls of at least one inch (25 mm) nominal thickness or equivalent.

2. Quantities exceeding 100 pounds (45 kg), but not exceeding 800 pounds (363 kg), shall be stored in storage cabinets having walls at least one inch (25 mm) nominal thickness or equivalent. Not more than 400 pounds (182 kg) shall be stored in any one cabinet, and cabinets shall be separated by a distance of at least 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of at least one hour.

3. Storage of quantities exceeding 800 pounds (363 kg), but not exceeding 5,000 pounds (2270 kg) in a building shall comply with all of the following:

3.1. The storage is inaccessible to unauthorized personnel.

3.2. Smokeless propellant shall be stored in nonportable storage cabinets having wood walls at least one inch (25 mm) nominal thickness or equivalent and having shelves with no more than three feet (914 mm) of vertical separation between shelves.

3.3. No more than 400 pounds (182 kg) is stored in any one cabinet.

3.4. Cabinets shall be located against walls with at least 40 feet (12 192 mm) between cabinets. The minimum required separation between cabinets may be reduced to 20 feet (6096 mm) provided that barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades must extend a minimum of 10 feet (3048 mm) outward, be firmly attached to the wall, and be constructed of steel not less than 0.25 inch thick (6.4 mm), two-inch (51 mm) nominal thickness wood, brick, or concrete block.

3.5. Smokeless propellant shall be separated from materials classified as combustible liquids, flammable liquids, flammable solids, or oxidizing materials by a distance of 25 feet (7620 mm) or by a fire partition having a fire-resistance rating of one hour.

3.6. The building shall be equipped throughout with an automatic sprinkler system installed in accordance with ~~Section 903.3.1.1~~ the applicable NFPA 13 standard.

4. Smokeless propellants not stored according to Item 1, 2, or 3 above shall be stored in a Type 2 or 4 magazine in accordance with Section 5604 and NFPA 495.

AA. Change Section 5607.1 to read:

5607.1 General. Blasting operations shall be conducted only by persons certified by the SFMO as a restricted or unrestricted blaster or shall be supervised on-site by a person properly certified by the SFMO as a restricted or unrestricted blaster.

BB. Add Section 5607.16 to read:

5607.16 Blast records. A record of each blast shall be kept and retained for at least five years and shall be readily available for inspection by the code official. The record shall be in a format selected by the blaster and shall contain the minimum data and information indicated in Form 5607.16.

Form 5607.16
Blast (shot) Record

Block 1 General Information				
1	Blast date:	Blast Number:	Blast Time:	Permit Number:
2	Blast location by address including city, county or town:			
3	Blast location by GPS coordinates: ☐ check box if unknown			
4	Name of Permit Holder:			
5	Name of Blaster in charge (print):			
6	Signature of Blaster in charge:			
7	Certification Number of Blaster in charge:			

Block 2 General Environmental Conditions			
1	Weather (Clear? Cloudy? Overcast?)	Wind direction and speed @________mph	Temperature F° / C°
2	Topography (Flat? Hilly? Mountainous?)	Distance from blast site to nearest inhabited building:	Distance from nearest inhabited building determined by: ☐ GPS coordinates ☐ Measurement ☐ Estimated
3	Use of nearest inhabited building (Dwelling? Business? Apartment Building? School?)	Direction from blast site to nearest inhabited building:	Direction from blast site to nearest inhabited building determined by: ☐ GPS instrument ☐ Compass ☐ Estimated
Additional Blaster notations on environmental conditions:			

Block 3 Shot Layout and Precautions Taken (N/A = Not Applicable)			
1	Number of holes	Diameter of hole or holes	Depth of hole or holes
2	Were any holes decked? ☐ Yes ☐ No	How many holes were decked? ☐ N/A	How many decks per hole? ☐ N/A
		(If applicable, indicate on any attached shot pattern drawing which holes were decked and the number of decks for the holes.)	
3	Shot pattern ☐ Check this box if only single hole.	Depth of sub-drilling	Drilling angle
4	Burden	Spacing of holes	Water height
5	Stemming height	Material used for stemming	Check box for flyrock precautions taken ☐ Mats ☐ Overburden ☐ None taken
Additional Blaster notations on shot layout and precautions:			

Block 4 Seismic Control Measures (N/A = Not Applicable)			
1	Was scaled distance formula used? ☐ Yes ☐ No	Indicate which scaled distance equation was used. ☐ N/A ☐ $W(lb)=\{D(ft)/50\}^2$ ☐ $W(lb)=\{D(ft)/55\}^2$ ☐ $W(lb)=\{D(ft)/65\}^2$	Maximum allowable charge weight per 8 ms based on scaled distance. ☐ N/A
2	Was seismograph used? ☐ Yes ☐ No	Seismograph manufacturer and model number: ☐ N/A	Seismograph serial number: ☐ N/A
			Seismograph's last calibration date. ☐ N/A
3	Distance and direction seismograph from blast site ☐ N/A	Distance determined by: ☐ N/A ☐ GPS coordinates ☐ Estimated ☐ Measurement	
4	Seismograph ☐ N/A Geophone Minimum Frequency _______Hz Seismograph Microphone Minimum Frequency _______Hz	Seismograph recordings: ☐ N/A Transverse _____in/s ____ Hz Vertical _____in/s ____ Hz Longitudinal _____in/s ____ Hz Acoustic ______dB ____ Hz	
5	Seismograph trigger level ☐ N/A _____ in/s _____dB		
Additional Blaster notations on seismic control measures:			

Block 5
Quantity and Product

1	Maximum allowable charge weight per 8 ms interval ☐ Delay not used _____ lbs	Initiation (Check) ☐ Electric ☐ Non-electric ☐ Electronic
2	Maximum number of holes/decks per 8 ms interval ☐ Delay not used _____ lbs	
3	Maximum weight or sticks of explosive per hole _____ lbs	Firing device manufacturer and model: ☐ N/A

	Explosive Product listing (Attach additional pages as needed.)			
4	Manufacturer	Product name, description or brand	Number of units	Unit weight (lb)
5	Total explosive weight in this shot: lbs.			
Additional Blaster notations on product and quantities:				

Block 6
Completion of Shot Record and General Comments

General comments on shot not included in notes above:	
Date shot report completed:	Time shot report completed:
Printed name and signature of person completing shot report if different from Block 1, Lines 5 and 6.	(Print)
	(Signature)

CC. Change Section 5608.2 to read:

5608.2 Permit application. Prior to issuing permits for a fireworks display, plans for the fireworks display, inspections of the display site and demonstrations of the display operations shall be approved. A plan establishing procedures to follow and actions to be taken in the event that a shell fails to ignite in, or discharge from, a mortar or fails to function over the fallout area or other malfunctions shall be provided to the fire code official.

In addition to the requirements of Section 5601.2.3.1, a permit to conduct a fireworks display shall not be issued to any applicant without the applicant identifying on the application the pyrotechnician who will be in responsible charge of the fireworks display and who is appropriately certified as a pyrotechnician in accordance with Section 5601.4.1.

Exception: Permits are not required for the use or display of permissible fireworks on private property with the consent of the owner of such property.

DD. Change Section 5608.3 to read:

5608.3 Approved fireworks displays. Approved fireworks displays shall include only the approved fireworks 1.3G, fireworks 1.4G, fireworks 1.4S and pyrotechnic articles 1.4G. The design, setup, conducting or direct on-site supervision of the design, setup and conducting of any fireworks display, either inside a building or outdoors, shall be performed only by persons certified by the SFMO in accordance with Section 5601.4.1 as a pyrotechnician (firework operator) and at least one person properly certified by the SFMO as a pyrotechnician shall be present at the site where the fireworks display is being conducted. The approved fireworks shall be arranged, located, discharged and fired in a manner that will not pose a hazard to property or endanger any person.

Exception: Certification as a pyrotechnician is not required for the use or display of permissible fireworks when conducted on private property with the consent of the owner of such property.

EE. Change Section 5608.4 to read:

5608.4 Clearance. Spectators, spectator parking areas, and dwellings, buildings or structures shall not be located within the display site. The site for the outdoor land or water display shall have at least 100-ft/in. (31-m/2.4mm) radius of internal mortar diameter of the largest shell to be fired as shown in Table 5608.4.

Exceptions:

1. This provision shall not apply to pyrotechnic special effects and fireworks displays using Division 1.4G materials before a proximate audience in accordance with NFPA 1126.

2. This provision shall not apply to unoccupied dwellings, buildings and structures with the approval of the building owner and the fire code official.

FF. Add Table 5608.4 to read:

Table 5608.4
Distances for Outdoor Fireworks Display Sites: Minimum Separation Distances from Mortars to Spectators for Land and Water Displays

Mortar Size[a]	Minimum Secured Diameter of Site	Vertical Mortars[b]	Angled Mortars[c] 1/3 offset	Mortars to Special Hazards[d]

in.	mm	ft	m	ft	m	ft	m	ft	m
<3	<76	300	92	150	46	100	31	300	92
3	76	600	183	300	92	200	61	600	183
4	102	800	244	400	122	266	81	800	244
5	127	1000	305	500	152	334	102	1000	305
6	152	1200	366	600	183	400	122	1200	366
7	178	1400	427	700	213	467	142	1400	427
8	203	1600	488	800	244	534	163	1600	488
10	254	2000	610	1000	305	667	203	2000	610
12	305	2400	732	1200	366	800	244	2400	732
>12	Requires the approval of the fire official								

[a] Aerial shells, mines, and comets shall be classified and described only in terms of the inside diameter of the mortar from which they are fired (e.g., 3-in. (76-mm) aerial shells, mines and comets are only for use in 3-in. (76mm) mortars).

[b] Where the mortars are positioned vertically, the mortars shall be placed at the approximate center of the display site.

[c] Mortars shall be permitted to be angled during a display to allow for wind and to carry shells away from the main spectator viewing areas. For angled mortars, the minimum secured diameter of the display site does not change. Only the location of the mortars within the secured area changes when the mortars are angled.

[d] Note that this is only the distance to the special hazards. The minimum secured diameter of the display site does not change.

GG. Add Sections 5608.4.1 and 5608.4.2 to read:

5608.4.1 Non-splitting, non-bursting comets and mines. For non-splitting or non-bursting comets and mines containing only stars or non-splitting or non-bursting comets, the minimum required radius of the display site shall be 50 feet per inch (15.24 m per 25.4 mm) of the internal mortar diameter of the largest comet or mine to be fired, one-half that shown in Table 5608.4.

5608.4.2 Special distance requirements. The minimum distance requirements of Table 5608.4 shall be adjusted as follows:

1. For chain-fused aerial shells and comets and mines to be fired from mortars, racks, or other holders that are sufficiently strong to prevent their being repositioned in the event of an explosive malfunction of the aerial shells, comets, or mines, the minimum required radius shall be the same as that required in Sections 5608.4 and 5608.4.1. For chain-fused aerial shells and comets and mines to be fired from mortars, racks, or other holders that are not sufficiently strong to prevent their being repositioned in the event of an explosive malfunction of the aerial shells, comets, or mines, or if there is doubt concerning the strength of racks holding chain-fused mortars, based upon the largest mortar in the sequence, the minimum required radius shall be double that required in Sections 5608.4 and 5608.4.1.

2. Distances from the point of discharge of any firework to a health care or detention and correctional facility, or the bulk storage of materials that have flammability, explosive, or toxic hazard shall be at least twice the distances specified in Table 5608.4.

3. The minimum required spectator separation distance for roman candles and cakes that produce aerial shells, comets, or mine effects shall be the same as the minimum required radius specified in Table 5608.4.

4. Aerial shells, comets and mines, and roman candles and cakes shall be permitted to be angled if the dud shells or components are carried away from the main spectator area and either of the following requirements is satisfied:

4.1. The offset specified in Table 5608.4 is followed.

4.2. The separation distance is correspondingly increased in the direction of the angle.

If the offset provided in Table 5608.4 is followed, the mortars or tubes shall be angled so that any dud shells or components fall at a point approximately equal to the offset of the mortars or tubes from the otherwise required discharge point but in the opposite direction.

13VAC5-51-151. ~~Ifc~~ IFC Chapter 57 Flammable and Combustible Liquids.

A. The following changes shall be made to Section 5701, General:

1. Add Section 5701.1.1 to read:

5701.1.1 Other regulations. Provisions of the Virginia State Water Control Board regulations 9VAC25-91 and 9VAC25-580 addressing the maintenance and operational aspects of underground and aboveground storage tanks subject to those regulations are hereby incorporated by reference to be an enforceable part of this code. Where differences occur between the provisions of this code and the incorporated provisions of the State Water Control Board regulations, the provisions of the State Water Control Board regulations shall apply.

Note: For requirements for the installation, repair, upgrade and closure of such tanks, see Section 414.6.2 of the USBC, Part I, Construction.

2. Change Section 5701.2 to read:

~~(N)~~5701.2 Applicability. This chapter shall apply to the maintenance and operation of flammable and combustible liquids.

3. Delete Section 5701.3.

4. Change Section 5701.4 to read:

5701.4 Permits. Permits shall be required as set forth in Section 107.2.

B. The following changes shall be made to Section 5703, General Requirements:

1. Change Sections 5703.1 and 5703.1.1 to read:

~~(N)~~5703.1 Electrical. Electrical wiring and equipment shall be maintained in accordance with the applicable building code.

~~(N)~~5703.1.1 Classified locations for flammable liquids. Areas where flammable liquids are stored, handled, dispensed or mixed shall be maintained in accordance with the applicable building code.

2. Delete Table 5703.1.1.

3. Change Section 5703.1.2 to read:

~~(N)~~5702.1.2 Classified locations for combustible liquids. Areas where Class II or III liquids are heated above their flash points shall be maintained in accordance with the applicable building code.

4. Delete Section 5703.1.3.

5. Change Sections 5703.2 and 5703.6 to read:

~~(N)~~5703.2 Fire protection. Where provided, fire protection for the storage, use, dispensing, mixing, handling, and onsite transportation of flammable and combustible liquids shall be maintained in accordance with the applicable building code.

~~(N)~~5703.6 Piping systems. Piping systems, and their component parts, for flammable and combustible liquids shall be maintained in accordance with the applicable building code.

6. Delete Sections 5703.6.1 and 5703.6.2.

7. Delete Table 5703.6.2.

8. Delete Sections 5703.6.2.1 and 5703.6.3.

9. Change Section 5703.6.3.1 to read:

~~(N)~~5703.6.3.1 Existing piping. Existing piping shall be tested in accordance with the applicable building code where the fire official has reasonable cause to believe that a leak exists.

10. Delete Sections 5703.6.4 through 5703.6.11.

C. The following changes shall be made to Section 5704, Storage:

1. Delete Section 5704.2.5.

2. Delete Sections 5704.2.7 through 5704.2.7.3.5.3.

3. Change Section 5704.2.7.4 to read:

~~(N)~~5704.2.7.4 Emergency venting. Where required, emergency venting for stationary, aboveground tanks shall be maintained in accordance with the applicable building code.

4. Delete Sections 5704.2.7.5 and 5704.2.7.5.1.

5. Delete Section 5704.2.7.5.3.

6. Delete Sections 5704.2.7.5.5 through 5704.2.7.5.5.2.

7. Delete Sections 5704.2.7.5.7 and 5704.2.7.5.8.

8. Change Section 5704.2.7.6 to read:

~~(N)~~5704.2.7.6 Repair, alteration or reconstruction of tanks and piping. Hot work, as defined in Section 202, on storage tanks shall be conducted in accordance with Section 3510.

9. Delete Sections 5704.2.7.7 through 5704.2.7.9.

10. Delete Sections 5704.2.7.11 through 5704.2.8.3.

11. Change Section 5704.2.8.5 to read:

~~(N)~~5704.2.8.5 Anchoring. Anchoring for vaults shall be maintained in accordance with the applicable building code.

12. Delete Sections 5704.2.8.7 and 5704.2.8.8.

13. Change Section 5704.2.8.9 to read:

~~(N)~~5704.2.8.9 Ventilation. Where required, the exhaust system shall be maintained in accordance with the applicable building code.

14. Delete Sections 5704.2.8.10 and 5704.2.8.11.

15. Delete Sections 5704.2.8.13 and 5704.2.8.14.

16. Delete Section 5704.2.8.16.

17. Delete Section 5704.2.8.18.

18. Change Sections 5704.2.9 and 5704.2.9.1 to read:

~~(N)~~5704.2.9 Aboveground tanks. Aboveground storage of flammable and combustible liquids in tanks shall be maintained in accordance with the applicable building code.

~~(N)~~5704.2.9.1 Existing noncompliant installations. Existing aboveground tanks shall be maintained in accordance with the code requirements that were applicable at the time of installation.

19. Delete Sections 5704.2.9.2 through 5704.2.9.2.3.

20. Delete Section 5704.2.9.3.

21. Change Sections 5704.2.9.4 and 5704.2.9.5 to read:

~~(N)~~5704.2.9.4 Stairways, platforms and walkways. Stairways, platforms and walkways shall be maintained in accordance with the applicable building code.

~~(N)~~5704.2.9.5 Aboveground tanks inside of buildings. Aboveground tanks inside of buildings shall be maintained in accordance with the applicable building code.

22. Delete Sections 5704.2.9.5.1 and 5704.2.9.5.2.

23. Change Section 5704.2.9.6 to read:

~~(N)~~5704.2.9.6 Aboveground tanks outside of buildings. Aboveground tanks outside of buildings shall be maintained in accordance with the applicable building code.

24. Delete Sections 5704.2.9.6.1 through 5704.2.9.7.3.

25. Delete Section 5704.2.9.7.5.

26. Delete Sections 5704.2.9.7.5.2 and 5704.2.9.7.6.

27. Delete Sections 5704.2.9.7.8 through 5704.2.10.3.

28. Delete Section 5704.2.10.5.

29. Change Sections 5704.2.11 and 5704.2.11.1 to read:

~~(N)~~5704.2.11 Underground tanks. Underground storage of flammable and combustible liquids in tanks shall be maintained in accordance with the applicable building code.

~~(N)~~5704.2.11.1 Location. The location of flammable and combustible liquid storage tanks located underground, either outside or under buildings, shall be in accordance with the applicable building code.

30. Delete Sections 5704.2.11.2 through 5704.2.11.4.

31. Delete Section 5704.2.11.4.2.

32. Add the following exception to Section 5704.2.13.1.3 to read:

Exception: Underground storage tanks subject to the Virginia State Water Control Board regulation 9VAC25-580.

33. Change Section 5704.2.12.2 to read

5704.2.12.2 Testing of underground tanks. Before being covered or placed in use, tanks and piping connected to underground tanks shall be tested for tightness in the presence of the fire code official. Piping shall be tested in accordance with the applicable building code. The system shall not be covered until it has been approved.

34. Change Section 5704.13.1.2 to read:

5704.2.13.1.2 Out of service for 90 days. Underground tanks not used for a period of 90 days shall be safeguarded in accordance with all the following or be removed in accordance with Section 5704.2.14:

1. Flammable or combustible liquids shall be removed from the tank.

2. All piping, including fill line, gauge opening, vapor return and pump connection, shall be capped or plugged and secured from tampering.

3. Vent lines shall remain open and be maintained in accordance with Section 5704.2.7.4.

35. Change Section 5704.2.13.1.5 to read:

~~(N)~~5704.2.13.1.5 Reinstallation of underground tanks. Tanks that are to be reinstalled for flammable or combustible liquid service shall be approved by the building official.

36. Change Section 5704.3 to read:

5704.3 Container and portable tank storage. Storage of flammable and combustible liquids in closed containers that do not exceed 60 gallons (227 L) in individual capacity and portable tanks that do not exceed 660 gallons (2498 L) in individual capacity, and limited transfers incidental thereto, shall comply with Sections 5704.3.1 through 5704.3.8.4.

37. Change Section 5704.3.3.5 to read:

~~(N)~~5704.3.3.5 Shelf storage. Shelving shall be maintained in accordance with the applicable building code.

38. Delete Sections 5704.3.3.5.1 and 5704.3.3.5.2.

39. Delete Section 5704.3.3.6.

40. Change Section 5704.3.4 to read:

~~(N)~~5704.3.4 Quantity limits for storage. Liquid storage quantity limitations shall be maintained in accordance with the applicable building code.

41. Delete Section 5704.3.4.1.

42. Delete Table 5704.3.4.1.

43. Delete Sections 5704.3.4.2 and 5704.3.4.3.

44. Change Section 5704.3.5 to read:

~~(N)~~5704.3.5 Storage in control areas. Storage of flammable and combustible liquids in control areas shall be maintained in accordance with the applicable building code.

45. Delete Section 5704.3.5.1.

46. Change Section 5704.3.6.2 to read:

5704.3.6.2 Container capacity. Containers for Class I liquids shall not exceed a capacity of 5 gallons (19 L).

Exception: Metal containers not exceeding 55 gallons (208 L) are allowed to store up to 240 gallons (908 L) of the maximum allowable quantity per control area of Classes IB and IC liquids in a control area. The building shall be equipped throughout with an approved automatic sprinkler system in accordance with the applicable building code. The containers shall be provided with plastic caps without cap seals and shall be stored upright. Containers shall not be stacked or stored in racks and shall not be located in areas accessible to the public.

47. Change Section 5704.3.7.1 to read:

~~(N)~~5704.3.7.1 General. Quantities of liquids exceeding those set forth in the applicable building code for storage in control areas shall be stored in a liquid storage room complying with the applicable building code.

48. Change Section 5704.3.7.2.2 to read:

~~(N)~~5704.3.7.2.2 Separation and aisles. Piles shall be separated from each other in accordance with the applicable building code. Aisles shall be maintained in accordance with the applicable building code.

49. Change Sections 5704.3.7.3 through 5704.3.7.5 to read:

~~(N)~~5704.3.7.3 Spill control and secondary containment. Liquid storage rooms shall be maintained in accordance with the applicable building code.

~~(N)~~5704.3.7.4 Ventilation. Ventilation for storage rooms shall be maintained in accordance with the applicable building code.

~~(N)~~5704.3.7.5 Fire protection. Fire protection for liquid storage rooms shall be maintained in accordance with the applicable building code.

50. Delete Section 5704.3.7.5.1.

51. Change Sections 5704.3.8 and 5704.3.8.1 to read:

~~(N)~~5704.3.8 Liquid storage warehouses. Liquid storage warehouses shall be maintained in accordance with the applicable building code.

~~(N)~~5704.3.8.1 Quantities and storage arrangement. The total quantities of liquids in a liquid storage warehouse shall be maintained in accordance with the applicable building code. The arrangement of storage shall be in accordance with Table 5704.3.6.3(2) or 5704.3.6.3(3).

52. Delete Sections 5704.3.8.1.1 and 5704.3.8.1.2.

53. Change Sections 5704.3.8.2 through 5704.3.8.4 to read:

~~(N)~~5704.3.8.2 Spill control and secondary containment. Spill control and secondary containment for liquid storage warehouses shall be maintained in accordance with the applicable building code.

~~(N)~~5704.3.8.3 Ventilation. Ventilation for liquid storage warehouses storing containers greater than 5 gallons (19 L) in capacity shall be maintained in accordance with the applicable building code.

~~(N)~~5704.3.8.4 Automatic sprinkler systems. Automatic sprinkler systems for storage warehouses shall be maintained in accordance with the applicable building code.

54. Delete Section 5704.3.8.5.

55. Change Section 5704.4.3 to read:

~~(N)~~5704.4.3 Spill control and secondary containment. Spill control and secondary containment for storage areas shall be maintained in accordance with the applicable building code.

56. Delete Section 5704.4.7.

D. The following change shall be made to Section 5705, Dispensing, Use, Mixing and Handling:

1. Change Section 5705.3.6.2.3 to read:

5705.3.6.2.3 Solvent quantity limits. Solvent quantities shall be limited as follows:

> 1. Machines without remote solvent reservoirs shall be limited to quantities set forth in Section 5705.3.5.
>
> 2. Machines with remote solvent reservoirs using Class I liquids shall be limited to quantities set forth in Section 5705.3.5.
>
> 3. Machines with remote solvent reservoirs using Class II liquids shall be limited to 35 gallons (132 L) per machine. The total quantities shall not exceed an aggregate of 240 gallons (908 L) per control area in buildings not equipped throughout with an approved automatic sprinkler system and an aggregate of 480 gallons (1817 L) per control area in buildings equipped throughout with an approved automatic sprinkler system in accordance with the applicable ~~building code~~ NFPA 13 standard.
>
> 4. Machines with remote solvent reservoirs using Class IIIA liquids shall be limited to 80 gallons (303 L) per machine.

2. Change Section 5705.5 to read:

5705.5 Alcohol-based hand rubs classified as Class I or II liquids. The use of wall-mounted dispensers containing alcohol-based hand rubs classified as Class I or II liquids shall be in accordance with all of the following:

> 1. The maximum capacity of each dispenser shall be 68 ounces (2 L).
>
> 2. The minimum separation between dispensers shall be 48 inches (1219 mm).
>
> 3. The dispensers shall not be installed above, below, or closer than 1 inch (25 mm) to an electrical receptacle, switch, appliance, device or other ignition source. The wall space between the dispenser and the floor or intervening countertop shall be free of electrical receptacles, switches, appliances, devices or other ignition sources.
>
> 4. Dispensers shall be mounted so that the bottom of the dispenser is not less than 42 inches (1067 mm) and not more than 48 inches (1219 mm) above the finished floor.
>
> 5. Dispensers shall not release their contents except when the dispenser is manually activated. Facilities shall be permitted to install and use automatically activated "touch free" alcohol-based hand-rub dispensing devices with the following requirements:
>
> 5.1. The facility or persons responsible for the dispensers shall test the dispensers each time a new refill is installed in accordance with the manufacturer's care and use instructions.

5.2. Dispensers shall be designed and must operate in a manner that ensures accidental or malicious activations of the dispensing device are minimized. At a minimum, all devices subject to or used in accordance with this section shall have the following safety features:

5.2.1. Any activations of the dispenser shall only occur when an object is placed within 4 inches (98 mm) of the sensing device.

5.2.2. The dispenser shall not dispense more than the amount required for hand hygiene consistent with label instructions as regulated by the U.S. Food and Drug Administration (USFDA).

5.2.3. An object placed within the activation zone and left in place will cause only one activation.

6. Storage and use of alcohol-based hand rubs shall be in accordance with the applicable provisions of Sections 5704 and 5705.

7. Dispensers installed in occupancies with carpeted floors shall only be allowed in smoke compartments or fire areas equipped throughout with an approved automatic sprinkler system in accordance with the applicable ~~building code~~ NFPA 13 standard.

3. Delete Section 5705.5.1.

E. The following changes shall be made to Section 5706, Special Operations:

1. ~~Add Section 5706.1.1 to read:~~

~~5706.1.1 Mobile fueling operations. Delivery of Class I, Class II, and Class III liquids to the fuel tank of a highway vehicle from a tank vehicle, a tank carried on a vehicle, or a nonportable container is prohibited.~~

~~Exceptions:~~

~~1. The refueling of highway vehicles in an emergency.~~

~~2. The refueling of vehicles in compliance with Sections 5706.5.4.1 through 5706.5.4.5.~~

3. V~~ehicles used for farm operations and machinery.~~

~~2.~~ Change Section 5706.2.4.2 to read:

5706.2.4.2 Vents. Tanks shall be provided with a method of normal and emergency venting. Normal vents shall be in accordance with the applicable building code.

Emergency vents shall be in accordance with Section 5704.2.7.4. Emergency vents shall be arranged to discharge in a manner that prevents localized overheating or flame impingement on any part of the tank in the event that vapors from such vents are ignited.

~~3.~~ 2. Change Sections 5706.2.6 ~~and 5706.3.3~~ to read:

~~(N)~~5706.2.6 Spill control drainage control and diking. Outdoor storage areas shall be provided with drainage control or diking as set forth in the applicable building code.

3. Change Section 5706.3.3 to read:

~~(N)~~5706.3.3 Sumps. Sumps associated with wells shall be maintained in accordance with the applicable building code.

4. Delete Sections 5706.3.3.1 and 5706.3.3.3.

5. Change Sections 5706.4.1, 5706.4.2, 5706.4.4, 5706.4.7.6, and 5706.4.9 to read:

~~(N)~~5706.4.1 Building construction. Buildings shall be maintained in accordance with the applicable building code.

~~(N)~~5706.4.2 Means of egress. Means of egress from rooms in which liquids are stored, used or transferred by pumps shall be maintained in accordance with the applicable building code.

~~(N)~~5706.4.4 Ventilation. Ventilation for rooms, buildings and enclosures in which Class I liquids are pumped, used or transferred shall be maintained in accordance with the applicable building code.

~~(N)~~5706.4.7.6 Piping, valves and fittings. Piping, valves and fittings shall be maintained in accordance with the applicable building code.

~~(N)~~5706.4.9 Drainage control. Loading and unloading areas shall be provided with drainage control in accordance with the applicable building code.

6. Change Sections 5706.4.10, 5706.5.1.2, 5706.5.1.3, 5706.5.1.5, 5706.5.1.6, 5706.8.1, 5706.8.3, and 5706.8.5 to read:

~~(N)~~5706.4.10 Fire protection. Fire protection for bulk plants or terminals shall be maintained in accordance with the applicable building code.

~~(N)~~5706.5.1.2 Weather protection canopies. Where weather protection canopies are provided, they shall be maintained in accordance with the applicable building code.

~~(N)~~5706.5.1.3 Ventilation. Ventilation shall be maintained in accordance with the applicable building code.

~~(N)~~5706.5.1.5 Spill control and secondary containment. The spill control and secondary containment system shall be maintained in accordance with the applicable building code.

~~(N)~~5706.5.1.6 Fire protection. Fire protection shall be maintained in accordance with the applicable building code.

5706.8.1 Over-pressure or vacuum protection. Tanks and equipment shall have independent venting for over-pressure or vacuum conditions that might occur from malfunction of the vapor recovery or processing system.

Exception: For tanks, venting shall comply with the applicable building code.

5706.8.3 Vapor collection systems and overfill protection. The operation of the vapor collection system and overfill protection shall be in accordance with this section and Section 19.5 of NFPA 30.

5706.8.5 Overfill protection. Storage tanks served by vapor recovery or processing systems shall be equipped with overfill protection in accordance with the applicable building code.

7. Change Section 5707.1 and delete Sections 5707.1.1 through 5707.6.3:

5707.1 Mobile fueling operations. Delivery of Class I, Class II, and Class III liquids to the fuel tank of a highway vehicle from a tank vehicle, a tank carried on a vehicle, or a nonportable container is prohibited.

Exceptions:

1. The refueling of highway vehicles in an emergency.

2. The refueling of vehicles in compliance with Sections 5706.5.4.1 through 5706.5.4.5.

3. Vehicles used for farm operations and machinery.

13VAC5-51-151.5. ~~Ifc~~ IFC Chapter 58 Flammable Gases and Flammable Cryogenic Fluids.

A. Change Sections 5801.1 and 5801.2 to read:

~~(N)~~5801.1 Scope. The storage and use of flammable gases and flammable cryogenic fluids shall be in accordance with this chapter and NFPA 55. Compressed gases shall also comply with Chapter 53 and cryogenic fluids shall also comply with Chapter 55. Flammable cryogenic fluids shall comply with Section 5806. Hydrogen motor fuel-dispensing stations and repair garages and their associated aboveground hydrogen storage systems shall also be designed, constructed and maintained in accordance with Chapter 23 and NFPA 2.

Exceptions:

1. Gases used as refrigerants in refrigeration systems (see Section 606).

2. Liquefied petroleum gases and natural gases regulated by Chapter 61.

3. Fuel-gas systems and appliances regulated under the International Fuel Gas Code other than gaseous hydrogen systems and appliances.

4. Pyrophoric gases in accordance with Chapter 64.

5801.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Change Sections 5803.1, 5803.1.1.2, 5803.1.5, and 5804.1 to read:

~~(N)~~5803.1 Quantities not exceeding the maximum allowable quantity per control area. The storage and use of flammable gases in amounts not exceeding the maximum allowable quantity per control area under the applicable building code.

~~(N)~~5803.1.1.2 Aggregate quantity. The aggregate quantities of flammable gases used for maintenance purposes and operation of equipment shall not exceed the maximum allowable quantity per control area under the applicable building code.

~~(N)~~5803.1.5 Electrical. Electrical wiring and equipment shall be maintained in accordance with the applicable building code.

~~(N)~~5804.1 Indoor storage. Indoor storage of flammable gases in amounts exceeding the maximum allowable quantity per control area in accordance with the applicable building code and this chapter.

C. Delete Sections 5804.1.1 and 5806.2.

D. Change Section 5806.3 to read:

~~(N)~~5806.3 Aboveground tanks for liquid hydrogen. Aboveground tanks for the storage of liquid hydrogen shall be maintained in accordance with the applicable building code.

E. Delete Sections 5806.3.1 through 5806.3.2.1.

F. Change Section 5806.4 to read:

~~(N)~~5806.4 Underground tanks for liquid hydrogen. Underground tanks for the storage of liquid hydrogen shall be maintained in accordance with the applicable building code.

G. Delete Sections 5806.4.1 through 5806.4.3.

H. Change Section 5806.4.4 to read:

~~(N)~~5806.4.4 Anchorage and security. Anchorage provided for tanks and systems shall be maintained in accordance with the applicable building code.

I. Delete Sections 5806.4.5 through 5806.4.8.3.

J. Change Sections 5807.1.10 and 5808.1 to read:

~~(N)~~5807.1.10 Electrical. Electrical components for metal hydride storage systems shall be maintained in accordance with NFPA 70.

~~(N)~~5808.1 General. Where required by the applicable building code, hydrogen fuel gas rooms shall be maintained.

K. Delete Sections 5808.2 through 5806.8.3.2.

L. Change Sections 5808.4 and 5808.5 to read:

~~(N)~~5808.4 Exhaust ventilation. Ventilation required for hydrogen fuel gas rooms shall be maintained in accordance with the applicable building code.

~~(N)~~5808.5 Gas detection system. Gas detection systems required for hydrogen fuel gas rooms shall be maintained in accordance with the applicable building.

M. Delete Sections 5808.5.1 ~~through 5808.5.4~~ and 5808.5.2.

N. Change Section 5808.6 and 5808.7 to read:

~~(N)~~5808.6 Explosion control. Explosion control required for hydrogen fuel gas rooms shall be maintained in accordance with the applicable building code.

~~(N)~~5808.7 Standby power. Standby power provided for mechanical ventilation and gas detection systems shall be maintained in accordance with the applicable building code.

13VAC5-51-152.5. ~~Ifc~~ IFC Chapter 59 Flammable Solids.

A. Change Section 5901.2 to read:

5901.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Change Section 5904.1 to read:

~~(N)~~5904.1 Indoor storage. Indoor storage of flammable solids in amounts exceeding the maximum allowable quantity per control area shall be in accordance with the applicable building code.

C. Delete Section 5904.1.1.

D. Change Section 590 to read:

~~(N)~~5904.1.2 Aisles. Aisle widths between piles shall be maintained in accordance with the applicable building code.

~~(N)~~5904.1.3 Basement storage. Flammable solids shall not be stored in basements unless previously approved.

~~(N)~~5906.2 Storage of magnesium articles. The storage of magnesium shall be maintained in accordance with the applicable building code.

E. Delete Sections 5906.2.1 through 5906.2.3.

F. Change Sections 5906.3.1 and 5906.4 to read:

~~(N)~~5906.3.1 Indoor storage. Indoor storage of pigs, ingots and billets shall be maintained in accordance with the applicable building code.

~~(N)~~5906.4 Storage of fine magnesium scrap. The storage of scrap magnesium shall be maintained in accordance with the applicable building code.

G. Delete Sections 5906.4.2 through 5906.5.4.

H. Change Section 5906.5.5 to read:

~~(N)~~5906.5.5 Electrical equipment. Electric wiring, fixtures and equipment in the immediate vicinity of and attached to dust-producing machines, shall be maintained in accordance with the applicable building code.

I. Delete Section 5906.5.6.

13VAC5-51-153. ~~Ifc~~ IFC Chapter 60 Highly Toxic and Toxic Materials.

A. Change Sections 6001.1 and 6001.2 to read:

6001.1 Scope. The outside storage and use of highly toxic and toxic materials and the maintenance and operational aspects of inside storage and use of highly toxic and toxic materials shall comply with this chapter. Compressed gases shall also comply with Chapter 53.

Exceptions:

1. Display and storage in Group M and storage in Group S occupancies complying with Section 5003.11.

2. Conditions involving pesticides or agricultural products as follows:

2.1. Application and release of pesticide, agricultural products and materials intended for use in weed abatement, erosion control, soil amendment or similar applications when applied in accordance with the manufacturer's instruction and label directions.

2.2. Transportation of pesticides in compliance with the Federal Hazardous Materials Transportation Act and regulations thereunder.

2.3. Storage in dwellings or private garages of pesticides registered by the U.S. Environmental Protection Agency to be utilized in and around the home, garden, pool, spa and patio.

6001.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Change Section 6003.1.4 to read:

6003.1.4 Indoor storage. Indoor storage of highly toxic and toxic solids and liquids shall comply with the applicable building code.

C. Delete Sections 6003.1.4.1, 6003.1.4.2, and 6003.2.5.

D. Change Sections 6004.1.2~~,~~ and 6004.1.3~~, and 6004.3.3~~ to read:

6004.1.2 Gas cabinets. Gas cabinets containing highly toxic or toxic compressed gases shall comply with Section 5003.8.6 and the following requirements:

1. The average ventilation velocity at the face of gas cabinet access ports or windows shall be not less than 200 feet per minute (1.02 m/s) with not less than 150 feet per minute (0.76 m/s) at any point of the access port or window.

2. Gas cabinets shall be connected to an exhaust system.

3. Gas cabinets shall not be used as the sole means of exhaust for any room or area.

4. The maximum number of cylinders located in a single gas cabinet shall not exceed three, except that cabinets containing cylinders not exceeding 1 pound (0.454 kg) net contents are allowed to contain up to 100 cylinders.

5. Gas cabinets required by Section 6004.2 or 6004.3 shall be equipped with an approved automatic sprinkler system in accordance with the applicable ~~building code~~ NFPA 13 standard. Alternative fire-extinguishing systems shall not be used.

6004.1.3 Exhausted enclosures. Exhausted enclosures containing highly toxic or toxic compressed gases shall comply with Section 5003.8.5 and the following requirements:

1. The average ventilation velocity at the face of the enclosure shall be not less than 200 feet per minute (1.02 m/s) with not less than 150 feet per minute (0.76 m/s).

2. Exhausted enclosures shall be connected to an exhaust system.

3. Exhausted enclosures shall not be used as the sole means of exhaust for any room or area.

4. Exhausted enclosures required by Section 6004.2 or 6004.3 shall be equipped with an approved automatic sprinkler system in accordance with the applicable ~~building code~~ NFPA 13 standard. Alternative fire-extinguishing systems shall not be used.

~~6004.3.3 Outdoor storage weather protection for portable tanks and cylinders. Weather protection in accordance with Section 5004.13 shall be provided for portable tanks and cylinders located outdoors and not within gas cabinets or exhausted enclosures. The storage area shall be equipped with an approved automatic sprinkler system in accordance with the applicable building code.~~

~~Exception: An automatic sprinkler system is not required when:~~

~~1. All materials under the weather protection structure, including hazardous materials and the containers in which they are stored, are noncombustible.~~

~~2. The weather protection structure is located not less than 30 feet (9144 mm) from combustible materials or structures or is separated from such materials or structures using a fire barrier complying with Section 6004.3.2.1.1.~~

E. Change Sections 6004.2.2.5, 6004.2.2.6, and 6004.2.2.8 to read:

~~(N)~~6004.2.2.5 Piping and controls - stationary tanks. In addition to the requirements of Section 5003.2.2, piping and controls on stationary tanks shall comply with the following requirements:

1. Pressure relief devices shall be vented to a treatment system designed in accordance with Section 6004.2.2.7.

Exception: Pressure relief devices on outdoor tanks provided exclusively for relieving pressure due to fire exposure are not required to be vented to a treatment system provided that:

1. The material in the tank is not flammable.

2. The tank is located not less than 30 feet (9144 mm) from combustible materials or structures or is shielded by a fire barrier complying with Section 6004.3.2.1.1.

2. Filling or dispensing connections shall be provided with a means of local exhaust. Such exhaust shall be designed to capture fumes and vapors. The exhaust shall be directed to a treatment system in accordance with Section 6004.2.2.7.

3. Stationary tanks shall be provided with a means of excess flow control on all tank inlet or outlet connections.

Exceptions:

1. Inlet connections designed to prevent backflow.

2. Pressure relief devices.

~~(N)~~6004.2.2.6 Gas rooms. Gas rooms shall comply with Section 5003.8.4 and the following requirement:

1. The exhaust ventilation from gas rooms shall be directed to an exhaust system.

~~(N)~~6004.2.2.8 Emergency power. Emergency power shall be maintained in accordance with the applicable building code.

F. Delete Sections 6004.2.2.8.1, ~~and~~ 6004.2.2.9, 6004.2.2.10, 6004.2.2.10.1, 6004.2.2.10.2 and 6004.2.2.10.3.

G. Change Section 6004.3.3 to read:

6004.3.3 Outdoor storage weather protection for portable tanks and cylinders. Weather protection in accordance with Section 5004.13 shall be provided for portable tanks and cylinders located outdoors and not within gas cabinets or exhausted enclosures. The storage area shall be equipped with an approved automatic sprinkler system in accordance with the applicable NFPA 13 standard.

Exception: An automatic sprinkler system is not required when:

1. All materials under the weather protection structure, including hazardous materials and the containers in which they are stored, are noncombustible.

2. The weather protection structure is located not less than 30 feet (9144 mm) from combustible materials or structures or is separated from such materials or structures using a fire barrier complying with Section 6004.3.2.1.1.

13VAC5-51-154. ~~Ifc~~ IFC Chapter 61 Liquefied Petroleum Gases.

A. Change Section 6101.2 to read:

6101.2 Permits. Permits shall be required as set forth in Section 107.2. Distributors shall not fill an LP-gas container for which a permit is required unless a permit for installation has been issued for that location by the fire code official, except when the container is for temporary use on construction sites.

B. Change Section 6103.1 to read:

~~(N)~~6103.1 General. LP-gas equipment shall be maintained in accordance with the code under which it was installed.

C. Delete Section 6103.3.

D. Change Section 6104.1 to read:

~~(N)~~6104.1 General. The storage and handling of LP-gas and the maintenance of related equipment shall comply with applicable building code.

E. Delete Sections 6104.2 through 6104.4 and Table 6104.3.

F. Add Section 6106.4 to read:

6106.4 DOTn cylinders filled on site. U.S. Department of Transportation (DOTn) cylinders in stationary service that are filled on site and therefore are not under the jurisdiction of DOTn either shall be requalified in accordance with DOTn requirements or shall be visually inspected within 12 years of the date of manufacture or within five years from May 1, 2008, whichever is later, and within every five years thereafter, in accordance with the following:

1. Any cylinder that fails one or more of the criteria in Item 3 shall not be refilled or continued in service until the condition is corrected.

2. Personnel shall be trained and qualified to perform inspections.

3. Visual inspection shall be performed in accordance with the following:

3.1. The cylinder is checked for exposure to fire, dents, cuts, digs, gouges, and corrosion according to CGA C-6, Standards for Visual Inspection of Steel Compressed Gas Cylinders, except that paragraph 4.2.1(1) of that standard (which requires tare weight certification), shall not be part of the required inspection criteria.

3.2. The cylinder protective collar (where utilized) and the foot ring are intact and are firmly attached.

3.3. The cylinder is painted or coated to retard corrosion.

3.4. The cylinder pressure relief valve indicates no visible damage, corrosion of operating components, or obstructions.

3.5. There is no leakage from the cylinder or its appurtenances that is detectable without the use of instruments.

3.6. The cylinder is installed on a firm foundation and is not in contact with the soil.

3.7. A cylinder that passed the visual inspection shall be marked with the month and year of the examination followed by the letter "E" (example: 10-01E, indicating requalification in October 2001 by the external inspection method).

3.8. The results of the visual inspection shall be documented, and a record of the inspection shall be retained for a five-year period.

Exception: Any inspection procedure outlined in Items 3.1 through 3.8 that would require a cylinder be moved in such a manner that disconnection from the piping system would be necessary shall be omitted, provided the other inspection results do not indicate further inspection is warranted.

G. Change Section 6108.1 to read:

~~(N)~~6108.1 General. Fire protection for installations having LP-gas storage containers shall be maintained in accordance with the applicable building code.

H. Delete Section 6109.11.2.

I. Change Section 6111.2 to read:

6111.2 Unattended parking. The unattended parking of LP-gas tank vehicles shall be in accordance with Sections 6111.2.1 and 6111.2.2.

Exception: The unattended outdoor parking of LP-gas tank vehicles may also be in accordance with Section 9.7.2 of NFPA 58.

13VAC5-51-154.2. ~~Ifc~~ IFC Chapter 62 Organic Peroxides.

A. Change Section 6201.2 to read:

6201.2 Permits. Permits shall be required for organic peroxides as set forth in Section 107.2.

B. Change Sections 6203.1 and 6203.1.1 to read:

~~(N)~~6203.1 Storage and use. The storage and use of organic peroxides in amounts not exceeding the maximum allowable quantity per control area indicated in Section 5003.1 shall be maintained in accordance with the applicable building code.

~~(N)~~6203.1.1 Special limitations for indoor storage and use by occupancy. The indoor storage and use of organic peroxides shall be maintained in accordance with the applicable building code.

C. Delete Sections 6203.1.1.1 and 6203.1.1.3.

D. Change Section 6203.1.1.4 to read:

~~(N)~~6203.1.1.4 Classrooms. In classrooms in Group B, F or M occupancies, any amount of unclassified detonable and Class 1 organic peroxides shall be stored in accordance with the applicable building code.

E. Delete Sections 6203.2 and 6204.1.1.

F. Delete Table 6204.1.2.

G. Change Section 6203.1.2 through and 6204.1.6 to read:

~~(N)~~6204.1.2 Distance from detached buildings to exposures. Detached storage buildings for Classes I, II, III, IV and V organic peroxides shall be located in accordance with the applicable building code. Detached buildings containing quantities of unclassified detonable organic peroxides shall be located in accordance with the applicable building code.

~~(N)~~6204.1.3 Liquid-tight floor. Liquid-tight floors shall be maintained in accordance with the applicable building code.

~~(N)~~6204.1.4 Electrical wiring and equipment. Electrical wiring and equipment in storage areas for Class I or II organic peroxides shall be maintained in accordance with the applicable building code.

~~(N)~~6204.1.5 Smoke detection. Smoke detection systems shall be maintained in accordance with the applicable building code.

~~(N)~~6204.1.6 Maximum quantities. Maximum allowable quantities per building in a mixed occupancy building shall not exceed the amounts set forth by the applicable building code.
Maximum allowable quantities per building in a detached storage building shall not exceed the amounts set forth by the applicable building code.

H. Change Sections 6204.1.10 and 6204.1.11 to read:

~~(N)~~6204.1.10 Explosion control. Indoor storage rooms, areas and buildings containing explosion control shall be maintained in accordance with the applicable building code.

~~(N)~~6204.1.11 Standby power. Standby power shall be maintained in accordance with the applicable building code.

I. Delete Section 6204.1.11.1.

J. Change Section 6204.2.5 to read:

6204.2.5 Separation. In addition to the requirements of Section 5003.9.8, outdoor storage areas for organic peroxides in amounts exceeding those specified by the applicable building code shall be located a minimum distance of 50 feet (15 240 mm) from other hazardous material storage.

K. Change Section 6204.2.3 to read:

~~(N)~~6204.2.3 Maximum quantities. Maximum quantities of organic peroxides in outdoor storage shall be in accordance with the applicable building code.

13VAC5-51-154.4. ~~Ifc~~ IFC Chapter 63 Oxidizers, Oxidizing Gases and Oxidizing Cryogenic Fluids.

A. Change Section 6301.2 to read:

6301.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Change Section 6303.1 to read:

~~(N)~~6303.1 Storage and use. The storage and use of oxidizing materials shall be maintained in accordance with the applicable building code.

C. Delete Sections 6303.1.1 and 6303.1.1.1.

D. Change Section 6303.1.1.1.1 to read:

6303.1.1.1.1 Group A, E, I or U occupancies. In Group A, E, I or U occupancies, any amount of Class 4 liquid and solid oxidizers shall be stored in accordance with the following:

~~1.~~ Class 4 liquid and solid oxidizers shall be stored in hazardous materials storage cabinets complying with Section 5003.8.7.

E. Delete Sections 6303.1.1.2 and 6303.1.1.3.

F. Change Section 6303.1.2 to read:

~~(N)~~6303.1.2 Emergency shutoff. Shutoff valves shall be maintained in accordance with the applicable building code.

G. Delete Sections 6303.1.2.1 and 6303.1.2.2.

H. Change Sections 6303.1.3 and 6303.2 to read:

~~(N)~~6303.1.3 Ignition source control. Ignition sources in areas containing oxidizing gases shall be controlled in accordance with the applicable building code.

~~(N)~~6303.2 Class 1 oxidizer storage configuration. The storage configuration of Class I liquid and solid oxidizers shall be as set forth in accordance with the applicable building code.

I. Delete Table 6303.2.

J. Change Sections 6304.1 through 6304.1.5 to read:

~~(N)~~6304.1 Indoor storage. Indoor storage of oxidizing materials shall be maintained in accordance with the applicable building code.

~~(N)~~6304.1.1 Explosion control. Explosion control for indoor storage rooms, areas and buildings containing Class 4 liquid or solid oxidizers shall be maintained in accordance with the applicable building code.

~~(N)~~6304.1.2 Automatic sprinkler system. The automatic sprinkler system for oxidizer storage shall be maintained in accordance with the applicable building code.

~~(N)~~6304.1.3 Liquid-tight floor. Liquid-tight floors of storage areas for liquid and solid oxidizers shall be maintained in accordance with the applicable building code.

~~(N)~~6304.1.4 Smoke detection. Smoke detection systems shall be maintained in accordance with the applicable building code.

~~(N)~~6304.1.5 Storage conditions. The maximum quantity of oxidizers per building in storage buildings shall be maintained in accordance with the applicable building code.

K. Delete Tables 6304.1.5(1), 6304.1.5(2), and 6304.1.5(3).

L. Change Section 6304.1.8 to read:

6304.1.8 Detached storage. Storage of liquid and solid oxidizers shall be in detached buildings where required by the applicable building code.

M. Change Section 6304.2.2 to read:

6304.2.2 Storage configuration for liquid and solid oxidizers. Storage configuration for liquid and solid oxidizers shall be in accordance with the applicable building code.

N. Change Sections 6305.1 and 6306.4 to read:

~~(N)~~6305.1 Scope. The use of oxidizers shall be in accordance with the applicable building code.

~~(N)~~6306.4 Maximum aggregate quantity. The maximum aggregate quantity of liquid oxygen allowed in storage and in use in each dwelling unit shall be maintained in accordance with the applicable building code.

13VAC5-51-154.6. ~~Ifc~~ IFC Chapter 64 Pyrophoric Materials.

A. Change Section 6401.2 to read:

6401.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Change Sections 6403.1 and 6403.1.1 to read:

~~(N)~~6403.1 Storage and use. The storage and use of pyrophoric material shall be maintained in accordance with the applicable building code.

~~(N)~~6403.1.1 Emergency shutoff. Emergency shutoff valves shall be maintained in accordance with the applicable building code.

C. Delete Sections 6403.1.1.1, 6403.1.1.2, and 6403.2.

D. Change Sections 6404.1 and 6404.1.1 to read:

~~(N)~~6404.1 Indoor storage. Indoor storage of pyrophoric materials shall be maintained in accordance with the applicable building code.

~~(N)~~6404.1.1 Liquid-tight floor. Liquid-tight floors of storage areas containing pyrophoric liquids shall be maintained in accordance with the applicable building code.

E. Delete Sections 6404.1.2, 6404.1.3, 6404.1.4, and 6404.2.2.

13VAC5-51-154.7. ~~Ifc~~ IFC Chapter 65 Pyroxylin (Cellulose Nitrate) Plastics.

A. Change Section 6501.2 to read:

6501.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Delete Sections 6504.1.1 and 6504.1.3.

C. Change Sections 6504.1 and 6504.2 to read:

6504.1 Raw material. Raw cellulose nitrate (pyroxylin) plastic material in a Group F building shall be stored and handled in accordance with Sections 6504.1.2 and 6504.1.4 through 6504.1.7.

~~(N)~~6504.2 Fire protection. Fire protection for the manufacture or storage of articles of cellulose nitrate (pyroxylin) plastic in quantities exceeding 100 pounds (45 kg) shall be in accordance with the applicable building code.

13VAC5-51-154.8. ~~Ifc~~ IFC Chapter 66 Unstable (Reactive) Materials.

A. Change Section 6601.2 to read:

6601.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Change Sections 6603.1 and 6603.1.1 to read:

~~(N)~~6603.1 Storage and use. Quantities of unstable (reactive) materials not exceeding the maximum allowable quantity per control area shall be maintained in accordance with the applicable building code.

~~(N)~~6603.1.1 General. The storage and use of unstable (reactive) materials shall be in accordance with the applicable building code.

C. Delete Section 6603.1.2.

D. Change Sections 6603.1.2.1 and 6604.1 to read:

6603.1.2.1 Group A, E, I or U occupancies. In Group A, E, I or U occupancies, any amount of Classes 3 and 4 unstable (reactive) materials shall be stored in accordance with the applicable building code.

~~(N)~~6604.1 Indoor storage. Indoor storage of unstable (reactive) materials shall be maintained in accordance with the applicable building code.

E. Delete Section 6604.1.1.

~~D.~~ F. Change Sections 6604.1.2, 6604.1.3, and 6604.1.5 to read:

~~(N)~~6604.1.2 Explosion control. Explosion control for indoor storage shall be maintained in accordance with the applicable building code.

~~(N)~~6604.1.3 Liquid-tight floor. Liquid-tight floors of storage areas shall be maintained in accordance with the applicable building code.

~~(N)~~6604.1.5 Location in building. Unstable (reactive) materials shall not be stored in basements unless approved.

13VAC5-51-154.9. ~~Ifc~~ IFC Chapter 67 Water-Reactive Solids and Liquids.

A. Change Section 6701.2 to read:

6701.2 Permits. Permits shall be required as set forth in Section 107.2.

B. Change Section 6703.1 to read:

~~(N)~~6703.1 Storage and use. The storage and use of water reactive solids and liquids shall be maintained in accordance with the applicable building code.

C. Change Section 6703.2 to read:

~~(N)~~6703.2 Quantities exceeding the maximum allowable quantity per control area.

D. Change Section 6704.1 to read:

~~(N)~~6704.1 Indoor storage. Indoor storage of water-reactive solids and liquids shall be maintained in accordance with the applicable building code.

E. Change Section 6704.1.1 to read:

~~(N)~~6704.1.1 Detached storage.

F. Change Section 6704.1.2 to read:

~~(N)~~6704.1.2 Liquid-tight floor. Liquid-tight floors in storage areas for water reactive solids and liquids shall be maintained in accordance with the applicable building code.

G. Delete Section 6704.1.3.

H. Change Section 6704.1.5 to read:

~~(N)~~6704.1.5 Storage configuration. Aisle widths between piles shall be maintained in accordance with the applicable building code.

I. Change Section 6704.1.1 to read:

~~(N)~~6704.1.6 Explosion control. Explosion control for indoor storage rooms shall be maintained in accordance with the applicable building code.

J. Change Section 6704.2.5 to read:

~~(N)~~6704.2.5 Containment. Secondary containment shall be provided in accordance with the applicable building code.

13VAC5-51-155. ~~Ifc~~ IFC Chapter 80 Referenced Standards.

Change the referenced standards as follows (standards not shown remain the same):

Standard reference number	Title	Referenced in code section number
CGA C-6 (2001)	Standards for Visual Inspection of Steel Compressed Gas Cylinders	6106.4
~~NFPA 45-15~~	~~Standard on Fire Protection for Laboratories Using Chemicals~~	~~5001.7.5, 5001.7.10, 5001.7.11~~
~~NFPA 96-17~~	~~Standard for Ventilation Control and Fire Protection of~~	~~319.4, 904.3~~

	~~Commercial Cooking Operations~~	
UL 1278-00	Standard for Movable and Wall- or Ceiling-Hung Electric Room Heaters	605.10.1
~~UL 1805-2002~~	~~Standard for Laboratory Hoods and Cabinets~~	~~5001.7.11~~
NA3178		

FP103.2.1 (VFSB SFPC Edit Part 1)-18

VFC: PROPOSAL INFORMATION (New), 1 (New), CHAPTER 20, CHAPTER 21, CHAPTER 23, CHAPTER 24, CHAPTER 25, CHAPTER 28, CHAPTER 29, CHAPTER 30, CHAPTER 31, CHAPTER 32, CHAPTER 33, CHAPTER 34, CHAPTER 36, CHAPTER 37

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2015 Virginia Statewide Prevention Fire Code

PROPOSAL INFORMATION

Add new text as follows:

VFSB Recommendation	VFSB Comments/Commentary
2007.1 General. Helistops and heliports shall be maintained in accordance with Sections 2007.2 through 2007.8.	There are no maintenance requirements in the applicable building codes.
2007.4 Exits. Exits and stairways shall be maintained in accordance with chapter 10 and the applicable building code.	There are no maintenance requirements in the applicable building codes.
2007.5 Standpipe systems. A building with a rooftop helistop or heliport provided with a Class I or III standpipe system shall be maintained in accordance with Chapter 9 and remain in accordance with the applicable building code.	Provides a reference to Chapter 9 fire protection system maintenance requirements. There are no maintenance requirements in the applicable building codes.
2007.6 Foam protection. Where provided or required by the applicable building code, foam fire-protection capabilities shall be maintained for rooftop heliports. Such systems shall be maintained in accordance with the applicable provisions of Chapter 9.	Provides a reference to Chapter 9 fire protection system maintenance requirements. There are no maintenance requirements in the applicable building codes.
2104.2.1 Ventilation. Adequate ventilation shall be operated and maintained. Ventilation systems provided shall remain in accordance with the applicable building code.	The building code does not include maintenance requirements. This section is intended to ensure ventilation in dry cleaning plants that is maintained and adequate to protect plant employees and the public from the hazards associated with dry cleaning operations using any of the various classes of dry cleaning solvents, both in approved dry cleaning machines and in spotting and pretreating operations in the open. This is an operational requirement not construction.
2104.2.3 Electrical wiring and equipment. Electrical wiring and equipment in dry cleaning rooms or other locations subject to flammable vapors shall be maintained in accordance with NFPA 70 and Chapter 6. Where provided, such systems and equipment shall comply with the applicable building code.	The building code does not include maintenance requirements. To reduce the likelihood of a vapor ignition, electrical wiring and equipment located where flammable vapors might be released by malfunctioning equipment, rupture or breakage is typically classified as Class I, Division 1 equipment under the provisions of NFPA 70. This would include rooms or spaces containing closed-system dry cleaning equipment that, under normal conditions, keeps the solvent vapors confined within the equipment. For the same reason, in areas where flammable vapors are present under normal operating conditions, such as in spotting or pretreating areas, using Class I solvents in the open, in tubs or on soaking tables, electrical wiring and equipment typically must be classified as Class I, Division 1, equipment to meet the requirements of NFPA 70.

2105.2.3 Ventilation. Ventilation shall be maintained and operated. Ventilation systems provided must remain in accordance with the applicable building code.	The building code does not include maintenance requirements. his section intended to prevent solvent vapors from Type II dry cleaning systems from accumulating to an ignitable concentration in the room in which those appliances are located by providing adequate mechanical ventilation.
2106.3 Class II and III solvents. Scouring, brushing, and spotting and pretreating shall be permitted to be conducted with Class II or III solvents. The maximum quantity of Class II or III solvents permitted at any work station shall be 1 gallon (4 L). In other than Group H-2 occupancy, the aggregate quantities of solvents shall not exceed the maximum allowable quantity per control area for use-open system.	The reference to MAQ is appropriate and important to keep in this section. This section allows Class II or III solvents to be used for spotting or pretreating and limits the quantity of solvent that can be in use at a spotting or pretreating work station to 1 gallon (4 L) to reduce the likelihood of an unmanageable solvent spill. Aggregate quantities of spotting or pretreating solvent must not exceed the MAQ for open system use established by Table 5003.1.1(1), including the increases allowed for the sprinkler system required by Section 2108.2.
2107.2 Type II systems. Unless otherwise approved by the applicable building code, Type II dry cleaning and solvent tank storage rooms shall not be operated below grade or above the lowest floor level of the building and shall be maintained in accordance with Sections 2107.2.1 through 2107.2.3. Exception: Solvent storage tanks installed underground, in vaults or in special enclosures in accordance with Chapter 57.	If the subsections remain, the main sections should remain as well. The exception is also an important pointer to Chapter 57. This proposal addresses the location hazards of these operations and is not requiring construction. Type II dry cleaning systems are those systems using a Class II combustible liquid [flash point from 100°F (38°C) to 140°F (60°C)] as a cleaning solvent, sometimes at or above its lowest flash point under normal plant operating conditions. For this reason, this section prohibits the operation of these systems and solvent storage at other than the level of fire department access or exit discharge (i.e., other than at grade). Because of the higher relative hazards of these systems and their solvents, locating them above or below the lowest grade floor level could affect rapid egress by employees, as well as rapid access to the system by fire fighters in case of an emergency.
2107.2.2 Number of means of egress. The number and means of egress for Type II dry cleaning rooms shall be maintained in accordance with Chapter 10 and remain in accordance with the applicable building code.	The building code does not include maintenance requirements. The proposal also removes construction language.
2107.2.3 Spill control and secondary containment. Curbs, drains or other provisions for spill control and secondary containment shall be maintained in accordance with Section 5004.2 to collect solvent leakage and fire protection water as approved in accordance with the applicable building code.	Not construction. The building code does not include maintenance requirements. To prevent the flow of Class II solvents to rooms or spaces adjoining the dry cleaning room, spill control complying with Section 5004.2 is required to be maintained by this section. Runoff from spills or manual fire suppression activities may result in environmental contamination if not properly controlled.
2107.3 Solvent storage tanks. Solvent storage tanks for Class II, IIIA and IIIB liquids shall be maintained in accordance with Chapter 57 and remain as approved in accordance with the applicable building code. Exception: As provided in NFPA 32 for inside storage or treatment tanks.	Storage tank maintenance requirements, not construction. The building code does not include maintenance requirements. The exception allows for compliance with NFPA 32 where applicable. Safe and proper storage of solvents is a paramount concern in the safe operation of a dry cleaning plant or facility. This section requires that combustible solvents be stored in approved tanks located either underground or above ground outside the building, and references Chapter 57 for detailed requirements.

2108.1 General. Fire protection systems, devices and equipment shall be inspected, tested and maintained in accordance with Chapter 9.	Not construction. The building code does not include maintenance requirements. Restores maintenance reference to Chapter 9.
2108.2 Unless otherwise required by the applicable building code, the following operational conditions are to be maintained in the absence of an automatic sprinkler system: 1.Type III-A dry cleaning plants where the aggregate quantity of Class III-A solvent in dry cleaning machines and storage does not exceed 330 gallons (1250 L) and dry cleaning machines are equipped with a feature that will accomplish any one of the following: 1.1.Prevent oxygen concentrations from reaching 8 percent or more by volume. 1.2.Keep the temperature of the solvent at least 30°F (16.7°C) below the flash point. 1.3.Maintain the solvent vapor concentration at a level lower than 25 percent of the lower explosive limit (LEL). 1.4.Utilize equipment approved for use in Class I, Division 2 hazardous locations in accordance with NFPA 70. 1.5.Utilize an integrated dry-chemical, clean agent or water-mist automatic fire-extinguishing system designed in accordance with Chapter 9. 2. Type III-B dry cleaning plants where the aggregate quantity of Class III-B solvent in dry cleaning machines and storage does not exceed 3,300 gallons (12 490 L).	Maintenance of sprinkler systems is covered by 2108.1 and Chapter 9. This section provided specific operational conditions that must be maintained if used in lieu of fire sprinklers. Several exceptions to the requirement for sprinklers are included in this section of the code in part because several states have banned the use of the nonflammable dry cleaning fluid perchlorethylene or “perc” due to its carcinogenicity which already requires that plant operators purchase new equipment using alternative dry cleaning technology. The ICC voting membership approved the addition of the exceptions because its members felt that having a sprinkler requirement on top of that capital expense would be a business hardship and also because the nationally recognized standard, NFPA 32, already included such exceptions. These exceptions were added to the code rather than relying on a reference to NFPA 32 so the inspector would not have to carry the referenced standard into the field.
2301.5 Electrical. Electrical wiring and equipment shall be suitable for the locations in which they are installed in accordance with the applicable building code, and shall be maintained in accordance with Section 605, NFPA 30A and NFPA 70.	Not construction. The building code does not include maintenance requirements. Chapter 8 of NFPA 30A addresses electrical equipment at motor fuel-dispensing facilities and is correlated with NFPA 70. Electrical equipment must be approved for the particular hazards anticipated at motor fuel-dispensing facilities and the hazardous nature of flammable and combustible liquids and gases.
2301.6 Heat-producing appliances. Heat producing appliances shall be suitable for the locations in which they are located and shall comply with NFPA 30A and the applicable building code.	Not construction. The building code does not include maintenance requirements. Heat-producing appliances are ignition sources. Precautions must be taken when using such appliances around flammable and combustible liquids. NFPA 30A, and the applicable building code provide requirements for the safe use of these appliances.

2303.1 Location of dispensing operations. The location of dispensing operations shall be maintained in accordance with the following unless otherwise approved in accordance with the applicable building code: 1.Ten feet (3048 mm) or more from lot lines. 2.Ten feet (3048 mm) or more from buildings having combustible exterior wall surfaces or buildings having noncombustible exterior wall surfaces that are not part of a 1-hour fire-resistance-rated assembly or buildings having combustible overhangs. Exception: Canopies constructed in accordance with the applicable building code providing weather protection for the fuel islands. 3.Such that all portions of the vehicle being fueled will be on the premises of the motor fuel-dispensing facility. 4.Such that the nozzle, when the hose is fully extended, will not reach within 5 feet (1524 mm) of building openings. 5.Twenty feet (6096 mm) or more from fixed sources of ignition.	These operational items have been consistently in the code for decades and are an important operational control. In order to reduce the likelihood of motor fuels coming into contact with ignition sources or posing a hazard to persons, adjoining property or on-site buildings, this section provides very specific dispensing operation requirements in relation to buildings, lot lines and ignition sources. These are operational controls, not construction requirements.
2303.2 Emergency disconnect switches. An approved, clearly identified and readily accessible emergency disconnect switch shall be maintained at an approved location in accordance with the applicable building code to stop the transfer of fuel to the fuel dispensers in the event of a fuel spill or other emergency. Such devices shall be distinctly labeled as: EMERGENCY FUEL SHUTOFF. Signs shall be provided in approved locations.	This section establishes the maintenance requirements for emergency disconnect switches to shut off the flow of fuel in an emergency. The switch location must be prominently indicated by an approved sign and access to the switch must be free of any obstructions, such as displayed merchandise. This section does not include specific installation or location requirements as those are provided in the applicable building code.
2304.2.2 Emergency controls. Approved emergency controls shall be maintained in accordance with Section 2303.2.	Restores reference 2303.2 since the building code does not include maintenance requirements.
2304.3.2 Dispensers. Dispensing devices shall be maintained in accordance with Section 2306.7. Dispensing devices operated by the insertion of coins or currency shall not be used unless approved in accordance with the applicable building code.	Restores reference to 2306.7 for maintenance of fuel dispensing devices. Provides operational reference to ensure that coin or currency devices are not added or modified without approval.

2304.3.3 Emergency controls. Approved emergency controls shall be maintained in accordance with Section 2303.2. Emergency controls shall be of a type that is only manually resettable.	There are not maintenance requirements in the building code. This proposal simply restores reference to maintenance requirements of Section 2303.2.
2306.2.2 Above-ground tanks located inside buildings. Above-ground tanks for the storage of Class I, II and IIA liquid fuels are allowed to be located in buildings where permitted by the applicable building code.	-
2306.2.3 Above-ground tanks located outside above grade. Above-ground tanks shall not be used for the storage of Class I, II or III liquid motor fuels unless approved in accordance with the applicable building code. Tanks located at farms, construction projects or rural areas shall comply with Section 5706.2.	The installation and arrangement of tanks is regulated by the applicable building code. The improper use of unapproved tanks is an operational issue. Also includes important reference to Chapter 57 for tank operations at farms and construction sites.
2306.2.4 Above-ground tanks located in above-grade vaults or below grade vaults. Above-ground tanks used for storage of Class I, II or IIIA liquid motor fuels are allowed to be installed in vaults located above grade or below grade where permitted by the applicable building code.	There are no maintenance requirements in the building code. This section provides a reminder to the user that additional requirements may be required by the applicable building code.
2306.2.4.1 Tank capacity limits. The individual and aggregate capacity of tanks storing Class I and Class II liquids at an individual site shall be limited to the quantities allowed in the applicable building code.	Literature review shows that these particular thresholds (15,000 gallons and aggregate 48,000 gallons) have not changed since at least the 2000 IFC.
2306.2.4.2 Fleet vehicle motor fuel-dispensing facilities. The individual capacity and aggregate capacity of tanks storing Class II and Class IIIA liquids at a fleet vehicle motor fuel-dispensing facility shall be limited to the quantities allowed in the applicable building code.	Literature review shows that these particular thresholds (20,000 gallons and aggregate 80,000 gallons) have not changed since at least the 2000 IFC.

2306.2.6 Special enclosures. Special enclosures (essentially concrete vaults) shall be maintained and remain in accordance with the applicable building code. Tanks for liquid motor fuels are allowed to be operated in approved special enclosures where maintained in accordance with the following: 1.The special enclosure shall be maintained liquid tight and vapor tight. 2.The special enclosure shall not contain backfill. 3.Sides, top and bottom of the special enclosure shall be maintained as reinforced concrete, with openings for inspection through the top only. 4.Tank connections shall be maintained as piped or closed such that neither vapors nor liquid can escape into the enclosed space between the special enclosure and any tanks inside the special enclosure. 5.Means shall be maintained whereby portable equipment can be employed to discharge to the outside any vapors which might accumulate inside the special enclosure should leakage occur. 6.Tanks containing Class I, II or IIIA liquids operated inside a special enclosure shall maintain not more than 6,000 gallons (22 710 L) in individual capacity or 18,000 gallons (68 130 L) in aggregate capacity unless otherwise approved by the applicable building code. 7.Unless otherwise approved, each tank within special enclosures shall maintain a clear space of not less than 3 feet (910 mm) to allow for maintenance and inspection.	The safe operation within special enclosures is dependent upon maintaining the items listed in this section. There are no maintenance requirements in the building code. Also, language from the commentary as to the concept/definition of special enclosures has been provided for clarity.

2306.5 Secondary containment. Drainage control or diking for above-ground tanks shall be maintained in accordance with Chapter 57. Secondary containment systems shall be monitored with visually or automatically. Emergency venting for enclosed secondary containment systems shall be maintained and remain in accordance with the applicable building code. NOTE: Drainage control and diking is not required for listed secondary containment tanks.	There are no maintenance requirements in the building code. This section restores basic operational requirements such as visual monitoring as well as maintenance of emergency venting if provided. It also add a note, not a requirement, regarding listed secondary containment tanks not requiring drainage or diking.
2306.6 Piping, valves, fittings and ancillary equipment for use with flammable or combustible liquids. The design, fabrication and assembly of piping, valves, fittings and ancillary equipment shall be in accordance with the applicable building code. The testing and inspection of piping, valves, fittings and ancillary equipment for use with flammable or combustible liquids shall be in accordance with Chapter 57 and Sections 2306.6.1 through 2606.6.3.	There are no maintenance requirements in the building code. Removes the words "design, fabrication and assembly" and restores the reference to Chapter 57 for testing/inspection (not construction). The majority of leaks come from piping, valves, fittings and ancillary equipment, not from the tank itself. Therefore, this section is intended to reduce fuel spills by addressing the requirements for this equipment.
2306.6.2 Piping, valves, fittings and ancillary equipment for above-ground tanks for Class I, II and III liquids. Piping, valves, fittings and ancillary equipment for above ground tanks storing Class I, II and III liquids shall be maintained in accordance with this section and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code but there are in the following sections.
2306.6.2.1 Tank openings. Tank openings for above-ground tanks shall be through the top only unless specifically approved in accordance with the applicable building code.	The presence of tank openings or uncovered openings on tanks is an operational concern unless specifically approved during installation.
2306.6.2.2 Fill-pipe connections. Unless otherwise approved in accordance with the applicable building code, the fill pipe for above-ground tanks shall be provided with a means for making a direct connection to the tank vehicle's fuel-delivery hose so that the delivery of fuel is not exposed to the open air during the filling operation.	The exposure of fuel-delivery to the open air is an operational hazard regulated by this section to ensure proper fuel-delivery hose arrangements. This is an operational control, not construction.
2306.6.2.3 Overfill protection. Overfill protection for above-ground flammable and combustible liquid storage tanks shall be maintained in accordance with Chapter 57 and remain in accordance with the applicable building code.	Overfill prevention is a major concern when dealing with above-ground tanks. There are no maintenance requirements in the building code. This proposal also provides additional context to the maintenance requirements.

2306.6.2.4 Siphon prevention. Antisiphon methods provided in the piping system to prevent flow of liquid by siphon action shall be maintained and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. This proposal also provides additional context to the requirements listed. This section requires that an approved anti-siphon device be maintained in the liquid piping near the top of the tank to prevent liquid flow from the tank by siphon action if the supply pipe from the tank to the dispenser is damaged.
2306.6.2.5 Emergency relief venting. Emergency relief venting for above-ground storage tanks, tank compartments and enclosed secondary containment spaces shall be maintained in accordance with Chapter 57 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. This proposal also restores the reference to Chapter 57. The emergency relief vent is the most important safety device installed on the tank. The emergency relief vent prevents the tank from overpressurizing in the event the tank is exposed to fire. In the case of a secondary containment above-ground tank there must be an emergency relief vent maintained for each tank compartment and an emergency relief vent for the interstitial space.
2306.6.2.6 Spill containers. A spill container having a capacity of not less than 5 gallons (19 L) shall be provided for each fill connection. For tanks with a top fill connection, spill containers shall be noncombustible and shall be fixed to the tank and equipped with a manual drain valve that drains into the primary tank unless specifically approved otherwise in accordance with the applicable building code. For tanks with a remote fill connection, a portable spill container is allowed.	Spill containers are operational items, not construction.
2306.6.3 Piping, valves, fittings and ancillary equipment for underground tanks. Piping, valves, fittings and ancillary equipment for underground tanks shall be maintained in accordance with Chapter 57 of this code, NFPA 30A and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. This proposal also restores the reference to Chapter 57 and NFPA 30A.
2306.7 Fuel-dispensing systems for flammable and combustible liquids. Fuel dispensing systems for flammable and combustible liquid fuels shall be maintained in accordance with this sections 2306.7.1 through 2306.7.9.2.4 and remain in accordance with the applicable building code. Alcohol-blended fuel-dispensing systems shall also be maintained in accordance with Section 2306.8.	There are no maintenance requirements in the building code. This proposal also provides reference to alcohol-blended fuels which is consistent with the original intent of the section. Alternative alcohol-blended fuels, while they are considered in this category of fuels, possess characteristics that require the systems for dispensing them to comply with additional requirements contained in Section 2306.8.
2306.7.1 Listed equipment. Electrical equipment, dispensers, hose, nozzles and submersible or subsurface pumps used in fuel dispensing systems shall be listed unless otherwise approved in accordance with the applicable building code.	Operational equipment not construction. Ensuring that electrical and dispensing equipment maintain listings is a key operational requirement of the life of a facility. This is consistent with other "Listing" sections of the code. The use of listed equipment and devices provides evidence that they have been evaluated by a third-party agency for safe use in the applications for which they are designed. This is especially important where flammable liquids are being transferred or dispensed.

2306.7.2 Fixed pumps required. Unless otherwise approved in accordance with the applicable building code, class I and II liquids shall be transferred from tanks by means of fixed pumps that allow control of the flow and prevent leakage or accidental discharge.	Operational requirements not installation of pumps or construction.
2306.7.3 Mounting of dispensers. Unless otherwise approved in accordance with the applicable building code, dispensing devices, except those installed on top of a protected above-ground tank that qualifies as vehicle-impact resistant, shall be maintained as protected against physical damage by a concrete island 6 inches (152 mm) or more in height, or shall maintain protection in accordance with Section 312. Dispensing devices shall be maintained securely fastened to their mounting surface in accordance with the dispenser manufacturer's instructions. Dispensing devices installed indoors shall be located in a position where they cannot be struck by an out-of-control vehicle descending a ramp or other slope unless otherwise approved in accordance with the applicable building code.	Operational maintenance requirements of dispensing equipment (impact damage protection, securely fastened, etc.) Not construction. These requirements have been consistent in the code since at least the 1978 BOCA edition.
2306.7.4 Dispenser emergency shutoff valve. Unless otherwise approved in accordance with the applicable building code, an approved automatic emergency shutoff valve designed to close in the event of a fire or impact shall be maintained in the liquid supply line at the base of dispenser supplied by a remote pump. Such valve shall be maintained and remain in accordance with the applicable building code. Emergency shutoff valves shall be maintained in accordance with the manufacturer's instructions and tested at least yearly in accordance with Section 2305.2.4.	Provide context for maintenance of dispenser emergency shutoff valve devices. Restores annual testing requirement that was removed.
2306.7.5 Dispenser hose. Dispenser hoses shall be a maximum of 18 feet (5486 mm) in length unless otherwise approved in accordance with the applicable building code. Dispenser hoses shall be maintained as listed and approved. When not in use, hoses shall be reeled, racked or otherwise protected from damage.	Operational equipment requirements for hoses, not construction. Requirements have been consistent and standardized to this limit in the industry and code for years.

2306.7.5.1 Emergency breakaway devices. Unless otherwise approved in accordance with the applicable building code, dispenser hoses for Class I and II liquids shall be maintained with a listed emergency breakaway device designed to retain liquid on both sides of a breakaway point. Such devices shall be maintained in accordance with the manufacturer's instructions. Where hoses are attached to hose retrieving mechanisms, the emergency breakaway device shall remain between the hose nozzle and the point of attachment of the hose-retrieval mechanism to the hose.	Important context and specific requirements for the maintenance and operation of emergency breakaway devices. Not construction or installation. This provision requires a breakaway device on dispenser hoses delivering gasoline, diesel and kerosene (Class I and II liquids). These devices are installed to prevent a pull-down of the motor fuel dispenser in the event a car drives away with the hose nozzle valve still in the car’s fill pipe. When these valves operate, the separated sections of the hose are sealed to prevent leakage of liquid from the hose. The placement of the breakaway device between the hose-retrieving mechanism clamp and the nozzle is important to the proper operation of the valve by preventing the pulling force of the driveoff from being transmitted via the retrieving cable directly to the dispenser.
2306.7.6 Fuel delivery nozzles. Unless specifically approved otherwise in accordance with the applicable building code: island-type dispensers used for dispensing Class I, II or III liquids shall be maintained with a listed automatic-closing-type nozzle valve with or without a latch-open device and overhead-type dispensing units shall be maintained with a listed automatic-closing-type nozzle valve without a latch-open device. Exception: A listed automatic-closing-type hose nozzle valve with latch-open device is allowed to be used on overhead-type dispensing units where the design of the system is such that the hose nozzle valve will close automatically in the event the valve is released from a fill opening or upon impact with a driveway.	There are no maintenance requirements in the building code. This proposal restores context to the proper maintenance of fuel delivery nozzles and an optional exception. A listed automatic-closing-type hose nozzle with or without a latch-open device is designed to automatically close when the fuel spits back through the vent line or if the hose nozzle were to fall out of the car fill pipe and strike the ground. When the nozzle is equipped with certain types of vapor recovery equipment, it is designed to shut off when the nozzle is removed from the vehicle. The nozzle on island-type dispensers may or may not be equipped with a latchopen device. The distinction between an overhead-type dispenser and an island-type dispenser is included in this section even though the overhead dispenser is rarely used. However, the concern was that since the hose is on a retractable reel built into the canopy, the nozzle would not strike the ground if it were to fall out of the vehicle and a latch-open device would fail to work, allowing dangerous, uncontrolled fuel spills. The exception is that if the overhead-type dispenser hose mechanism is designed to allow the nozzle to strike the ground and automatically shut off or if the nozzle was equipped with vapor return bellows that would automatically shut off the nozzle if it was removed from the vehicle, the latch-open device would be approved.
2306.7.7 Remote pumping systems. Remote pumping systems for liquid fuels shall be maintained in accordance with 2306.7.7.1 and 2306.7.7.2 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Remote pumping systems (sometimes referred to as “pressure systems”) are systems in which liquid motor fuels are transferred from the storage tank to the dispensing devices by submersible pumps located at the storage tank rather than by suction pumps located within the dispensing device. The intent of this section is to maintain special safety devices on pumping systems that deliver fuel to the dispenser by pressure rather than suction.

2306.7.7.1 Leak detection. Leak detection devices shall be maintained. Unless otherwise approved by the applicable building code, where remote pumps are used to supply fuel dispensers, each pump shall maintain a listed leak detection device on the discharge side that will detect a leak in the piping and dispensers and provide an indication of the leak. A leak detection device is not required if the piping from the pump discharge to under the dispenser is above ground and visible.	There are no maintenance requirements in the building code. This section highlights operational requirements for leak detection and restores a exception where detection is not necessary. In remote pumping systems, the piping between the remote pump and the dispenser, because it is under pressure, is the number-one location of fuel spills caused by leaks.
2306.7.7.2 Location. Remote pumps installed above grade, outside of buildings, shall remain in approved locations in accordance with the applicable building code. Dispensing operations shall not be less than 10 feet (3048 mm) from lines of adjoining property that can be built upon and not less than 5 feet (1524 mm) from any building opening. Pumps shall be maintained substantially anchored and protected against physical damage.	The location of physical pumps is to remain as originally approved however it is still important to also maintain operational controls which have been consistently in the code for decades. These are not construction requirements.
2306.7.9 Vapor-recovery and vapor-processing systems. Vapor-recovery and vapor-processing system shall be maintained in accordance with sections 2306.7.9.1.1 through 2306.7.9.2.4 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Because of clean-air environmental concerns, some jurisdictions prohibit fuel vapors displaced during tanker deliveries or routine fuel-dispensing operations from being discharged into the atmosphere and require vapor recovery or vapor-processing systems to prevent pollution. This section contains the provisions for returning the vapors to the tank or processing the vapors on site. Note that the code does not require these systems to be installed, but where they are installed, they must comply with these regulations.
2306.7.9.1 Vapor-balance systems. Vapor balance systems shall be maintained in accordance with section 2306.7.9.1.1 through 2306.7.9.1.5 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. As fuel enters the fuel tank of the vehicle it displaces fuel vapors. The vapor-balance system simply captures these vapors and returns them to the storage tank.

2306.7.9.1.1 Dispensing devices. Dispensing devices incorporating provisions for vapor recovery shall be listed and labeled unless otherwise approved in accordance with the applicable building code. Where dispensing devices are modified for vapor recovery, such modifications shall be approved in accordance with the applicable building code and include a listing report by a nationally recognized testing laboratory. Any listing by report shall contain a description of the component parts used in the modification and recommended method of installation on the specific dispensers. Where provided, such report shall be approved by the building official and made available on request of the fire official. Means shall be maintained to shut down fuel dispensing in the event the vapor return line becomes blocked.	Clarifies that dispensing equipment is to be listed and any modifications approved by the building official. Motor fuel dispensers equipped with vapor-recovery equipment must be listed and labeled by a recognized testing laboratory attesting that they will function properly when maintained in accordance with the terms of their listing. When existing dispensing equipment is retrofitted with vapor-recovery equipment, the equipment being added must be listed to work with the existing equipment. In other words, a person cannot modify an existing dispensing device manufactured by one company with vapor-recovery component parts manufactured by the same or a different company unless a report from a recognized testing laboratory is submitted to the building official verifying that the retrofit components will work properly with the dispensing device. This is called “listed by report” and is a service provided by major testing laboratories to document equipment compatibility. The report from the testing laboratory must also be provided when requested by the fire official during inspections. Means must be maintained to shut down fuel dispensing in the event the vapor-return line becomes blocked. This provision is self-explanatory. To prevent vapors from entering the atmosphere, the dispensing operation must be stopped if the vapor return is blocked.
2306.7.9.1.2 Vapor-return line close off. An acceptable method in accordance with the applicable building code shall be maintained as to close off the vapor return line from dispensers when the product is not being dispensed.	Operational requirements for the vapor-return line are indicated. To prevent vapors from escaping after dispensing has stopped, some type of device must be maintained that will prevent vapors in the tank from escaping out of the return line. This could be accomplished by a one-way check valve.
2306.7.9.1.3 Piping. Piping in vapor-balance systems shall be maintained in accordance with Sections 5703.6, 5704.2.9 and 5704.2.11 of this code. Unless otherwise approved in accordance with the applicable building code, vapor return piping shall be maintained in a manner that drains back to the tank, without sags or traps in which the liquid can become trapped. Where provided, condensate tanks shall be maintained so that they can be drained without opening.	There are no maintenance requirements in the building code. This also provides language to make sure that piping continues to be operationally functional.
2306.7.9.1.4 Flexible joints and shear joints. Flexible joints shall be maintained in accordance with 5703.6.9. Unless otherwise approved in accordance with the applicable building code, shear joints shall remain rigidly mounted and connected by a union in the vapor return piping at the base of each dispensing device and shall remain mounted flush with the top of the surface on which the dispenser is mounted.	There are no maintenance requirements in the building code. The shear joint mentioned here serves the same function for the vapor-recovery lines as the dispenser emergency valve does for the pressurized fuel supply piping to the dispenser (see commentary, Section 2306.7.4). This shear valve must be securely mounted so that the shear groove is located flush or within 1/2 inch (12.7 mm) of the surface of the dispenser island or top of the sump. This shear valve is designed to close in case of a dispenser fire or a dispenser knock-down..

2306.7.9.1.5 Testing. Existing vapor return lines and vent piping shall be tested in accordance with Section 5703.6.3 where the fire code official has reasonable cause to believe that a leak exists.	The ability to test for leaks is a key operational requirement and is not a construction requirement.
2306.7.9.2 Vapor-processing systems. Vapor-processing systems shall be maintained in accordance with section 2306.7.9.2.1 through 2306.7.9.2.4 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Where vapor-recovery systems capture the vapors and return them to the tank, vapor-processing systems do not return the vapors to the tank. Instead, they process the vapors either by refrigeration, absorption or burning them off..
2306.7.9.2.1 Equipment. Unless otherwise approved in accordance with the applicable building code, equipment in vapor-processing-systems, including hose nozzle valves, vapor pumps, flame arresters, fire checks or systems for prevention of flame propagation, controls and vapor-processing equipment, shall be individually maintained as listed for the intended use in a specified manner. Vapor processing systems that introduce air into the underground piping or storage tanks shall maintain equipment for prevention of flame or propagation that has been tested and listed as suitable for the intended use.	Maintenance of listing requirements for equipment and devices. Unlisted vapor-processing equipment may not be used. Equipment that is used must be done in accordance with its listing. Vapor-processing systems that introduce air into the underground piping or storage tanks must be provided with equipment for prevention of flame propagation that has been tested and listed as suitable for the intended use. When blowers are used to introduce air, equipment, such as listed flame arresters, must be used to prevent vapors in the flammable range from being ignited.
2306.7.9.2.2 Location. Unless otherwise approved in accordance with the applicable building code, vapor-processing equipment shall remain located at or above grade and vapor processing units shall be operated not less than 10 feet (3048 mm) from the nearest building or lot line of a property which can be building upon. Sources of ignition shall be located not less than 50 feet (15 240 mm) from fuel-transfer areas and not less than 18 inches (457 mm) above tank fill openings and tops of dispenser islands.	Important dispensing operation requirements are provided. Not construction. This section is intended to protect vapor-processing equipment from fire exposure, not to protect other structures or equipment from a fire involving the vapor-recovery equipment. Clearance to lot lines is intended to provide a measure of exposure protection to the vapor-processing equipment from potential offsite fires. The exception provides several acceptable clearance alternatives, recognizing that the required clearances cannot, in all cases, be achieved.
2306.7.9.2.2.1 Distance from dispensing devices. Unless otherwise approved in accordance with the applicable building code, vapor-processing equipment functioning during dispensing operations shall maintain a minimum of 20 feet (6096 mm) from dispensing devices.	Dispensing devices and vapor-processing equipment need to be separated during dispensing operations This is consistent with NFPA 70 for classified flammable vapor areas.

2306.7.9.2.2.2 Physical protection. Vapor-processing equipment shall remain protected against physical damage by maintaining guardrails, curbs, protective enclosures or fencing required in accordance with the applicable building code. Where approved protective enclosures are used, approved means shall be maintained to ventilate the volume within the enclosure to prevent pocketing of flammable vapors.	There are no maintenance requirements in the building code. Functional and operational intent is provided for context. Vapor-processing equipment must not only be physically protected from vehicles and other physical damage but, if the protection means includes an enclosure, the enclosed area must be adequately ventilated to prevent the accumulation of flammable vapors within where it could become a hazard to anyone entering the enclosure.
2306.7.9.2.3 Mounting. Unless otherwise approved in accordance with the applicable building code, vapor-processing units shall be maintained securely mounted on concrete, masonry or structural steel supports on concrete or other noncombustible foundations. Vapor-recover and vapor-processing equipment is allowed to be operated on roofs where approved in accordance with the applicable building code.	Not construction. Maintenance language for secure mounting as well as a note about roof operations.
2306.7.9.2.4 Piping. Piping in a mechanical assist system shall be maintained in accordance with 5703.6 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
2306.8 Alcohol-blended fuel dispensing operations. Alcohol-blended fuel-dispensing systems shall be maintained in accordance with 2306.7, Section 2306.8.1 through 2306.8.5 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. This section addresses hazards specifically related to the dispensing of alcohol-blended fuels as compared to gasoline and the more established gasoline-alcohol blends ("gasohol"), which are treated the same as gasoline in the code.
2306.8.6 Compatibility. Dispensers shall only be used with the fuels for which they have been listed, which are marked on the product. Field installed components including hose assemblies, breakaway couplings, swivel connectors, and hose nozzle valves shall be maintained in accordance with the listing and marking on the unit.	Compatibility is an ongoing operational issue, not construction. Dispensers and certain field-installed dispensing system components may be made of materials commonly used with gasoline but which may be incompatible with high-level alcohol blends and may degrade over time in their presence. Zinc, brass, lead and aluminum are some of the more sensitive metals. This section requires that dispensers and their field-installed components be marked by the equipment manufacturer with the names of the fuels with which they are compatible, confirming their suitability for use with alcohol blended fuels.
2306.8.3 Facility identification. Facilities dispensing alcohol-blended fuels shall be identified by an approved means.	Facility identification is a key firefighter operation and safety issue. Signage is not construction. This section addresses dispensing facility identification for alcohol-blended fuels. Identification of the facility is intended to promote first-responder awareness of the presence of alcohol-blended fuels. According to the U.S. Department of Energy (DOE) Handbook for Handling, Storing, and Dispensing E85, each state, along with the U.S. Department of Transportation (DOT), has developed signage to place at refueling stations. Code users should contact their individual state DOT to obtain the correct signage criteria for their area.

2306.8.4 Marking. Dispensers shall be marked in an approved manner to identify the types of alcohol-blended fuels being dispensed.	Dispenser identification is a key firefighter operation and safety issue. Signage is not construction. Identification of equipment for specific alcohol blended fuels communicates the intended use of the installed equipment to both customers and emergency personnel. The Federal Trade Commission (FTC) requires a small sticker to be placed on the face of the fuel dispenser as close as possible to the price per unit of fuel. The sticker should have a black background with orange text
2307.2 Approvals. Unless otherwise approved in accordance with the applicable building code, storage vessels and equipment for the storage or dispensing of LP-gas shall be maintained as approved or listed in accordance with Sections 2307.2.1 and 2307.2.2 and the applicable building code.	Using approved storage vessels is an operational issue and is not construction. All equipment used in connection with the storage and dispensing of LP-gas motor fuel must be either approved or listed, as specified in the following sections.
2307.2.1 Approved equipment. Unless otherwise approved in accordance with the applicable building code, containers, pressure relief devices (including pressure relief valves), pressure regulators and piping for LP-gas shall be approved in accordance with the applicable building code.	Using approved equipment is an operational issue and is not construction.
2307.2.2 Listed equipment. Unless specifically approved otherwise in accordance with the applicable building code, hoses, hose connections, vehicle fuel connections, dispensers, LP-gas pumps and electrical equipment for LP-gas shall be listed in accordance with the applicable building code.	Using approved equipment is an operational issue and is not construction.
2307.3 Attendants. Motor fuel-dispensing operations for LP-gas shall be conducted by qualified attendants or in accordance with Section 2307.6 by persons trained in the proper handling of LP-gas..	The 2015 VSFPC language give two options that basically mean the same thing to the reader. This proposal restores the reference to trained persons when using privately operated and properly maintained dispensers. LP-gas must be dispensed into a vehicle by trained and qualified persons. Unattended and self-service LP-gas stations that are open to the public are not allowed. Section 2307.6 does allow self-service as long as it is closed to the public; that is, the vehicles belong to the operator of the LP-gas-fueling facility and the persons dispensing the fuel are employees of the LP-gas-fueling operation and are properly trained

2307.4 Location of dispensing operations and equipment. Unless specifically approved otherwise in accordance with the applicable building code, the point of transfer for LP-gas dispensing operations shall be 25 feet (7620 mm) or more from buildings having combustible exterior wall surfaces, buildings having noncombustible exterior wall surfaces that are not part of a 1-hour fire-resistance-rated assembly, or buildings having combustible overhands, lot lines of property which could be built on, public streets, or sidewalks and railroads; and at least 10 feet (3048 mm) from driveways and buildings having noncombustible exterior wall surfaces that are part of a fire-resistance-rated assembly having a rating of 1 hour or more. Exception: The point of transfer for LP-gas dispensing operations need not be separated from canopies that are constructed in accordance with the applicable building code and which provide weather protection for the dispensing equipment. LP-gas containers shall remain located in accordance with Chapter 61 and the applicable building code. LP-gas storage and dispensing equipment shall be operated outdoors and in accordance with Section 2306.7 unless otherwise approved in accordance with the applicable building code.	The location of dispensing operations is a key safety issue that is not a construction requirement. Although technical factors remain in the language, all are options for compliance and are not sole prescriptive construction requirements. This section regulates the location of the point of transfer of the LP gas motor fuel into the vehicle fuel tank. The intent of the term “point of transfer” is to describe the location where LP-gas fueling connections are made and broken and any location where LP-gas is vented during transfer or fueling operations. Whenever LP-gas is dispensed or transferred, there is always at least a “puff” of LP gas released at the point where the LP-gas dispensing hose connects to and disconnects from the vehicle fuel tank or other LP-gas container, and it is at those locations that a flammable mixture will exist, even if momentarily. This section intends to isolate these “movable locations” by regulating how far away from potential ignition sources or other properties they must remain under in all circumstances. This section is also in agreement with NFPA 58 with respect to separation distances

2307.5 Additional requirements for LP-gas dispensers and equipment. Unless specifically approved otherwise in accordance with the applicable building code, LP-gas dispensers and related equipment shall remain in accordance with the applicable building code and be maintain the following provisions: 1. Pumps shall remain fixed in place and shall be maintained to allow control of the flow and to prevent leakage and accidental discharge. 2. Dispensing devices operated within 10 feet (3048 mm) of where vehicular traffic occurs shall be protected against physical damage by mounting on a concrete island 6 inches (152 mm) or more in height, or shall be protected in accordance with Section 312. 3. Dispensing devices shall remain securely fastened to their mounting surface in accordance with the dispenser manufacturer's instructions.	Additional operational and maintenance language about dispensing. Not construction. In order to reduce the likelihood of a leak or the accidental discharge of LP-gas, Item 1 requires that dispensing pumps be fixed in place and equipped with a means of controlling the flow of LP-gas. Similar to the provisions of Section 2306.7.3, Items 2 and 3 of this section address two alternatives for operating dispensers so as to provide impact protection. One is to mount the dispenser on an elevated island. The other is to protect the dispenser in accordance with Section 312, which requires the dispenser to be protected by steel posts filled with concrete. Regardless of which alternative is chosen, the stability and protection of the dispenser and operation depends on its maintenance in accordance with the manufacturer’s instructions.
2307.6 Maintenance of LP-gas dispensing devices and equipment. LP-gas dispensing systems shall be maintained and remain in accordance with the applicable building code. The operation of LP-gas dispensing systems shall be in accordance with Sections 2307.5.1 through 2307.5.3 and Chapter 61. LP-gas dispensers and dispensing stations shall be maintained in accordance with the manufacturer's specifications and their listing.	Operational requirements and references to other maintenance sections. This provision specifically addresses the maintenance requirements for valves, hoses and impact protection for LPgas-dispensing equipment.
2307.6.1 Valves. Unless otherwise approved in accordance with the applicable building code, a manual shutoff valve and an excess flow-control check valve shall be maintained in the liquid line between the pump and the dispenser inlet where the dispensing device is installed at a remote location and is not part of a complete storage and dispensing unit mounted on a common base. An excess flow-control check valve or an emergency shutoff valve shall be maintained in or on the dispenser at the point at which the dispenser hose is connected to the liquid piping. A differential backpressure valve shall be considered equivalent protection. A listed shutoff valve shall be maintained at the discharge end of the transfer hose.	Maintenance language for valves including options for alternative compliance. The maintenance provisions of this section are similar to certain maintenance provisions in Section 2306.7 that are applicable to flammable and combustible liquid dispensing operations.

2307.6.2 Hoses. Unless otherwise approved in accordance with the applicable building code, hoses and piping for the dispensing of LP-gas shall maintain hydrostatic relief valves. Hose length for dispensing operations shall not exceed 18 feet (5486 mm). An approved method shall be maintained to protect the hose against mechanical damage.	Maintenance of hydrostatic relief valves and other operational requirements. To prevent over pressurization of the hoses and piping, a relief valve must be maintained in the system. The hose length is limited to 18 feet (5486 mm) to prevent excessive amounts of hose from lying on the ground and being damaged by vehicles. The general public is familiar with the 18-foot (5486 mm) length because of the 18-foot (5486 mm) requirement for liquid fuel dispensing hoses in Section 2306.7.5 and they know where to position their vehicles for refueling.
2307.6.3 Emergency breakaway devices. Unless otherwise approved in accordance with the applicable building code, dispenser hoses shall maintain a listed emergency breakaway device to retain liquid on both sides of the breakaway point. Where hoses are attached to hose-retrieving mechanisms, the emergency breakaway device shall be maintained such that the breakaway device activates to protect the dispenser from being displaced. 2307.6.4 Vehicle impact protection. Where operated within 10 feet of vehicle traffic, LP-gas storage containers, pumps and dispensers shall be protected in accordance with Section 2307.5, Item 2, unless otherwise approved in accordance with the applicable building code.	Maintenance of emergency breakaway devices, not installation. Similar to Section 2306.7.5.1 of the code and Section 6.25.4.2 of NFPA 58, this section requires maintenance breakaway devices on dispenser hoses delivering LP-gas motor fuel. These devices prevent a pull-down of the motor fuel dispenser in the event that a car drives away with the hose nozzle valve still attached to the car’s fill pipe. The design of these valves is such that when they operate, the separated sections of the hose are sealed to prevent leakage of fuel from the hose. Where a hose is equipped with a hose retrieval mechanism, placing the breakaway device between the mechanism’s clamp and nozzle is important to the proper operation of the valve by preventing the pulling force of the drive-off from being transmitted via the retrieving cable directly to the dispenser.
2307.6.4 Vehicle impact protection. Where operated within 10 feet of vehicle traffic, LP-gas storage containers, pumps and dispensers shall maintain protection in accordance with Section 2307.5, Item 2, unless otherwise approved in accordance with the applicable building code.	Maintenance of vehicle impact protection, not installation. This section is intended to prevent leaks and spills caused by vehicle impact by requiring vehicle impact protection.

2307.7 Public fueling of motor vehicles. Self-service LP-gas dispensing systems, including key, code, and card lock dispensing systems, shall be limited to the filling of permanently mounted containers providing fuel to the LP-gas powered vehicle. The requirements for self-service LP-gas dispensing shall be in accordance with the following: 1. The arrangement and operation of the transfer of product into a vehicle shall be in accordance with this section and Chapter 61. 2. Unless otherwise approved in accordance with the applicable building code, the system shall maintain an emergency shut-off switch located in accordance with the applicable building code. 3. The owner of the LP-gas motor fuel-dispensing facility or the owner's designee shall provide for the safe operation of the system and the training of users. 4. Unless otherwise approved in accordance with the applicable building code, the dispenser and hose-end valve shall release not more than 1/8 fluid ounce (4 cc) of liquid to the atmosphere upon breaking the connection with the fill valve on the vehicle. 5. Portable fire extinguishers shall be provided in accordance with Section 2305.5. 6. Warning signs shall be provided in accordance with Section 2305.6. 7. The area around the dispenser shall be maintained in accordance with Section 2306.7.	Fueling procedures and equipment function is an operational issue, not construction. This section is in response to new technologies available to safeguard refueling operations. If the vehicles being refueled do not belong to the owner of the fuel dispensing facility and the fuel-dispensing operator is not an employee of the owner, the facility is considered to be “public.” This section allows vehicle owners to refuel their own vehicles under the supervision of, or after having been trained by, the LP-gas motor fuel-dispensing facility owner or the owner’s designee. This section contains provisions for the safe operation of the facility and an emergency shutoff switch similar to the emergency shutoff switch required to be maintained at motor fuel-dispensing facilities in Section 2303.2.
2308.1 General. Motor fuel-dispensing facilities for compressed natural gas (CNG) fuel shall be maintained and remain in accordance with the applicable building code. Such facilities shall be operated and maintained in accordance with this section and Chapter 53.	This proposal restores a key reference to Chapter 53. he federal government is mandating that automakers move toward alternative fuels to replace conventional gasoline and diesel. One of the more popular alternative fuels is compressed natural gas (CNG). As more vehicles use alternative fuels, codes will have to be modified to address the safe dispensing of these fuels. This section addresses the dispensing of CNG at motor fuel-dispensing facilities. Chapter 53 contains the general provisions for CNG.

2308.2 Approvals. Unless otherwise approved in accordance with the applicable building code, storage vessels and equipment used for the storage, compression or dispensing of CNG shall be approved or listed in accordance with Sections 2308.2.1 and 2308.2.2 and the applicable building code. 2308.2.1 Approved equipment. Containers, compressors, pressure relief devices (including pressure relief valves) and pressure regulators and piping used for CNG shall be approved. 2308.2.2 Listed equipment. Hoses, hose connections, dispensers, gas detection systems and electrical equipment used for CNG shall be maintained in accordance with their listing. Vehicle-fueling connections shall be listed and labeled in accordance with the applicable building code..	Maintenance of approvals and listing, not construction. All equipment used in connection with the storage and dispensing of CNG motor fuel must be either approved or listed in accordance with the applicable building code.
2308.3 Location of dispensing operations and equipment. Unless approved otherwise in accordance with the applicable building code or Chapter 53, compression, storage and dispensing equipment shall be located above ground, outside.	Storage, compression and dispensing are functional operations, not construction. Because of the potential for leakage, the compression, storage and dispensing equipment and operations must be located either outdoors or in a noncombustible, substantially open building, except as allowed by Chapter 53.

2308.3.1 Location of operations on property. Unless otherwise approved in accordance with the applicable building code, compression, storage and dispensing equipment not located in vaults complying with Chapter 53 shall be maintained and operated in accordance with Section 2303.1 and as follows: 1. Not beneath power lines. 2. Ten feet (3048 mm) or more from the nearest building or lot line that could be built on, public street, sidewalk or source of ignition. Exception: Dispensing equipment need not be separated from canopies that are constructed in accordance with the applicable building code and that provide weather protection for the dispensing equipment. 3. Twenty-five feet (7620 mm) or more from the nearest rail of any railroad track and 50 feet (15 240 mm) or more from the nearest rail of any railroad main track or any railroad or transit line where power for train propulsion is provided by an outside electrical source, such as third rail or overhead catenary. 4. Fifty feet (15 240 mm) or more from the vertical plane below the nearest overhead wire of a trolley bus line.	Storage, compression and dispensing are functional operations, not construction. Natural gas is lighter than air. The requirements for the operational location of the activity and associated equipment that compresses and dispenses the gas must take this into consideration. The separation distances from overhead ignition sources should be noted.
2308.5 Pressure regulators. Unless otherwise approved in accordance with the applicable building code, pressure regulators shall be maintained so that their operation will not be affected by the elements (freezing rain, sleet, snow or ice), mud or debris. The protection is allowed to be an integral part of the regulator.	Maintenance of pressure regulator operations and protection. The pressure regulator must be maintained protected from the elements and is intended to prevent the over pressurization of the vehicle fuel tank and the delivery hose. Pressure regulator failure could result in dangerous overpressure and the opening of relief valves; therefore, they must be dependable. The regulator vent is susceptible to blockage by debris and ice.
2308.6 Valves. Unless otherwise approved in accordance with the applicable building code, gas piping to equipment shall maintain a remote, readily accessible manual shutoff valve.	Maintenance and accessibility of a manual shut off valve, not construction. Shutoff valves allow isolation of components for service, repair, replacement and emergency shutdown. This valve is independent of the emergency shutdown device required by Section 2308.7.

2308.7 Emergency shutdown control. Emergency shutdown controls shall be maintained and remain within 75 feet (22 860 mm) of, but not less than 25 feet (7620 mm) from, dispensers as well as in the compressor area unless otherwise approved in accordance with the applicable building code. Where provided and, upon activation, the emergency shutdown system shall be maintained to automatically shut off the power supply to the compressor and close valves between the main gas supply and the compressor and between the storage containers and dispensers.	Maintenance and operations of emergency shutdown controls. Includes context regarding function of the equipment. CNG systems take natural gas from the utility supply line, compress it to very high pressures and store the compressed gas in vessels from which the dispensers draw the gas for transfer to the vehicle onboard containers. The emergency shutdown device, usually no farther than 75 feet (22 860 mm) from and no closer than 25 feet (7620 mm) to the dispensers, must be maintained. An additional shutdown device must also be maintained near the compressors; the compressors may be remote from the dispensers. The shutdown device must be maintained to disconnect the power to the compressors, must actuate automatic valves that isolate the gas supply from the compressors and isolate the storage vessels from the dispenser, thus limiting accidental gas discharge.
2309.1 General. Hydrogen motor fuel-dispensing facilities shall be maintained and remain in accordance with the applicable building code. Such facilities shall be operated and maintained in accordance with this section and Chapter 58. Where a fuel-dispensing facility also includes a repair garage, the repair operation shall comply with Section 2311.	Restores the important reference to Chapter 58. The federal government is mandating that automakers move toward alternative fuels to replace conventional gasoline and diesel. Hydrogen is one alternative fuel likely to grow in popularity. Section 2309, along with the provisions of Chapter 58, clearly defines gaseous hydrogen refueling and generating stations within the scope of the code and provides fire code officials with the necessary tools to create a safe consumer environment as the use of hydrogen as a motor fuel increases. In many cases, the hydrogen fuel is utilized, with air, within a fuel cell to produce electricity and, in some cases, cogenerate heat. Typically, fire code officials will be faced with two classes of equipment—those that generate hydrogen (for use by other devices) and those that utilize hydrogen as their energy input.
2309.2 Equipment. Unless otherwise approved in accordance with the applicable building code, equipment used for the generation, compression, storage or dispensing of hydrogen shall be maintained for the specific application in accordance with Sections 2309.2.1 through 2309.2.3.	There are no maintenance requirements in the building code. All equipment used in connection with the storage and dispensing of hydrogen motor fuel must be either approved or listed, as specified in the following sections.
2309.2.1 Approved equipment. Unless otherwise approved in accordance with the applicable building code, cylinders, containers and tanks; pressure relief devices, including pressure valves; hydrogen vaporizers; pressure regulators; and piping used for gaseous hydrogen systems shall be maintained in accordance with Chapters 53, 55 and 58.	Key maintenance reference to specific chapters. The equipment identified in this section must be approved. Listing of the specified components could be the basis for approval, but listing is not mandated. Any such components must be designed and recommended for the application by the manufacturer.

2309.2.2 Listed or approved equipment. Unless otherwise approved in accordance with the applicable building code, hoses, hose connections, compressors, hydrogen generators, dispensers, detection systems and electrical equipment used for hydrogen shall be maintained as listed or approved for use with hydrogen. Hydrogen motor-fueling connections shall remain listed and labeled or approved for use with hydrogen in accordance with the applicable building code.	Maintenance of listings and approvals, not construction. The equipment identified in this section must be approved. Listing of the specified components could be the basis for approval, but listing is not mandated. Any such components must be designed and recommended for the application by the manufacturer.
2309.2.3 Electrical equipment. Electrical installations shall be maintained and remain in accordance with the applicable building code. Portable or temporary electrical equipment shall be in accordance with NFPA 70.	There are no maintenance requirements in the building code. This section addresses electrical equipment at hydrogen motor fuel-dispensing facilities and is correlated with NFPA 70. Electrical equipment use must be approved for the particular hazards anticipated at hydrogen motor fuel-dispensing facilities.
2309.3 Location on property. Unless otherwise approved in accordance with the applicable building code, dispensing equipment operations shall be remain located in accordance with the applicable building code and maintained in accordance with Section 2301.1 and Sections 2309.3.1 through 2309.3.2.	Dispensing area operational requirements, not construction. In order to reduce the likelihood of hydrogen motor fuels coming into contact with ignition sources or posing a hazard to persons, adjoining property or on-site buildings, this section provides dispensing equipment operation location requirements in relation to outdoor equipment, canopies and overhead power lines.
2309.3.1.1 Outdoors. Generation, compression, or storage equipment shall be allowed outdoors where maintained in accordance with Chapter 58 and NFPA 2.	Generation, compression or storage are operational activities, not construction. Restores reference to Chapter 58. This section requires that hydrogen generation, compression and storage equipment installed outdoors be provided with the minimum separations prescribed by Chapter 58 and NFPA 2.
2309.3.1.2 Indoors. Generation, compression, storage and dispensing equipment operations located in indoor rooms or other approved areas shall remain in accordance with the requirements of the applicable building code and NFPA 2 including ventilation.	Location of generation, compression, storage and dispensing operations, not construction. The overriding theme of the indoor location requirements for the generation, compression, storage or dispensing of hydrogen motor fuel is to never permit the maximum concentration of flammable contaminants in air to exceed 25 percent of the lower flammable limit (LFL) for hydrogen during the period that a credible leak exists. This can be accomplished using natural or mechanical means to maintain adequate ventilation to prevent a hazardous buildup of hydrogen gas in buildings or confined spaces.
2309.3.1.3 Gaseous hydrogen storage. Unless otherwise approved in accordance with the applicable building code, storage of gaseous hydrogen shall be in accordance with Chapters 53 and 58.	There are no maintenance requirements in the building code. This proposal restores important references to Chapters 53 and 58. Although Section 2309 includes substantial safeguards for the generation, compression, storage or dispensing of hydrogen motor fuel, gaseous hydrogen is also classified as a flammable gas requiring compliance with Chapter 58 and possesses compressed gas hazards requiring compliance with Chapter 53.
2309.3.1.4 Liquefied hydrogen storage. Unless otherwise approved in accordance with the applicable building code, storage of liquefied hydrogen shall be in accordance with Chapters 55 and 58.	Storage is an operational activity, not construction. Although Section 2309 includes substantial safeguards for the generation, compression, storage or dispensing of hydrogen motor fuel, stored liquefied hydrogen is also classified as a flammable cryogenic fluid requiring compliance with Chapter 55, which in turn requires compliance with NFPA 55. Chapter 58 is referenced because it includes requirements for underground liquid hydrogen storage tanks.

2309.3.1.5 Canopy tops. Unless otherwise approved in accordance with the applicable building code, gaseous hydrogen compression and storage equipment operations located on top of motor fuel-dispensing canopies shall be maintained in accordance with Sections 2309.3.1.5.1 through 2309.3.1.5.5, Chapters 53 and 58 and the applicable building code.	Regulations for operations on top of canopies, not construction. Overhead placement enhances safety because the equipment remains removed from possible vehicular impact and ground-level ignition sources. This option has gained popularity, especially in more congested urban areas where real estate prices prohibit the purchase of sufficient property to meet the separation requirements of IFC Section 2309.3.2.5.1 for new motor fuel-dispensing facilities.
2309.3.1.5.1 Construction. Canopy construction shall be maintained and remain in accordance with the applicable building code. NOTE: See Motor Fuel Dispensing Canopy Requirements of the applicable building code.	Maintenance of construction, not construction. VCC Section 406.7.2 regulates installation of motor fuel-dispensing facility canopies and includes special requirements for canopies used to support hydrogen motor fuel equipment.
2309.3.1.5.2 Fire Extinguishing systems. Fire-extinguishing systems provided for fuel-dispensing areas under canopies shall be maintained in accordance with Chapter 9 and remain in accordance with the applicable building code.	Removes construction language and provides maintenance language with pointer to Chapter 9
2309.3.1.5.3 Emergency discharge. Where provided, operation of the fire extinguishing system shall be maintained to activate an automatic emergency discharge system which will discharge the hydrogen gas from the equipment on the canopy top through the vent pipe system.	Maintenance of emergency discharge. As part of protecting the hydrogen equipment mounted on top of the canopy from a fire developing below, this section requires that an approved emergency discharge system be provided to “dump” the hydrogen content of the system safely into the atmosphere.
2309.3.1.5.4 Emergency shutdown control. Where provided, operation of the fire extinguishing system shall be maintained to activate the emergency shutdown control required to be maintained by Section 2309.5.3.	Maintenance of emergency shutdown Whereas Section 2309.3.2.6.2.1 requires maintenance of a precautionary hydrogen “dump” procedure from the canopy-mounted hydrogen equipment, this section requires maintenance of the emergency shutoff such process where also required to operate upon fire extinguishing system activation.
2309.4.1 Dispensing systems. Unless otherwise approved in accordance with the applicable building code, dispensing systems with an overpressure protection device shall be maintained set at 140 percent of the service pressure of the fueling nozzle it supplies.	Maintenance of overpressure protection device with technical data. This section provides the overpressure protection of the vehicle fuel system by the fuel-dispensing system. Nearly all of the hydrogen fuel cell vehicles that are currently deployed or will be deployed in the near future rely on the fuel dispenser for overpressure protection. Similar language appears in NFPA 52.
2309.5.3 Safety precautions. Safety precautions at hydrogen motor fuel-dispensing and generation facilities shall be in accordance with Section 2309.5.1 through 2309.5.3.1.	Scoping language. This section establishes a minimum level of safety for hydrogen motor fuel generation and dispensing.

2309.5.2 Emergency shutoff valves. Unless otherwise approved in accordance with the applicable building code, a manual emergency shutoff valve shall be maintained to shut down the flow of gas from the hydrogen supply to the piping system.	Maintenance of shutoff valves. To prevent spillage and to allow servicing of equipment, a remote accessible manual shutoff valve must be maintained. This valve is independent of the emergency shutdown equipment referenced in Section 2309.5.3.
2309.5.3 Emergency shutdown controls. Unless otherwise approved in accordance with the applicable building code, a remotely located, manually activated shutdown control shall be maintained in addition to the manual emergency shutoff valve referenced by Section 2309.5.2. This emergency shutdown control shall be maintained within 75 feet (22 860 mm) of, but not less than 25 feet (7620 mm) from, dispensers and hydrogen generators unless otherwise approved by the applicable building code.	Maintenance of shutdown controls, not construction. Two emergency shutdown devices must be maintained, one in the compressor area in accordance with Section 2309.5.2 and the other no closer than 25 feet (7620 mm) or farther than 75 feet (22 860 mm) from the dispenser. These distances and devices are to be maintained at a location such that the emergency shutdown control is, at its furthest, no further from the hydrogen dispensers or generators than a portable fire extinguisher would be but not close enough to put personnel at risk of injury in the event of an emergency.
2309.5.3.1 System requirements. Unless otherwise approved in accordance with the applicable building code, activation of the emergency shutdown control shall be maintained to automatically shut off the power supply to all hydrogen storage, compression and dispensing equipment; shut off natural gas or other fuel supply to the hydrogen generator; and close valves between the main supply and the compressor and between the storage containers and dispensing equipment.	Maintenance of system shutdown operations, not installation. Emergency shutdown controls must be maintained to shut down the power supply to the hydrogen storage, compression and dispensing equipment and close the valves leading to and from the compressor and between the storage containers and dispensers in the event of an emergency. Activation of any one emergency shutdown device must be maintained to activate total shutdown of all generation and dispensing operations on site.
2309.6.1.2.1.2 Vent pipe maximum diameter. Unless otherwise approved in accordance with the applicable building code, defueling vent pipes shall maintain a maximum inside diameter of 1 inch (25 mm).	Maintenance of vent pipe size including a minimum threshold for successful operations. When discharging hydrogen to the atmosphere, it is important that the size of the vent pipe on the equipment be such that it will provide sufficient discharge velocity to disperse the hydrogen in the air.
2309.6.1.2.1.3 Maximum flow rate. Unless otherwise approved in accordance with the applicable building code, the maximum rate of hydrogen flow through the vent pipe system shall not exceed 1,000 cfm at NTP (0.47 m3/s) and shall be controlled by means of the manufacturer's equipment, at low pressure and without adjustment.	When gas flows through piping, friction with the pipe wall generates heat. Limiting the flow rate limits the amount of heat generated by the flow of gas. This is an operational control, not construction.

2309.6.1.2.2 System documentation. System documentation illustrating the defueling system to be utilized shall be provided. Documentation shall be of sufficient detail and clarity to allow for evaluation of the piping and control systems to be utilized and include the method of support for cylinders, containers or tanks to be used as part of a closed transfer system, the method of grounding and bonding and other requirements specified herein.	Defueling systems and equipment are operational components of a repair garage. Each system can be different and it is important for the fire official to have access to the system documents to ensure that they are being used and maintained properly.
2309.6.1.2.3 Stability of cylinders, containers and tanks. A method of rigidly supporting cylinders, containers or tanks used during the closed transfer system discharge or defueling of hydrogen shall be provided. The method shall provide not less than two points of support and shall be designed to resist lateral movement of the receiving cylinder, container or tank. The system shall be designed to resist movement of the receiver based on the highest gas-release velocity through valve orifices at the receiver's rated service pressure and volume. Supporting structures or appurtenances used to support receivers shall be constructed of noncombustible materials in accordance with the applicable building code.	Stability of cylinders is an operational issue with equipment, not construction. Vehicle hydrogen fuel containers can hold extremely high pressures, which, if released quickly, can produce large thrust forces that would propel the container like a rocket. Hydrogen does not liquefy at normal ambient temperatures; therefore, in order to hold the required amount of fuel on board the vehicle, the gaseous fuel must be compressed to extreme pressures of 3,000 to 5,000 psia (20 613 to 34 355 kPa).
2309.6.1.2.4 Grounding and bonding. Cylinders, containers or tanks and piping systems used for defueling shall be bonded and grounded. Unless specifically approved otherwise in accordance with the applicable building code, structures or appurtenances used for supporting the cylinders, containers or tanks shall be grounded in accordance with NFPA 70. The valve of the vehicle storage tank shall be bonded with the defueling system prior to the commencement of discharge or defueling operations.	Grounding and bonding is an operational procedure, not construction.
2309.6.2 Repair of hydrogen piping. Piping systems containing hydrogen shall not be opened to the atmosphere for repair without first purging the piping with an inert gas to achieve 1%t hydrogen or less by volume. Defueling operations and exiting purge flow shall be vented in accordance with Section 2309.6.1.2.	Operational procedures, not construction. The proposal restores the last sentence referencing proper discharge. To prevent the release of flammable hydrogen gas to the atmosphere and to prevent an explosive hydrogen-air mixture (above 1-percent hydrogen based on the pipe volume) within system piping, this section requires that piping be purged with an inert gas before being disconnected and repaired.

2310.1 General. Marine motor fuel-dispensing facilities shall be maintained and remain in accordance with the applicable building code and NFPA 30A. The storage of Class I, II or IIIA liquids at marine motor fuel-dispensing facilities shall be maintained in accordance with this chapter and Chapter 57.	Scoping section regarding maintenance of motor fuel-dispensing facilities.
2310.2 Storage and handling. The storage and handling of Class I, II or IIIA liquids at marine motor vehicle fuel-dispensing facilities shall be in accordance with Sections 2310.2.1 through 2310.2.3.	There are no maintenance requirements in the building code.
2310.2.1 Class I, II or IIIA liquid storage. Unless otherwise approved in accordance with the applicable building code, Class I, II or IIIA liquids stored inside of buildings used for marine motor fuel-dispensing facilities shall be stored in approved containers or portable tanks. Storage of Class I liquids shall not exceed 10 gallons (38 L). Exception: Storage in liquid storage rooms in accordance with the applicable building code.	Maintenance of storage, not construction. There are no maintenance requirements in the building code.
2310.2.2 Class II or IIIA liquid storage and dispensing. Unless specifically approved otherwise in accordance with the applicable building code, Class II or IIIA liquids stored or dispensed inside of buildings used for marine motor vehicle fuel-dispensing facilities shall be stored in and dispensed from approved containers or portable tanks. Storage of Class II and IIIA liquids shall be maintained to not exceed 120 gallons (454 L).	There are no maintenance or operational requirements in the building code.
2310.2.3 Heating equipment. Heating equipment installed in Class I, II or IIIA liquid storage or dispensing areas shall comply with Section 2301.6.	There are no maintenance requirements in the building code.
2310.3.3 Hoses and nozzles. Unless otherwise approved in accordance with the applicable building code, dispensing of Class I, II or IIIA liquids into the fuel tanks of marine craft shall be by means of an approved-type hose equipped with a listed automatic-closing nozzle without a latch-open device. Hoses used for dispensing or transferring Class I, II or IIIA liquids, when not in use, shall be reeled, racked or otherwise protected from mechanical damage.	Operational procedures, not construction. The automatic-closing-type nozzle is designed to operate with automotive-type fuel receivers. Many marine craft are not equipped with automotive-type fuel receivers with the vent line terminating in the receiver tube. It is the fuel returning in the vent line that shuts off the automatic-type nozzle. Therefore, the latch-open device must not be used on marine craft.

2310.3.5 Liquefied petroleum gas. Liquefied petroleum gas cylinders shall not be filled at marine motor fuel-dispensing facilities unless approved. Approved storage facilities for LP-gas cylinders shall be provided. See also Section 2307.	Operational procedures for filling cylinders, not construction. Many marine vessels use LP-gas for heating and cooking. LP-gas cylinders may not be refilled at a marina, unless specifically approved. Section 2307 has requirements for dispensing LP-gas at motor fuel-dispensing facilities, and this section can be used in making the decision on whether to approve the dispensing operations of LP-gas at marinas.
2310.6 Fire protection. Fire protection features for marine motor fuel-dispensing facilities shall be maintained in accordance with Sections 2310.6.1 through 2310.6.4 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
2311.2 Storage and use of flammable and combustible liquids. The storage and use of flammable and combustible liquids in repair garages shall be maintained in accordance with Chapter 57 and Sections 2311.2.1 through 2311.2.4 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
2311.3.1 Equipment. Appliances and equipment installed in a repair garage shall be maintained and the provisions NFPA 70, Chapter 6 of this code and remain in accordance with the applicable building code.	Maintenance of appliances and equipment. There are no maintenance requirements in the building code.
2311.4 Below-grade areas. Pits and below-grade work areas in repair garages shall comply with Sections 2311.4.1 through 2311.4.3.	Scoping section only, there are no maintenance requirements in the building code.
2311.4.2 Means of egress. Means of egress for pits and below-grade work areas shall be maintained in accordance with Chapter 10 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
2311.4.3 Ventilation. Where Class I liquids or LP-gas are stored or used within a building having a basement or pit wherein flammable vapors could accumulate, the basement or pit shall maintain mechanical ventilation and remain in accordance with the applicable building code, to prevent the accumulation of flammable vapors.	There are no maintenance requirements in the building code. It is critical that a ventilation system must be operated and maintained in any below grade area where flammable and combustible vapors might accumulate. The ventilation system must be in operation any time the repair garage is open for business, if a vehicle is left parked over the pit when the garage is closed for business or anytime there is a chance that vapors may accumulate in the below grade area. It is never ok to allow operations which permit the accumulation of flammable vapors.

2311.8 Repair garages for vehicles fueled by lighter-than-air fuels The room, motor vehicle repair booth or motor vehicle repair space containing repair garage activities for the conversion or repair of vehicles that use CNG, LNG, hydrogen or other lighter-than-air motor fuels shall be in accordance with the applicable building code and Sections 2311.8 through 2311.8.11 in addition to the other requirements of Section 2311. Repair garages for the repair of vehicles that use hydrogen fuel shall be in accordance with this code, the applicable building code and NFPA 2. Exceptions: 1.Repair garages where work is conducted only on vehicles that have been defueled and their systems purged with nitrogen gas, and where standard operating procedures to document and maintain the fueling status throughout repair operations are approved. 2. Repair garages where work is not performed on the fuel system and is limited to exchange of parts and maintenance not requiring open flame or welding on the CNG-, LNG-, hydrogen- or other lighter-than-air-fueled motor vehicle. 3. Repair garages for hydrogen-fueled vehicles where work is not performed on the hydrogen storage tank and is limited to the exchange of parts and maintenance not requiring open flame or welding on the hydrogen-fueled vehicle. During the work, the entire hydrogen fuel system shall contain less than 200 cubic feet (5.6 m3) of hydrogen. 4. Repair garages for natural-gas-fueled vehicles where work is not being performed on the fuel storage tank, and is limited to the exchange of parts and maintenance not requiring open flame or welding on the natural-gas-fueled vehicle. During the work, the natural gas, in the vehicle fuel tank shall contain a pressure of not more than 250 psi at 70°F (1724 kPa at 21°C).	-

2311.8.1 Preparation of vehicles for repair For vehicles powered by gaseous fuels, the fuel shutoff valves shall be closed prior to repairing any portion of the vehicle fuel system. Vehicles powered by gaseous fuels in which the fuel system has been damaged shall be inspected and evaluated for fuel system integrity prior to being brought into the repair garage. The inspection shall include testing of the entire fuel delivery system for leakage. _	_
2311.8.2 Repair garages used for the repair of hydrogen-fueled vehicles Repair garages used for the repair of hydrogen-fueled vehicles shall be maintained and operated with an approved exhaust ventilation system in accordance with the International Mechanical Code and Chapter 6 of NFPA 2.	Research hydrogen powered vehicles
2311.8.3 Motor vehicle repair rooms Motor vehicle repair rooms shall maintain fire-resistance rated separation from adjacent areas in accordance with Chapter 7 and the applicable building code.	_
2311.8.4 Motor vehicle repair booths The maintenance and operation of motor vehicle repair booths shall be in accordance with Sections 2311.8.4.1 through 2311.8.4.4.	_
2311.8.4.1 Construction Motor vehicle repair booths shall be maintained with approved noncombustible materials in accordance with the applicable building code. Structural sections of motor vehicle repair booths shall remain sealed in an approved manner.	_
2311.8.4.2 Surfaces The interior surfaces of motor vehicle repair booths shall be maintained to permit the free passage of exhaust air from all parts of the interior.	_
2311.8.4.3 Means of egress Means of egress shall be provided in accordance with Chapter 10 and the applicable building code. Exception: Means of egress doors from premanufactured motor vehicle repair booths shall be not less than 30 inches (762 mm) in width by 80 inches (2032 mm) in height.	_

2311.8.4.4 Clear space Motor vehicle repair booths shall be maintained so that all parts of the booth provide ready access for cleaning. A clear area of not less than 3 feet (914 mm) wide shall be maintained on all sides of the motor vehicle repair booth. This clear area shall be kept free of any storage or combustible construction. Exceptions: 1. This requirement shall not prohibit locating a motor vehicle repair booth closer than 3 feet (914 mm) to or directly against an interior partition, wall or floor/ceiling assembly that has a fire-resistance rating of not less than 1 hour in accordance with the applicable building code, provided that the motor vehicle repair booth can be adequately maintained and cleaned. 2. This requirement shall not prohibit locating a motor vehicle repair booth closer than 3 feet (914 mm) to an exterior wall or a roof assembly, provided that the wall or roof is maintained of noncombustible material in accordance with the applicable building code and the motor vehicle repair booth can be adequately maintained and cleaned.	-
2311.8.5 Motor vehicle repair spaces Where such spaces are not separately enclosed, noncombustible spray curtains shall be maintained and used to restrict the spread of flammable gases.	-
2311.8.6 Fire protection Motor vehicle repair booths or spaces located in a room or area protected by an automatic sprinkler system shall have the protection extended to include the inside of the motor vehicle repair booth or space in accordance with the applicable building code.	-
2311.8.7 Fire extinguishers Portable fire extinguishers complying with Section 906 shall be provided and maintained for motor vehicle repair rooms, motor vehicle repair booths or motor vehicle repair spaces.	-

2311.8.8 Exhaust ventilation system Repair garages used for the repair of CNG, LNG, or other lighter-than-air motor fuels other than hydrogen shall be maintained and operated with an approved mechanical ventilation system. The mechanical exhaust ventilation system shall be in accordance with the applicable building code and Sections 2311.8.8.1 and 2311.8.8.2. Exception: Where approved by the fire code official, natural ventilation shall be permitted in lieu of mechanical exhaust ventilation.	-
2311.8.8.2 Operation The mechanical exhaust ventilation system shall operate continuously. Exceptions: 1.Mechanical exhaust ventilation systems that are interlocked with a gas detection system designed in accordance with Sections 2311.8.9 through 2311.8.9.2. 2.Mechanical exhaust ventilation systems in repair garages that are used only for repair of vehicles fueled by liquid fuels or odorized gases, such as CNG, where the ventilation system is electrically interlocked with the lighting circuit.	-
2311.8.9 Gas detection system Repair garages used for repair of vehicles fueled by nonodorized gases including, but not limited to, hydrogen and nonodorized LNG, shall maintain a gas detection system that complies with the applicable building code. The gas detection system shall be designed to detect leakage of nonodorized gaseous fuel. Where lubrication or chassis service pits are provided in garages used for repairing nonodorized LNG-fueled vehicles, gas sensors shall be maintained and operated in such pits.	-

2311.8.9.1 System activation Where provided in accordance with the applicable building code, activation of the gas detection alarm shall be maintained and operated to result in all of the following: 1. Initiation of local audible and visual alarms in approved locations. 2. Deactivation of heating systems located in the repair garage. 3. Activation of the mechanical exhaust ventilation system, where the ventilation system is interlocked with gas detection.	-
2311.8.9.2 Failure of the gas detection system Unless otherwise permitted by the applicable building code, failure of the gas detection system shall automatically deactivate the heating system, activate the mechanical exhaust ventilation system where the system is interlocked with the gas detection system and cause a trouble signal to sound in an approved location.	-
2311.8.10 Classified electrical area Areas within 18 inches (450 mm) of a ceiling within a motor vehicle repair room or motor vehicle repair booth shall be in accordance with the requirements for Class I, Division 2 classified locations, as set forth in NFPA 70 and the applicable building code. Exceptions: 1. Rooms with exhaust ventilation of not less than 1 cubic foot per minute per square foot (0.3 m3/ min/m2) of floor area, with suction taken from a point within 18 inches (450 mm) of the highest point in the ceiling in repair garages for vehicles that use CNG, liquefied natural gas (LNG) or other lighter-than-air motor fuels. 2. Rooms used for the repair of hydrogen-fueled vehicles that have an approved exhaust ventilation system in accordance with the International Mechanical Code and NFPA 2. -	-

2311.8.11 Defueling equipment required at vehicle maintenance and repair facilities Facilities for repairing or replacing hydrogen fuel tanks on hydrogen-fueled vehicles shall have equipment to defuel vehicle storage tanks. Where work must be performed on a vehicle's fuel storage tank for the purpose of maintenance, repair or cylinder certification, defueling and purging shall be conducted in accordance with Section 2309.6 and NFPA 2.	-
2403.2.1 Electrical wiring and equipment. Electrical wiring and equipment shall be maintained in accordance with this chapter, chapter 6 and NFPA 70.	Regulation of ignition sources is most commonly an operational is about equipment and arrangements, not permanent construction. In order to control the ignition and personnel hazards of electrical wiring and equipment, they must meet the requirements of NFPA 70. Those requirements are found in Article 516 of NFPA 70 for areas in and around the spraying equipment, which places restrictions on the use of portable electric lamps. The classification of an area is based on the amount of flammable vapors, combustible mists, residues, dust or deposits present.
2403.2.1.1 Flammable vapor areas. Electrical wiring and equipment in flammable vapor areas shall be of an explosion proof type approved for use in such hazardous locations as classified by the applicable building code and maintained in accordance with NFPA 70, and chapter 6.	Classification of areas is an operational requirement that may evolve over the lifespan of a facility. The areas where flammable vapors [defined as flammable constituents in air that exceed 25 percent of the lower flammable limit (LFL)] are present must meet the requirements for Class I, Division 1 hazardous locations. The areas where combustible residues (such as dusts or deposits) are present must meet the requirements for the Class II, Division 1 (for dusts and residue) electrical classification. This is a very critical aspect of prevention of sources of ignition. Based on the definition of "Flammable vapor area," the fire code official is authorized to define the extent of the flammable vapor area in any specific case. Otherwise, the areas described in that definition, such as the interior of spray booths, are used for electrical classification.

2403.2.1.2 Areas subject to deposits of residues. Electrical equipment, flammable vapor areas or drying operations that are subject to splashing or dripping of liquids shall be specifically approved for locations containing deposits of readily ignitable residue and explosive vapors. Exceptions: 1.This provision shall not apply to wiring in rigid conduit, threaded boxes or fittings not containing taps, splices or terminal connections. 2.This provision shall not apply to electrostatic equipment allowed by Section 2407. In resin application areas, electrical wiring and equipment that is subject to deposits of combustible residues shall be listed for such exposure and shall be installed as required for hazardous (classified) locations. Electrical wiring and equipment not subject to deposits of combustible residues shall be installed as required for ordinary hazard locations.	Residues and overspray are a result of operations, not construction. It is critical that only specifically approved electrical equipment be allowed in spraying spaces where deposits of combustible residues may readily accumulate. This section limits the use of electrical equipment in the above-mentioned area subject to deposit of residue for two primary reasons: 1.Sparks from such equipment could cause ignition of flammable vapors or overspray residue. 2.Buildup of combustible overspray or splashed residue accumulating on the surfaces of electrical equipment subject to heating may cause equipment to overheat and ignite. Taps, splices or terminal connections (similar to those of connections within flammable liquid transfer systems) are the areas where accidents are most likely to occur. By removing risks associated with such fittings and installing rigid conduit to protect against splashing or dripping of liquids, the hazards associated with such electrical equipment are reduced substantially. Because the electrostatic equipment is part of many flammable-finish processes, Section 2407 requires that the equipment be approved.
2403.2.1.3 Areas adjacent to spray booths. Electrical wiring and equipment located outside of, but within 5 feet (1524 mm) horizontally and 3 feet (914 mm) vertically of openings in a spray booth or a spray room, shall be approved for hazardous locations in accordance with the applicable building code and maintained in accordance with NFPA 70 and Chapter 6.	Designation of hazardous areas can change depending on the type and scale of operation. This is an operational requirement that needs guidance during the lifetime of the facility. Class I, Division 2, and Class II, Division 2 typically apply to areas where accumulation of flammable vapors and combustible dust are prevented through ventilation and dust collection systems. However, flammable vapors and combustible dusts may be present in these areas if the ventilation system fails.
2403.2.5 Grounding. Metal parts of spray booths, exhaust ducts and piping systems conveying Class I or II liquids shall be electrically grounded in accordance with NFPA 70. Metallic parts located in resin application areas, including but not limited to exhaust ducts, ventilation fans, spray application equipment, workpieces and piping, shall be electrically grounded.	Static electricity is one of the most insidious and most common of all ignition sources. According to D.R. Scarborough in 2003, static sparks are the most common ignition sources involving spray-finishing operations. Additionally, humans are conductors of electricity, meaning that operators must also be considered when grounding systems are determined.

2404.2 Location of spray-finishing operations. Spray finishing operations shall not be conducted in buildings used for Group A, E, I or R occupancies except where approved in accordance with the applicable building code. In other occupancies, spray-finishing operations shall be conducted in a spray room, spray booth or spraying space approved for such use. Exceptions: 1.Automobile undercoating spray operations and spray-on automotive lining operations conducted in areas with approved natural or mechanical ventilation shall be exempt from the provisions of Section 2404 when approved and where utilizing Class IIIA or IIIB combustible liquids. 2.In buildings other than Group A, E, I or R occupancies, approved limited spraying space in accordance with Section 2404.9. 3.Resin application areas used for manufacturing of reinforced plastics complying with Section 2409 shall not be required to be located in a spray room, spray booth or spraying space.	Regulates the location of spray finishing operations to reduce risk. Not construction. In the listed occupancy groups, separating spray-finishing operations from other portions of the building and protecting those portions from spraying-associated hazards are critical for several reasons. Spray finishing operations are generally too hazardous to be conducted in occupancies with a high life or property exposure. The number of occupants in such buildings and the physical conditions of those occupants vary. People exposed to the danger of a fire involving spray finishing must be able to evacuate or protect themselves promptly and effectively to avoid the risk of serious injury or death. Also, the psychology of people in a Group A, E, I or R occupancy is very different from those in a Group F manufacturing occupancy where spraying operations are usually found. A person walking in a manufacturing environment where flammable-finish processes take place in a large area where spray booths and signs are in plain view, for example, is more aware of the physical dangers associated with these processes than someone in a Group R occupancy who may be merely relaxing with a cigarette. Also note that the protection provided in these occupancies is, in many cases, less than would be found in manufacturing occupancies. Separation and protection in the form of fire-resistance-rated construction and automatic fire suppression must be provided where such operations are to be conducted in the same building.
2404.3 Design and construction. Design and construction of spray rooms, spray booths and spray spaces shall be in accordance with the applicable building code. These area shall be maintained in accordance with Sections 2404.3 through 2404.3.3.1.	Restores reference to the applicable building code for construction of spray rooms, booths and spaces. Also provides editorial language for the subsequent subsections.
2404.3.1 Spray rooms. Spray rooms shall be maintained in accordance with this section and remain in accordance with the applicable building code.	Changes construction language to maintenance language for spray rooms.
2404.3.1.1 Floor. Combustible floor construction in spray rooms shall be covered by approved, noncombustible, nonsparking material, except where combustible coverings, including but not limited to thin paper or plastic and strippable coatings, are utilized over noncombustible materials to facilitate cleaning operations in spray rooms.	Floor covering is not construction. In spray rooms, noncombustible floors would be the preferred type of floor construction so as not to contribute to the fuel load available to an unwanted fire. However, if the floor is not noncombustible, noncombustible and nonsparking material must be used to cover the floor. Kraft paper and similar coverings are commonly used in spraying spaces to protect against overspray. Such coverings must be removed and discarded when accumulation becomes excessive.

2404.3.2 Spray booths. The design and construction of spray booths shall be in accordance with the applicable building code and maintained in accordance with section 2404.3.2.2 through 2403.3.2.5 and 2304 through 2304.8 and NFPA 33.	Sections 2404.3.2.1 through 2404.3.2.6 and 2404.4 through 2404.8 and NFPA 33 contain requirements for controlling hazards associated with spray booths. Much of the hazard prevention and mitigation of flammable-finish fires in a spray booth depend on the proper construction and design of the spray booth.
2404.3.2.2 Surfaces. The interior surfaces of spray booths shall be smooth; shall be maintained so as to permit the free passage of exhaust air from all parts of the interior, and to facilitate washing and cleaning; and shall be maintained to confine residues within the booth. Aluminum shall not be used unless approved by the applicable building code.	Maintenance of surfaces is not construction. Rough, corrugated or uneven surfaces are difficult to clean. Periodic cleaning of the interior surfaces reduces the fire hazard posed by the accumulation of flammable or combustible coatings. Because flammable or combustible vapors and dusts are typically heavier than air, design considerations should include the passage of exhaust air and proper air circulation to all parts of the spray booth, especially at or near the floor level. Due to the physical properties of aluminum, it is unsuitable for cleaning and scraping of overspray residue.
2404.3.2.3 Floor covering. Combustible floor construction in spray booths shall be covered by approved, noncombustible, nonsparking material, except where combustible coverings, including but not limited to thin paper or plastic and strippable coatings, are utilized over noncombustible materials to facilitate cleaning operations in spray booths.	Floor covering is not construction. In spray booths, noncombustible floors would be the preferred type of floor construction so as not to contribute to the fuel load available to an unwanted fire. However, if the floor is not noncombustible, noncombustible and nonsparking material must be used to cover the floor. Kraft paper and similar coverings are commonly used in spraying spaces to protect against overspray. Such coverings must be removed and discarded when accumulation becomes excessive.
2404.3.2.4 Means of egress. Means of egress shall be maintained in accordance with the applicable building code and Chapter 10.	Add the reference back to Chapter 10 for egress maintenance.

2404.3.2.5 Clear space. Spray booths shall be maintained so that all parts of the booth are readily accessible for cleaning. A clear space of not less than 3 feet (914 mm) shall be maintained on all sides of the spray booth. This clear space shall be kept free of any storage or combustible construction. Exceptions: If approved in accordance with the applicable building code, 1.This requirement shall not prohibit locating a spray booth closer than 3 feet (914 mm) to or directly against an interior partition, wall or floor/ceiling assembly that has a fire-resistance rating of not less than 1 hour, provided the spray booth can be adequately maintained and cleaned. 2.This requirement shall not prohibit locating a spray booth closer than 3 feet (914 mm) to an exterior wall or a roof assembly, provided the wall or roof is constructed of noncombustible material and the spray booth can be adequately maintained and cleaned.	Restores the exceptions which were deleted. The topic is housekeeping and not construction. Spray booths are viewed as equipment where accessibility is essential to cleaning and maintenance. This section is also included for housekeeping reasons, and to keep combustible debris and materials away from the spray booth to reduce the chances of an ignition on its exterior from a fire that might occur within the booth. This clearance also serves to prevent heat from a fire within a booth from being transferred to adjacent combustible material. It also will prevent a fire near a booth (from combustible storage, for example) from acting as an ignition source for the booth
2404.3.3 Spraying spaces. Spraying spaces shall be designed and constructed in accordance with the applicable building code and maintained in accordance with Section 2404.3.3.1 and Sections 2404.4 through 2404.8 of this code.	Restores the references to the subsections.
2404.3.3.1 Floor covering. Combustible floor construction in spraying spaces shall be covered by approved, noncombustible, nonsparking material, except where combustible coverings, such as thin paper or plastic and strippable coatings, are utilized over noncombustible materials to facilitate cleaning operations in spraying spaces.	Floor covering is not construction. The spray-booth floor requirements in this section parallel those for spray rooms in Section 2404.3.1.1 and spray booths in Section 2404.3.2.3
2404.4 Fire protection. Unless otherwise permitted by the applicable building code, spray booths and spray rooms shall be protected by an approved automatic fire-extinguishing system complying with the requirements of the applicable building code and maintained in accordance with Chapter 9.	Automatic sprinkler protection is the preferred method of protection for spray booths and spray rooms where the building is otherwise sprinklered. In nonsprinklered buildings that contain spray booths and spray rooms, alternative automatic fire-extinguishing systems, such as clean agents, carbon dioxide, dry chemical, etc., are allowed to be installed when approved by the fire code official. See the commentary to Section 904 for further discussion of specific types of alternative fire-extinguishing systems. Fire protection systems, equipment and devices must be installed and maintained in accordance with Chapter 9. Because the flammable-finish operations are subject to accumulation of residue, failure of the system as a result of poor maintenance is more likely in these areas than in most other types of facilities.

2404.6.2.1 Glass panels. Panels for luminaires or for observation shall maintain seals to confine vapors, mists, residues, dusts and deposits to the flammable vapor area. Panels for luminaires shall be separated from the luminaire to prevent the surface temperature of the panel from exceeding 200°F (93°C).	Not construction. The surface of incandescent bulbs, halogen lamps and other light fixtures (luminaires) often exceeds the ignition temperature of common flammable and combustible liquids. Separation of light fixtures (luminaires) from the glazing will help reduce the surface temperature on the unexposed side of the glass. Glass panels must be designed, arranged and protected to ease cleaning and prevent breakage.
2404.6.2.2 Exterior luminaires. Luminaires attached to the walls or ceilings of a flammable vapor area, but outside of any classified area and separated from the flammable vapor areas by vapor-tight glass panels, shall be suitable for use in ordinary hazard locations. Such luminaires shall be serviced from outside the flammable vapor areas.	External luminaries can change over the life span of a facility. Safety features, such as ventilation and separation using vapor-tight glass panels, allow for the use of ordinary light fixtures (luminaires) that are not electrically classified for hazardous locations. To maintain the integrity of the separation (that is, vapor-tight glass panels and installation outside of the classified area), these light fixtures (luminaires) must be serviced from outside the spraying area.
2404.6.2.3 Integral luminaires. Luminaires that are an integral part of the walls or ceiling of a flammable vapor area are allowed to be separated from the flammable vapor area by glass panels that are an integral part of the luminaire. Such luminaires shall be used only if listed for use in hazardous locations in accordance with the applicable building code and also shall be suitable for accumulations of deposits of combustible residues. Such luminaires are allowed to be serviced from inside the flammable vapor area.	Restores reference to listing in accordance with the applicable building code and suitable for accumulations of deposits/residues which are operational concerns.
2404.7 Ventilation. Mechanical ventilation of flammable vapor areas shall be maintained in accordance with this section and remain in accordance with the applicable building code.	Provides scoping language for the following subsections.

2404.7.2 Recirculation. Air exhausted from spraying operations shall not be recirculated. Exceptions: 1.Air exhausted from spraying operations is allowed to be recirculated as makeup air for unmanned spray operations, provided that: 1.1.The solid particulate has been removed. 1.2.The vapor concentration is less than 25 percent of the LFL. 1.3.Approved equipment is used to monitor the vapor concentration. 1.4.When the vapor concentration exceeds 25 percent of the LFL, the following shall occur: a.An alarm shall sound; and b.Spray operations shall automatically shut down. 1.5.In the event of shutdown of the vapor concentration monitor, 100 percent of the air volume specified in Section 510 of the International Mechanical Code is automatically exhausted.	Restores a key operational prohibition and provides exceptions for reference. The prohibition of recirculation in this section is specifically directed to the concern that exhaust system makeup air does not add to the fire hazard of the spraying space. The exceptions are fairly specific and focus on the LFL and the monitoring of that limit. The exceptions are based on the environmental community's concerns about the volume of emissions generated by spray finishing. The permissible exposure limit (PEL) is generally more restrictive than the LFL. The recirculation of exhausted air containing flammable vapors could help spread the hazard of flash fires from the area of vapor generation to other parts of the building. At best, it would adversely affect only the area of vapor generation in that it could render the exhaust ventilation useless. It may also give the operators of the facility a false sense that the level of ventilation is safe for the system. Exception 1 lists five conditions that must be met for the recirculation of exhausted air in unmanned spray operations. If solid particulates (dusts) are removed from the exhausted air, the exhausted air is no longer considered a fire hazard because the potential for a dust explosion is eliminated. Flammable vapors are defined in Section 202 as "flammable constituents in air that exceed 25 percent of the LFL." By reducing the flammable vapor concentrations to less than 25 percent of the LFL, the exhausted air is no longer considered a flammable vapor. To increase the likelihood that the concentrations remain at less than 25 percent of the LFL, flammable vapor detection systems must automatically shut down the operations, set off an alarm and exhaust 100 percent of the air. This would allow for energy conservation in unmanned operations, without compromising the safety features typically associated with such ventilation systems. Exception 2 is applicable to manned operations where additional documentation is needed to reduce the risk to personnel, such as people operating the spray equipment, from an injury or life safety standpoint. This documentation may include a risk analysis of fire and health hazards associated with the operation of this equipment when some portion of the exhausted air is recirculated. In general, fire safety efforts have received some assistance from the environmental regulations that have placed restrictions on the amount of volatile organic compounds (VOCs) emitted to the atmosphere. This in turn limits the types of materials used and lowers the flammability characteristics through the use of less volatile liquids.
2404.7.3.1 Open-face or open-front spray booth. For spray application operations conducted in an open-face or open-front spray booth, the ventilation system air velocity shall be maintained in accordance with the requirements of the applicable building code.	Restores the words "air velocity" to indicate what specifically must be maintained. To help keep flammable vapors in a designated spraying space and limit the amount of overspray, the code requires that the exhaust system be adequately sized to maintain an average velocity over the open face of the booth or booth cross section.

2404.7.3.2 Enclosed spray booth or spray room with openings for product conveyance. For spray application operations conducted in an enclosed spray booth or spray room with openings for product conveyance, the ventilation system air velocity shall be maintained in accordance with the requirements of the applicable building code.	Restores the words "air velocity" to indicate what specifically must be maintained. To help keep flammable vapors in a designated spraying space and limit the amount of overspray, the code requires that the exhaust system be adequately sized to maintain an average velocity over the open face of the booth or booth cross section.

2404.7.6 Termination point. Unless otherwise permitted by the applicable building code, the termination point for exhaust ducts discharging to the atmosphere shall be maintained to be not less than the distances listed below. Termination locations at less than these distances shall be evaluated by the building official for compliance in accordance with the applicable building code. 1.Ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet (9144 mm) from the lot line; 10 feet (3048 mm) from openings into the building; 6 feet (1829 mm) from exterior walls and roofs; 30 feet (9144 mm) from combustible walls or openings into the building that are in the direction of the exhaust discharge; 10 feet (3048 mm) above adjoining grade. 2.Other product-conveying outlets: 10 feet (3048 mm) from the lot line; 3 feet (914 mm) from exterior walls and roofs; 10 feet (3048 mm) from openings into the building; 10 feet (3048 mm) above adjoining grade.	Clarifies that distances less than those listed in this section shall be evaluated by the building official for compliance in accordance with the applicable building code. This section details the requirements for safe outlets/ termination points of exhaust ducts conveying spray finish operation effluent. This section gives distances that must be maintained, depending on the type of exhaust, and is consistent most applicable building codes. Item 1 details the requirements of safe outlets/termination points for exhaust ducts that convey explosive or flammable vapors, fumes or dusts like those exhaust systems that serve operations involving the application of flammable finishes. This section is intended to reduce the exposure from the dangerous vapors in the exhaust. This is done to: 1. Protect other parts of the building. 2. Protect other buildings. 3. Reduce a potential reaction from materials that may be incompatible. 4. Reduce the severity of a fire, in case of an ignition. Vapors that are considered flammable and flammable finishes, including dusts, have more restrictive outlet/termination requirements than other vapors due to the potential for ignition. To avoid recirculation of flammable vapors, fumes or dusts back into the building, the duct must be designed and located to reduce such exposures. This may be achieved by physically separating the exhaust outlet from openings in the building, walls and roof, where sources of ignition or incompatible materials may be present. For health and safety reasons, hazardous exhaust cannot be directed onto adjacent property. Maintaining the required distance allows the hazardous contents of the exhaust to disperse into the atmosphere, thereby minimizing the exposure of an adjoining property to the potential ignition hazard of a burning ember or spark or the hazardous, noxious and objectionable odors emitted from such systems. Wind and wind-induced eddy currents can react with building structural surfaces to create air pressure zones that can diminish exhaust flow or redirect exhaust into nearby building openings, such as fresh air or combustion air intakes and operable windows. Exhaust systems sometimes incorporate rotating hoods over the discharge opening to prevent high winds from restricting the flow of exhaust gases out of the system. The hoods align themselves with the direction of the wind to allow the unimpeded and sometimes induced discharge from the exhaust outlet. The termination height specified for combustible walls is more restrictive to allow the concentration of explosive or flammable constituents in the exhaust to diminish before landing or accumulating on a combustible wall. The fire code official must consider prevailing wind conditions in locating hazardous exhaust outlets with respect to other building openings. Item 2 details provisions regarding safe outlets/termination points of other product-conveying ducts, such as those exhausting nonflammable and nonexplosive dusts and waste products. This item requires that the exhaust outlet be located well into the undisturbed wind stream and away from the cavity and wake (eddy) zones around the building. This counteracts the negative effects of wind-induced conditions and also prevents the reentry of exhaust products into the building through openings and fresh air intakes.

2404.7.8 Filters. Air intake filters that are part of a wall or ceiling assembly shall be listed as Class I or II in accordance with UL 900. Exhaust filters shall be required.	Filters are not construction. Spray-booth and ventilation system design should effectively enclose spray operations. To prevent exhausting contaminated vapors into the atmosphere and to prevent accumulation of overspray and residue on duct surfaces and at the duct discharge location, filters must be maintained ahead of the exhaust ventilation systems from spraying spaces. UL 900 requirements cover tests to determine combustibility and the amount of smoke generated for air filter units of both washable and throwaway types used for removal of dust and other air-borne particles from air circulated mechanically in equipment and systems. Because the combustibility and smoke generation of an air filter unit once used depends on the chemicals or materials it is impregnated with, the filter test requirements of UL 900 are for the clean condition only.
2404.7.8.1 Supports. Supports and holders for filters shall be maintained as noncombustible materials unless otherwise approved by the applicable building code.	This is not construction but restores expectation of non-combustible materials. This section is intended to minimize the combustible materials in a spray booth. The area near a filter that is used or partially used is very susceptible to ignition.
2404.7.8.3 Maintaining air velocity. Where provided, visible gauges, audible alarms or pressure-activated devices shall be maintained to indicate or ensure that the required air velocity is maintained.	Maintenance of equipment, not construction. Maintaining air velocities is critical in maintaining a safe environment outside the spraying space, as well as proper collection of flammable vapors and dusts within the spraying space. If air velocities that the exhaust system is designed for are not maintained, the spray booth operator must be made aware of this malfunction.
2404.7.8.4 Filter rolls. Unless otherwise permitted by the applicable building code, where spray booths are equipped with a filter roll that is automatically advanced it shall be arranged to shut down the spraying operation if the filter roll fails to advance automatically.	Not construction but rather an operational control on automatic equipment. IF a system has automatic equipment, that the equipment must be maintained to operate properly and not modified. In the case of roll-type filters, fresh filter material is advanced into the air stream when the air velocity is reduced. The impregnated filter is wound on a take-up reel. When the entire filter roll is consumed, it is discarded and replaced with a fresh roll of filter material. Shutting down the spray booth when the filter cannot automatically advance (either because of system failure or the need for cartridge replacement) ensures that the operator of the spray booth does not fail in his or her task of replacing the filter.
2404.7.8.7 Waterwash spray booths. Waterwash spray booths shall be maintained so as to prevent excessive accumulation of deposits in ducts and residue at duct outlets. Such booths shall be maintained so that air and overspray are drawn through a continuously flowing water curtain before entering an exhaust duct to the building exterior.	Maintaining equipment to prevent excessive residue/deposits is operational not construction. Waterwash booths are typically used for high-volume paint and lacquer usage. Many paints and lacquers are susceptible to spontaneous heating and combustion when left in a poorly ventilated or enclosed area. Materials containing linseed oil are especially prone to this type of reaction. Spray-finishing operations involving these materials should be confined to waterwash booths when possible because water is used as the filtration medium instead of dry filters.
(N)2404.8 Interlocks. Interlocks for spray application finishes shall be maintained fully operational and remain in accordance with the applicable building code.	Adds the words "fully operational" to indicate the expected status of the system if so equipped.

2404.8.1 Automated spray application operations. Where protecting automated spray application operations, automatic fire-extinguishing systems with an an approved interlock feature shall maintain that feature such that, upon discharge of the system, it will automatically stop the spraying operations and workpiece conveyors into and out of the flammable vapor areas. Where the building is equipped with a fire alarm system, discharge of the automatic fire-extinguishing system shall be maintained to activate the building alarm notification appliances in accordance with the applicable building code.	Changed from construction language to maintenance language. An interlock is a practical solution to avoid a fire situation in which the automated system would allow for a “moving fire” as the pieces within the automated assembly move through the spraying space. The interlock would stop the spray application, which would further contribute to the flammable fuel/vapors, and prevent a moving fire from spreading faster and farther than expected. This is especially significant in larger conveyor and multiple spraying-space/spraybooth systems, where fire could spread quickly beyond the designed sprinkler area. The interlock between the suppression system and the alarm system would notify the occupants of a building to evacuate.
2404.8.1.1 Alarm station. Where required, a manual fire alarm and emergency system shutdown station shall be maintained accessible, fully operational and remain in accordance with the applicable building code.	Added operational terms "accessible" and "fully operational" In case the operator of a spraying area becomes aware of a fire prior to the actuation of the extinguishing system, or in case there is an emergency not related to a fire where there is a risk to the occupants of the building, a manual fire alarm station is needed.
2404.8.2 Ventilation interlock prohibited. Unless otherwise permitted by the applicable building code, air makeup and flammable vapor area exhaust systems shall not be interlocked with the fire alarm system and shall remain in operation during a fire alarm condition. Exception: Where permitted by the applicable building code such as where the type of fire-extinguishing system used requires such ventilation to be discontinued and dampers close.	Restores an important operational prohibition against interlocking ventilation shutdown. Exhaust ventilation of flammable vapors and smoke during a fire may help reduce the fire severity and increase visibility. Therefore, an interlock system to shut down the spray operations during a fire should not include the safety systems, such as ventilation. In an emergency, the success of the fire-extinguishing system takes precedence over the function of the ventilation system. Therefore, if the ventilation system in any way compromises the fire-extinguishing system, the exception allows these systems to be interlocked to shut down in the event of a fire. Examples of systems that may be compromised if the ventilation system is on are many of the extinguishing systems that are not water based, such as carbon dioxide, halogenated agent, clean agent, etc.
2405.2 Location of dip-tank operations. Dip-tank operations conducted in buildings used for Group A, I or R occupancies shall be located in a room designed for that purpose, equipped with an approved automatic sprinkler system and separated vertically and horizontally from other areas in accordance with the applicable building code.	Operational requirement, not construction, to regulate where dip-tank operations are hazardous and should not be conducted. Separation and protection from hazards of other portions of a building housing the occupancy groups listed in this section are critical for several reasons. Dipping and coating processes are too hazardous to be conducted in occupancies with a high life or property exposure. The number of occupants in such buildings and their physical conditions vary. People exposed to the danger of a fire involving dip-tank operations must be able to evacuate or protect themselves promptly and effectively to avoid the risk of serious injury or death. Also, the behavior psychology of people in a Group A, I or R occupancy is very different from those in a Group F manufacturing occupancy. A person walking in a manufacturing facility where dipping operations/processes take place in a large area where the dip tanks and signs are in plain view is more aware of the physical dangers associated with these processes than someone in a Group R occupancy, who would more likely be relaxing and thinking of things other than physical hazards.

2405.3 Construction of dip tanks. Unless regulated by the applicable building code, dip tanks shall be constructed in accordance with Sections 2405.3.1 through 2405.3.4.3 and NFPA 34. Dip tanks, including drain boards, shall be constructed of noncombustible material and their supports shall be of heavy metal, reinforced concrete or masonry.	Dip tank operations are not necessarily fixed processes that require building permits. The selection of materials and design of dipping and coating processes must consider the physical properties of the liquid and the processing environment. The corrosivity, density, viscosity, vapor pressure and flash point of the liquid influences the selection of materials and arrangement of processing equipment.
2405.3.1 Overflow. To operate dip tanks greater than 150 gallons (568 L) in capacity or 10 square feet (0.93 m2) in liquid surface area, they shall be equipped with a trapped overflow pipe leading to an approved location outside the building in accordance with the building code.	This section highlights a requirement for proper drainage of large tanks and directs compliance in accordance with the applicable building code. An overflow drain is required for tanks with capacities greater than 150 gallons (568 L) or having a surface area greater than 10 square feet (0.93 m2) to confine spills or uncontrolled releases caused by overfilling or overflowing when parts are immersed. The capacity of overflow drains should exceed the capacity of the tank and discharge through an approved trap and separator or to an approved salvage tank.
2405.3.2 Bottom drains. Unless otherwise permitted by the applicable building code, dip tanks greater than 500 gallons (1893 L) in liquid capacity shall only be operated with bottom drains that are arranged to automatically and manually drain the tank quickly in the event of a fire unless the viscosity of the liquid at normal atmospheric temperature makes this impractical. Manual operation shall continue to be from a safe, accessible location. Such drains shall be trapped and discharged to a closed, vented salvage tank or to an approved outside location in accordance with the applicable building code. Exception: Dip tanks containing Class IIIB combustible liquids where the liquids are not heated above room temperature and the process area is protected by automatic sprinklers.	This section highlights special requirements for large tanks and directs compliance in accordance with the applicable building code. Emergency release drains permit flammable liquids in dip tanks to be safely discharged if a fire occurs. A trap between the drain opening and the separator or salvage tank reduces the likelihood that the fire will flash back into the tank. The arrangement of emergency release drains must permit both automatic and manual operation. Moreover, viscous liquids are exempt from these requirements. These liquids, however, generally have higher flash points and are more difficult to ignite than other, less viscous materials. If a highly viscous combustible liquid is heated for use as a coating material, having a drain remains a good practice. If installed, the drain should be sized for the volume and viscosity of the liquid under normal usage conditions. The exception covers Class IIIB combustible liquids, which have a flashpoint above 200°F (93°C). These liquids are not viewed by the code as extremely hazardous, especially when they are not heated above room temperature.
2405.4 Fire protection. Dip tank operations shall be protected with a fire protection system in accordance with the applicable building code and maintained in accordance with Chapter 9.	Restores the term "fire protection system" to provide proper context. Also references Chapter 9 for maintenance requirements.

2405.4.1 Fixed fire-extinguishing equipment. Unless otherwise permitted by the applicable building code, an approved automatic fire-extinguishing system or dip-tank cover in accordance with Section 2405.3.4 shall be maintained for the following dip tanks: 1.Dip tanks less than 150 gallons (568 L) in capacity or 10 square feet (0.93 m2) in liquid surface area. 2.Dip tanks containing a liquid with a flash point below 110°F (43°C) used in such manner that the liquid temperature could equal or be greater than its flash point from artificial or natural causes, and having both a capacity of more than 10 gallons (37.9 L) and a liquid surface area of more than 4 square feet (0.37 m2)	This section applies to fire-extinguishing equipment for certain smaller sizes of dip tanks. It offers the option of dip-tank covers instead of a fixed fire-extinguishing system. Tanks equipped with noncombustible automatic-closing covers conforming to Section 2405.3.4 need not be protected by a fire suppression system on the basis that the cover can be closed, thus containing a dip tank fire and further restricting oxygen supply to the fire. Additionally, the suppression system will not be effective in controlling a fire when the cover is in the sloped position because the sprinkler water would simply run off the cover and away from the fire. Water-spray fixed systems are more effective at controlling flammable liquid pool fires, such as those involving dip tanks, because they produce finer water droplets that are more effective at absorbing heat from these rapidly burning, intense fires. Most water droplets are quickly vaporized by the fire and rarely pose a significant danger of boil-over, froth-over or slop-over from penetrating the surface of the flammable or combustible liquid (see NFPA 30 for further information on these phenomena unique to flammable and combustible liquids in tanks).
2405.4.1.1 Fire-extinguishing system. Unless otherwise permitted by the applicable building code, an approved automatic fire-extinguishing system shall be provided for dip tanks with a 150-gallon (568 L) or more capacity or 10 square feet (0.93 m2) or larger in a liquid surface area.	Restores clarification that tanks over 150 gallons are expected to have a fire extinguishing system.
2405.7 Ventilation of flammable vapor areas. Flammable vapor areas shall be operated with mechanical ventilation adequate to prevent the dangerous accumulation of vapors in accordance with the applicable building code. Where required, ventilation systems shall be maintained such that the failure of any ventilating fan shall automatically stop the dipping conveyor system.	This section includes performance-based language for dip tank operations that requires ventilation to prevent the dangerous accumulation of vapors. Additionally, conveyor systems used with dipping operations need to be interlocked with the ventilation system to avoid continuation of operations in the event of a ventilation system failure.
2405.9.1 Location. Unless otherwise required by the applicable building code, tanks shall be located as far as practical from furnaces and shall not be located on or near combustible floors.	Dip tank operations are not necessarily fixed processes that require building permits. High temperatures produced by hardening and tempering processes require the maintenance of separation between tanks, ignition sources and combustible materials
2405.9.2 Hoods. Unless otherwise required by the applicable building code, tanks shall be operated only with a noncombustible hood and vent or other approved venting means, terminating outside of the structure to serve as a vent in case of a fire. Such vent ducts shall be treated as flues and proper clearances shall be maintained from combustible materials.	Housekeeping requirements for ventilation hoods and ducts. Though the materials in hardening and tempering baths are usually not considered flammable, the elevated temperatures may represent an ignition source to other combustibles. The contents of oil-quenching tanks used for high flash-point liquids may be difficult to ignite, but once ignited, the rate of heat release is comparable to other flammable and combustible liquids. Hoods over hardening, tempering and oilquenching tanks will help maintain tenable conditions near the tanks and help control a fire, should it occur, by providing a controlled avenue of vertical spread. Therefore, exhaust hood materials must be noncombustible and separated from combustible structural components.

2405.9.3 Alarms. Where equipped, tanks shall be operated with a high-temperature limit switch maintained to sound an alarm when the temperature of the quenching medium reaches 50°F (10°C) below the flash point or other approved level as required by the applicable building code.	Important operational alarm settings to maintain. Thermostats may be used to limit the heat input to the oil bath for temperature maintenance. However, many systems require cooling systems to maintain oil baths within specified temperature limitations. Water leaking from these cooling systems can pose a special hazard from boil-over as the water is converted to steam
2405.9.4 Fire protection. Unless otherwise required by the applicable building code, hardening and tempering tanks greater than 500 gallons (1893 L) in capacity or 25 square feet (2.3 m2) in liquid surface area shall be protected by an approved automatic fire-extinguishing system maintained in accordance with Chapter 9.	Tanks larger than 500 gallons (1893 L) in capacity or 25 square feet (2.3 m2) in surface area present a significant enough hazard as to be required to maintain protection by an automatic fire-suppression system
2405.10.1 Paint supply. Unless otherwise required by the applicable building code, paint operations shall be supplied by a gravity tank not exceeding 10 gallons (38 L) in capacity or by direct low-pressure pumps arranged to shut down automatically in case of a fire by means of approved heat-actuated devices in accordance with the applicable building code.	Positive displacement pumps are most commonly used to recirculate paint and coating material from the reservoir to the nozzles. Gravity tanks not exceeding 10 gallons (38 L) in capacity are also permitted. When a pump is used, the pump power supply must remain interlocked with heat detectors to shut down (in accordance with the applicable building code) if a fire occurs.
2405.11 Roll-coating operations. Roll-coating operations shall comply with Section 2405.10. In roll-coating operations utilizing flammable or combustible liquids, sparks from static electricity shall be prevented by electrically bonding and grounding all metallic rotating and other parts of machinery and equipment and by the installation of static collectors, or by maintaining a conductive atmosphere such as a high relative humidity.	Restores the technical maintenance requirements for roll-coating operations. Roll-coating methods apply material to flat work pieces, usually paper, cardboard, cloth or thin metals, using liquid-coated cylinders or rollers. Coating material may be applied to the rollers by rotating them in an open trough or pan or applying liquid to the space between two rollers
2406.3 Construction of powder coating rooms and booths. Powder coating rooms shall be constructed of noncombustible materials in accordance with the applicable building code. Spray booths shall be constructed in accordance with Section 2404.3.2. Exception: Listed spray-booth assemblies that are constructed of other materials shall be allowed.	Provides guidance for illegal powder coating arrangements and provides direction back to the applicable building code for construction requirements.
2406.4 Fire protection. Areas used for powder coating shall be protected by an approved automatic fire-extinguishing system in accordance with the applicable building code and maintained in accordance with Chapter 9.	Provides reference to Chapter 9 for maintenance of fire protection systems.

2406.6.4 Grounding and bonding. Precautions shall be taken to minimize the possibility of ignition by static electrical sparks through static bonding and grounding, where possible, of powder transport, application and recovery equipment.	Restores technical language for grounding and bonding requirements. Static electricity is one of the most insidious and most common of all ignition sources. According to D.R. Scarborough in 2003, static sparks are the most common ignition sources involving spray-finishing operations. Additionally, humans are conductors of electricity, meaning that operators must also be considered when grounding systems are determined.
2406.7 Ventilation. Exhaust ventilation shall be sufficient to maintain the atmosphere below one-half the minimum explosive concentration for the material being applied. Nondeposited, air-suspended powders shall be removed through exhaust ducts to the powder recovery system.	Restores critical technical thresholds for effective system operations. Powder coating creates explosive atmospheres because of the large surface areas of the particles when dispersed in the air. The explosive limit or concentration, just as with flammable vapors, will depend on the type of material being used. For example, Factory Mutual tested several powder-coating materials and found a range of lower explosive limit (LEL) of 0.026 to 0.097 ounces per square foot and auto-ignition temperatures between 790°F to 1,039°F (412°C to 559°C). Therefore, ventilation system requirements may vary from one type of coating to another. Also, a collection system is required to collect any unused powder. This requirement is similar to ventilation requirements for flammable vapors in its intent to limit the amount of vapors or dusts to a concentration that would not support ignition. Therefore “one-half the minimum explosive concentration” for powder coating is similar in intent to the “25 percent of the lower flammable limit (LFL).” The safety factor in the combustible dust is 2, while the safety factor for the LFL is 4. This is partly the result of the lower ignitibility of a dust compared to a vapor
2407.2 Location and clear space. A space of at least twice the sparking distance shall be maintained between goods being painted or deteared and electrodes, electrostatic atomizing heads or conductors. A sign stating the sparking distance shall be conspicuously posted near the assembly. Exception: Portable electrostatic paint-spraying apparatus listed for use in Class I, Division 1, locations.	Restores technical requirements that not only maintain the level of safety required by the IFC but also define the clear space in more detail. It also restores the exception for listed portable equipment. The change in the 2015 version significantly reduced the level of safety required by the IFC.
2407.3 Construction of equipment. Electrodes and electrostatic atomizing heads shall be maintained of approved construction, rigidly supported in permanent locations and effectively insulated from ground. Insulators shall be nonporous and noncombustible. Exception: Portable electrostatic paint-spraying apparatus listed for use in Class I, Division 1, locations.	Restores maintenance language for critically important equipment that must remain as required by the applicable building code.

2407.3.1 Barriers. Booths, fencing, railings or guards shall be maintained about the equipment such that either by their location or character, or both, isolation of the process is maintained from plant storage and personnel. Railings, fencing and guards shall be of conductive material, adequately grounded, and at least 5 feet (1524 mm) from processing equipment in accordance with the applicable building code. Exception: Portable electrostatic paint-spraying apparatus listed for use in Class I, Division 1, locations.	Restores technical provisions for maintaining guards or barriers. Key expectations about conductive material, grounding, etc. are noted to ensure that illegal modifications are identified. Also restores the exception for listed portable equipment.
2407.4 Fire protection. Areas used for electrostatic spray finishing with fixed equipment shall be protected with an approved automatic fire-extinguishing system and maintained in accordance with Chapter 9.	Provides reference to Chapter 9 for fire protection system maintenance.
2407.4.1 Protection for automated liquid electrostatic spray application equipment. Where provided, automated liquid electrostatic spray application equipment shall maintain an approved, supervised flame detection apparatus that shall, in the event of ignition, react to the presence of flame and shall accomplish all of the following unless otherwise required by the applicable building code: 1.Activation of a local alarm in the vicinity of the spraying operation and activation of the building alarm system, if such a system is provided. 2.Shutting down of the coating material delivery system. 3.Termination of all spray application operations. 4.Stopping of conveyors into and out of the flammable vapor areas. 5.Disconnection of power to the high-voltage elements in the flammable vapor areas and disconnection of power to the system.	Restores technical requirements and expectations for automated equipment. Automated liquid electrostatic spray application may or may not have operators who would take steps to reduce the severity of the fire, such as shutting down the supply of coating material, warning occupants for evacuation purposes, etc. The flame detection system and its associated interlocks are part of the protection system, in case ignition has already occurred. Systems that are designed to reduce the severity of the accident in the event of a fire need to be initiated automatically. Supervised flame detection systems are required by this section to stop the flow of additional fuel into the system, stop the spread of fire by shutting down the conveyor, activate an alarm for evacuation, terminate spray application operations that would further add to the fuel and disconnect power to the system. The power disconnection referred to in this section is for the spray booth equipment, but does not include power to emergency systems.

2407.8 Emergency shutdown. Where provided, electrostatic apparatus shall be maintained with automatic controls operating without time delay to disconnect the power supply to the high-voltage transformer and signal the operator under any of the following conditions unless otherwise required by the applicable building code: 1.Stoppage of ventilating fans or failure of ventilating equipment from any cause. 2.Stoppage of the conveyor carrying articles past the high-voltage grid. 3.Occurrence of a ground or an imminent ground at any point of the high-voltage system. 4.Reduction of clearance below that required in Section 2407.2.	Restores technical requirements and expectations for emergency shutdowns. The required interlocks reduce the likelihood of the apparatus igniting flammable vapors in the event of any of the specified conditions. Conditions 1 and 2 may lead to an increase in the concentration of flammable vapors in the atmosphere. Condition 3 may lead to the release of a spark or arc capable of igniting flammable vapors. Additionally, occurrence of Condition 4 could bring those parts of the system capable of producing an ignition into an area containing an ignitable vapor concentration.
2407.9 Ventilation interlock. Unless otherwise permitted by the applicable building code, hand electrostatic equipment shall be maintained as interlocked with the ventilation system for the spraying area so that the equipment cannot be operated unless the ventilating system is in operation.	This important requirement has not changes since at least the 1978 BOCA. The required interlock is intended to prevent the use of hand sprayers without ventilation equipment in operation. Failure to operate exhaust ventilation may lead to the creation of ignitable vapor concentration in the spraying space.
2408.2 Use of organic peroxide coatings. Unless otherwise required by the applicable building code, spraying operations involving the use of organic peroxides and other dual-component coatings shall be conducted in approved sprinklered spray booths complying with the applicable building code.	Proper use/location is a critical operational requirement, not construction. Because of the reactivity of the material, the use of organic peroxide and other dual-component coating systems is limited to spray booths only. For example, organic peroxide coatings cannot be applied in the limited spraying spaces described in Section 2404.1.4. This section is more specific and, therefore, supersedes the more general requirements. Storage of organic peroxides shall comply with Chapter 62
2409.3 Fire protection. Areas used for spray application of resin shall be maintained with an approved automatic fire-extinguishing system in accordance with Chapter 9 and remain in accordance with the applicable building code.	Provides reference to Chapter 9 for maintenance of fire protection systems.

2409.6 Ventilation. Mechanical ventilation shall be maintained throughout resin application areas in accordance with 2404.7 and remain in accordance with the building code. The ventilation rate shall be adequate to maintain the concentration of flammable vapors in the resin application area at or below 25 percent of the LFL. Exception: Mechanical ventilation is not required for buildings that have 75 percent of the perimeter unenclosed.	Restores technical provisions for operation of ventilation systems. In many cases, acetone is used for cleanup of resin accumulations. Therefore, the LFL for both resin and the cleaning solvent must be considered when designing the ventilation for the resin application areas. The exception recognizes that natural ventilation is considered adequate if the perimeter of the building is 75 percent open.
2409.6.1 Local ventilation. Local ventilation shall be provided inside of workpieces where personnel will be under or inside of the workpiece.	The use of ventilation is not a construction requirement. Ventilation in areas where personnel are present is required for fire prevention as well as for reduction of health risks.
2501.3 Ethylene generators. Approved ethylene generators shall be operated and maintained in accordance with Section 2506.	Chapter 25 recognizes the use of listed ethylene generators as a means of safely producing ethylene concentrations needed to ripen crops. This section requires that those devices be properly operated and maintained
2503.2 Dispensing. Valves controlling discharge of ethylene shall be maintained to limit the concentration of gas in accordance with this chapter and the applicable building code.	Although the hazards of using ethylene should be of considerable concern, technological innovation has produced a safe alternative to the old method of distributing ethylene to the ripening rooms. In the past, compressed ethylene gas in cylinders was piped through regulating equipment into rooms. Regulating equipment was calibrated to restrict gas quantity to a volume that would produce concentrations below the lower explosive gas limit; however, excessive concentrations occasionally escaped and uncontrolled ignition sources produced serious explosions. Ideally, gas sensors should be used to stop gas flow as it approaches the desired level. Manual overrides must be provided to interrupt the gas flow if a danger exists. A 1:1,000 concentration is only 0.1 percent in air. The LFL of ethylene is 2.6 percent. When used properly, this gas poses little hazard.
2504.1 Ignition prevention. Sources of ignition shall be controlled or protected in accordance with this section and Chapter 3.	There are no ignition prevention requirements in the building code. Lighted smoking materials and other open-flame sources are prohibited in crop-ripening and color-processing rooms. This prohibition should also be extended to the immediate vicinity of the entrance to such rooms. “No Smoking” signs are to be conspicuously posted and stringently enforced.
(N)2504.2 Electrical wiring and equipment. Electrical wiring and equipment, including luminaires, shall be classified and maintained in accordance with Chapter 6, NFPA 70 and remain in accordance with the applicable building code.	Maintenance and operation of electrical equipment in flammable vapor areas, not installation. Atmospheres containing ethylene are classified as Class 1, Division 1, Group C hazardous locations by NFPA 70. All electrical wiring and equipment must be suitably listed and labeled for use in such atmospheres.
2504.3 Static electricity. Bonding and grounding provided for permanent containers, piping and equipment shall be maintained in accordance with the applicable building code. Portable containers, piping and equipment shall be bonded and grounded in accordance with Chapter 57.	Bonding and grounding is an operational issue, not construction. Suitable grounds must be provided on all ethylene-handling systems and equipment to permit the dissipation of static electricity, thus preventing the generation of static sparks. Electrically isolated sections of systems and equipment must be independently grounded. NFPA 77 provides valuable guidance on this topic. Grounding and bonding should be in accordance with NFPA 70

2504.5 Heating. Heating shall be maintained in accordance with Chapter 6 and the applicable building code.	There are no heating device maintenance requirements in the building code. Wherever practical, heat for crop-ripening and coloring rooms should be indirect (steam, hot water or warm air) to eliminate sparks or open-flame ignition hazards.
2506.2 Ethylene generator rooms. Portable ethylene generators shall be used in rooms having a volume of not less than 1,000 cubic feet (28 m3). Rooms shall have air circulation to ensure even distribution of ethylene gas and shall be free from sparks, open flames or other ignition sources.	There are no operations or maintenance requirements for portable ethylene generators in the building code. Because ethylene generators are portable, the level of hazard associated with their use in closed rooms can change each time one is moved to a new ripening room. The intent of this section is to reduce the hazard potential by requiring that ethylene generators be used only in ripening rooms having a minimum volume of 1,000 cubic feet (28 m3) [10 feet by 10 feet by 10 feet (3048 mm by 3048 mm by 3048 mm)], that are free from ignition hazards and have air circulation to distribute the ethylene gas evenly throughout the space to avoid the potential for pockets of gas having concentrations approaching or exceeding 25 percent of the LEL.
2803.1 Open yards. Open yards required by the applicable building code shall be maintained around structures. The space shall be maintained free of obstructions associated with the outdoor storage of the materials regulated by Chapter 28, which could interfere with the function of the open space, especially that of providing fire department access to the building.	There are no maintenance requirements in the building code. The building code requires that certain buildings face an open space on at least one side. The open spaces may be a yard required for the purpose of providing light and ventilation or they may be a public way provided in order to achieve an increase in building area called a “frontage increase”, or to allow a building to be considered an “unlimited area building” . Regardless of the purpose of the open space, this section requires that the space be maintained and be free of obstructions associated with the outdoor storage of the materials regulated by Chapter 28, which could interfere with the function of the open space, especially that of providing fire department access to the building.
2803.2 Dust control. Equipment or machinery located inside buildings that generates or emits combustible dust shall be provided with an approved dust collection and exhaust system installed in accordance with Chapter 22 and the applicable building code. Equipment or systems that are used to collect, process or convey combustible dusts shall maintain an approved explosion control system installed in accordance with the applicable building code and maintained in accordance with Chapter 9.	There are no maintenance requirements for dust control in the building code. The basic wood-processing activities related to lumber yards and woodworking facilities generate large volumes of wood particles suspended in the air, creating a potentially explosive form of dust. Where such activities are located inside of buildings, this section requires that combustible dust be controlled by an approved dust-collection and exhaust system designed and installed in accordance with IFC Chapter 22, and the building code. There are two basic designs of dust collection systems. One is a single-stage system that consists of a single dust collector in the form of a cyclone separator or a combination cyclone/baghouse unit. The other is a two-stage system that consists of a cyclone separator followed by a bag-type filter house. An approved explosion control system is also required to be maintained for the equipment and systems that collect and convey the combustible dust. Such systems should be maintained in accordance with Section 911.
2803.2.1 Explosion venting. Where a dust explosion hazard exists in equipment rooms, buildings or other enclosures, such areas shall be declared an unsafe condition in accordance with Section 110.1 and operations shall not be continued until the hazard is mitigated. Where explosion venting is provided it shall be maintained in accordance with this Chapter 9 and the applicable building code.	The intent of this section is not maintenance of the explosion venting system as indicated in the 2015 VSFPC, but rather identifying unprotected dust explosion hazards. When wood dust is ignited while suspended in air in concentrations above the minimum combustible concentration (MCC), it burns violently, producing a deflagration. This likelihood depends on the concentration of fuel per unit volume. Most of the time, dust-collection systems remove the larger dust particles, allowing the finer particles to pass through the system and reenter the production area. The finer dust can create an explosion and fire hazard unless an approved suppression system is used.

2803.3 Waste removal. Sawmills, planing mills and other woodworking plants shall maintain waste removal systems that collect and remove sawdust and shavings. Such systems shall be maintained in accordance with Chapter 22 and comply with the applicable building code. Exception: Manual waste removal when approved.	There are not any maintenance requirements in the building code. Like many other organic materials, sawdust, wood chips and other similar waste materials are susceptible to spontaneous heat. Pilings and debris must be turned over or consumed regularly to minimize the potential for spontaneous combustion. Some waste material is used as fuel and some might go to pulp or particleboard manufacturers. Finer material is removed by air-moving equipment, cyclones or air bags. Chapter 22 and the IMC give the requirements for waste removal systems.
2803.4 Electrical equipment. Electrical wiring and equipment shall be maintained in accordance with Chapter 6, NFPA 70, and the applicable building code.	There are not any maintenance requirements in the building code. Arcs, sparks and loose connections often supply the ignition source that a vapor or combustible material needs for fire. Electrical equipment must be listed for the use it is installed for and comply with the requirements of NFPA 70.
2804.2 Fire alarms. Where provided, fire alarm systems shall be maintained in accordance with Chapter 9.	There are not any fire alarm maintenance requirements in the building code.
2804.2.1 Delete	This section is unnecessary since 2804.2 covers fire alarm device maintenance.
2804.4 Automatic sprinkler systems. Automatic sprinkler systems shall be maintained in accordance with Chapter 9.	There are not any fire sprinkler maintenance requirements in the building code.
2805.2 Dryer protection. Dryers protected by an approved, automatic deluge water-spray suppression system shall be maintained in accordance with Chapter 9. Deluge heads shall be inspected quarterly for pitch buildup. Deluge heads shall be flushed during regular maintenance for functional operation.	There are not any fire sprinkler maintenance requirements in the building code.
2807.3 Outdoor pile fire protection. Where conveyor tunnels and combustible enclosures that pass under an outdoor pile, automatic sprinkler protection shall be provided. Automatic sprinkler protection shall be maintained in accordance with Chapter 9.	This requirement addresses outdoor pile processing equipment that is not within a building and believed to be exempt from the building code. Unless found to be regulated by the building code, it would be regulated by the Fire Prevention Code. Automatic sprinklers are needed because of the difficulty of manual fire suppression operations in concealed, enclosed and elevated outdoor areas.
2808.7 Pile fire protection. Automatic sprinkler protection shall be provided in conveyor tunnels and combustible enclosures that pass under a pile. Combustible conveyor systems and enclosed conveyor systems shall be equipped with an approved automatic sprinkler system. These systems shall be maintained in accordance with Chapter 9.	This requirement addresses outdoor pile processing equipment that is not within a building and believed to be exempt from the building code. Unless found to be regulated by the building code, it would be regulated by the Fire Prevention Code. Automatic sprinklers are needed because of the difficulty of manual fire suppression operations in concealed, enclosed and elevated outdoor areas.

2903.1 Building Features. Unless approved by the applicable building code, manufacturing of organic coatings shall be done only in buildings that do not have pits or basements.	The use of organic coating processes are not a specifically approved use group classification in the IBC and therefore it is important to provide context as to where these operations should and should not be conducted. The IBC classifies organic coating processes in Group H-2 or H-3 occupancies, depending on the types and amounts of materials, when the maximum allowable quantity per control area (MAQ) of hazardous materials in Table 307.1(1) of that code is exceeded. Basements, pits or depressed first-floor construction are prohibited because of the tendency for hazardous materials vapors to accumulate in low areas and the difficulty in fighting fires in such areas and occupancies.
2903.2 Location. Unless approved by the applicable building code, organic coating manufacturing operations and operations incidental to or connected with organic coating manufacturing shall not be located in buildings having other occupancies.	The use of organic coating processes are not a specifically approved use group classification in the IBC and therefore it is important to provide context as to where these operations should and should not be conducted. The IBC classifies organic coating processes in Group H-2 or H-3 occupancies, depending on the types and amounts of materials, when the maximum allowable quantity per control area (MAQ) of hazardous materials in Table 307.1(1) of that code is exceeded. Incidental occupancies involve operations and activities closely related to the primary occupancy and are necessary for efficient, continuous and safe organic coatings manufacture. Administration, storage, shipping and receiving, as well as other related but not indispensable operations, should be located in separate buildings. Separations must have a fire-resistance rating, separation distance or a combination of the two as required by the IBC.
2903.11 Alarm system. Alarm systems shall be maintained in accordance with Chapter 9.	There are no maintenance requirements for fire alarm systems in the building code.
2904.1 Wiring and equipment. Electrical wiring and equipment shall be maintained in accordance with this chapter, chapter 6 and NFPA 70.	There are no maintenance requirements in the building code. NFPA 70 and the requirements of this section apply to electrical wiring and equipment to reduce the fire hazard associated with the presence of such equipment in areas where organic coatings are being manufactured..
2904.3 Bonding. Equipment including, but not limited to, tanks, machinery and piping, shall not be operated where an ignitable mixture is capable of being present unless bonded and connected to a ground in accordance with the applicable building code.	Bonding and grounding is an operational requirement not construction. This section is nearly identical to the 1978 BOCA and maintains operational language regarding ignitable mixtures being present.
2904.3.1 Piping. Electrically isolated sections of metallic piping or equipment shall be maintained grounded or bonded to the other grounded portions of the system in accordance with the applicable building code.	This section does not require maintenance of piping as indicated in the 2015VSFPC but rather bonding and grounding. In order to maintain the continuity of the grounding path for all portions of a tank and piping system that do not form a continuous conductive path, each electrically isolated section of piping must be independently grounded or, alternatively, be bonded to another properly grounded portion of the system.
2905.1 Process Location. Process operations shall be conducted in structures approved in accordance with the applicable building code.	The use of organic coating processes are not a specifically approved use group classification in the IBC and therefore it is important to provide context as to where these operations should and should not be conducted. The IBC classifies organic coating processes in occupancy Group H-2 or H-3, depending on the type and amounts of materials, when the MAQ of hazardous materials in Table 307.1(1) of that code is exceeded. IBC Section 418 further regulates these structures as to their physical configuration, location and finished product storage. See the commentary to IBC Sections 418.1 through 418.6 for further information.

2905.4 Explosion control. Explosion control shall be maintained in areas subject to potential deflagration hazards as indicated by the applicable building code. Explosion control shall be maintained in accordance with Section 911 and NFPA 35.	This intent of this section is to identify where explosion control would be needed due to the operations present. Explosion control is required where Class I liquids or flammable dusts create a potential deflagration hazard; as defined by NFPA 35. Section 911 and IBC Section 414.5.1 prescribe requirements for explosion control. NFPA 68 also provides guidance on this subject.
2905.5 Ventilation. Enclosed structures in which Class I liquids are processed or handled shall be ventilated to a safe location outside of the structure in accordance with the applicable building code.	The proposed section includes clear guidance that ventilation is to be to the atmosphere outside of the enclosure. Ventilation systems must be designed to prevent the accumulation of vapors in the building where Class I flammable liquids are processed. Uncontaminated air, preferably from a source outside the building, should be distributed to dilute and disperse vapors over the entire solid floor area and then discharge them to a safe location outside the building.
2906.1 Mills. Mills, operating with close clearances, which process flammable and heat-sensitive materials, such as nitrocellulose, shall maintain operations in a detached building or in a noncombustible structure without other occupancies unless otherwise approved by the applicable building code. The amount of nitrocellulose or other flammable material brought into the area shall not be more than the amount required for a batch.	There are no maintenance requirements in the building code for operating mills. Milling of heat-sensitive materials, such as nitrocellulose, is an extraordinary hazard that must be located in single-purpose buildings, away from other uses and high-hazard operations. Pebble mills pose a special vapor ignition hazard caused by static electricity. Both the grinding material and inner lining of these mills are made of materials with good insulating characteristics. Because static electricity is produced during milling, it has nowhere to go. Generally, the atmosphere inside of this type of mill is made either partially or totally inert using nitrogen or carbon dioxide gas to prevent ignition.
2909.4 Nitrocellulose storage. Nitrocellulose storage shall be located on a detached pad or in a separate structure or a room enclosed in accordance with the applicable building code. When nitrocellulose storage is present, the area shall not be utilized for any other use in accordance with the applicable building code. Electrical wiring and equipment in storage areas adjacent to process areas shall be maintained in accordance with Section 2904.2.	There are no maintenance requirements in the building code for nitrocellulose storage operations. Solvent-wet nitrocellulose is the most common type associated with lacquer production. In this case, the solvent is usually an alcohol, which is a Class I flammable liquid. Solvent-wet nitrocellulose possesses the same fire-hazard characteristics as the solvent in which it is stored, with important differences noted. Solvent-wet nitrocellulose becomes increasingly unstable as the temperature rises. Once ignited, nitrocellulose will continue to burn even in the absence of oxygen. Therefore, extra diligence must be used to prevent ignition and fire spread. IBC Section 418.5 contains requirements for the separation of these areas.
3001.1 Scope. This chapter shall apply to the maintenance and operation of industrial ovens and furnaces. Industrial ovens and furnaces shall comply with the applicable provisions of NFPA 86, the applicable building code and this chapter. The terms "ovens" and "furnaces" are used interchangeably in this chapter.	Restores reference to applicable building code in place of the IFGC and IMC.

3003.1 Ventilation. Enclosed rooms or basements containing industrial ovens or furnaces shall be maintained with combustion air in accordance with the applicable building code, and with ventilation air in accordance with the applicable building code.	Maintenance language, not construction. The proposal restores essential context as to combustion air and ventilation. Placing an oven or furnace below grade presents difficulty in ventilation and offers severe obstacles to proper explosion release. When gas or oil is used, the furnace or oven should be vented separately unless the products of discharge deposit directly into the oven.
3003.4 Temperatures. Unless otherwise approved by the applicable building code, roofs and floors of ovens shall maintain insulation and ventilation to prevent temperatures at combustible ceilings and floors from exceeding 160°F (71°C).	Temperature regulation is an operational requirement. This section including the temperature critical goes back until at least the 1978 BOCA. Furnaces and ovens should be maintained to minimize their fire hazard when operating at elevated temperatures. Insulation and ventilation are important in preventing heat transfer from the oven to surrounding combustible products.
3004.1 Fuel piping. Fuel piping serving industrial ovens shall be maintained in accordance with this section and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Electrically wired, oil-fired and special-atmosphere furnaces are covered in this section. Fuel-gas piping is covered in the IFGC
3004.2 Shutoff valves. Manual fuel shutoff valves for industrial ovens or furnaces shall be maintained and remain in accordance with the applicable building code.	Shutoff valves need to be maintained. Individual manual shutoff valves are used for equipment isolation.
3004.2.1 Fuel supply lines. Valves for fuel supply lines shall be located within 6 feet (1829 mm) of the appliance served. Exception: When approved and the valve is located in the same general area as the appliance served.	The placement and operation of emergency shutoff valves is and operational challenge. A fuel supply shutoff valve must be maintained in the fuel supply line within 6 feet (1829 mm) of the appliance for easy shutoff of fuel in case of an emergency.
3004.3 Valve position. Manual fuel shutoff valves shall be maintained to visually indicate the open or closed position of the valve. Manual fuel shutoff valves shall not be equipped with removable handles or wrenches unless the handle or wrench can only be installed parallel with the fuel line when the valve is in the open position.	Maintenance of valve indication and operation not construction. Manual shutoff valves should have a permanently affixed visual indicator that is easily recognizable, and it should be in the open position. The removable handle requirement prevents fuel supply shutoff for any reason. Accidental shutoff could endanger property and people.
3005.1 Shut down. Interlocks shall be maintained for Class A ovens so that conveyors or sources of flammable or combustible materials shall shut down if either the exhaust or recirculation air supply fails	Maintenance of interlocks, not construction. Code language has been consistent since 1978 BOCA. If ventilation or airflow were lost, a safety control circuit would immediately shut down the heating system of the effected section. When necessary, loss of ventilation must shut down the entire system, as well as the conveyor.
3006.1 Required protection. Fire extinguishing systems provided for Classes A and B ovens that contain, or are utilized for the processing of, combustible materials shall be maintained in accordance with Chapter 9.	There are no maintenance requirements in the building code. This proposal references Chapter 9 for the maintenance of fire protection systems.

3006.2 Fixed fire-extinguishing systems. Fixed fire-extinguishing systems shall be maintained in accordance with Chapter 9 for Class C or D ovens to protect against such hazards as overheating, spillage of molten salts or metals, quench tanks, ignition of hydraulic oil and escape of fuel.	There are no maintenance requirements in the building code. This proposal references Chapter 9 for the maintenance of fire protection systems. It also retains the IFC language to specify the potential hazards present. Class C and D ovens can operate with special processing atmospheres at very high temperatures and can present fire hazards to the areas around them.
3101.1 Scope. Tents, temporary special event structures, and membrane structures shall comply with this chapter. The provisions of Section 3103 are applicable only to temporary tents and membrane structures. The provisions of Section 3104 are applicable to temporary and permanent tents and membrane structures. Other temporary structures shall comply with the applicable building code.	No content change other than "temporary stage canopy" to "temporary special event structure" to match the 2018 IFC.
3103.1 General. All temporary tents and membrane structures shall comply with this section.	This general section only applies to tents and membrane structures used for temporary periods. It is not for other temporary structures and therefore the new language is not needed. See scope 3101.1 for temporary structure guidance.
3103.2 Approval required. Tents and membrane structures having an area in excess of 900 square feet (84 m2) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official in accordance with Table 107.2. Exceptions: 1.Tents used exclusively for recreational camping purposes. 2.Tents open on all sides which comply with all of the following: 2.1.Individual tents having a maximum size of 700 square feet (65 m2). 2.2.The aggregate area of multiple tents placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding 700 square feet (65 m2) total. 2.3.A minimum clearance of 12 feet (3658 mm) to all structures and other tents.	-

3104.4 Certification. An affidavit or affirmation shall be submitted to the fire code official and a copy retained on the premises on which the tent or air-supported structure is located. The affidavit shall attest to the following information relative to the flame propagation performance criteria of the fabric: 1.Names and address of the owners of the tent or air-supported structure. 2.Date the fabric was last treated with flame-retardant solution. 3.Trade name or kind of chemical used in treatment. 4.Name of person or firm treating the material. 5.Name of testing agency and test standard by which the fabric was tested.	The 2015 VSFPC removed the term "fire code official" from this section and leaves it unclear as to whom to submit the certification to for approval. This proposal simply restores the IFC language.
3104.13 Fire protection equipment. Fire hose lines, water supplies and other auxiliary fire equipment shall be maintained at the site in such numbers and sizes as required by the fire code official.	The 2015 VSFPC does not specify who approves the fire protection equipment. This proposal simply restores the IFC language to indicate "fire code official"
3104.14 Occupant load factors. The occupant load allowed in an assembly structure, or portion thereof, shall be determined in accordance with Chapter 10 of the International Fire Code.	Tents are inherently operational (not just maintenance) activities. VCC Section 3103.1 clearly indicates that tents less than 180 days shall comply with the IFC. Therefore it is simply unnecessary and confusing to add the term "or applicable building code". The 2015 VSFPC suggests two standards that could be used to determine occupant load factors but the IFC has always intended that the egress calculations for assembly areas be consistently calculated regardless of the type or duration of the tent. Indicating two options creates unnecessary confusion as to which factors or reference should be used. This is further complicated by the fact that direct reference to any occupant load factors have been deleted in the 2015 VSFPC in Chapter 10 and the VCC defers all requirements for temporary tents directly to the IFC. So even if the "applicable building code" is used, the occupant load factors would come directly from the IFC, not the VCC Chapter 10.
3104.15.1 Installation. Heating and cooking equipment, tanks, piping, hoses, fittings, valves, tubing and other related components shall be operated in accordance with manufacturer specifications and other provisions of the this code. Such items shall be maintained in accordance with this code.	The language in the 2015 VSFPC makes it unclear as to whom approves the installation or arrangement of this equipment, especially when it is temporary or portable equipment that is not regulated by the building code. This proposal replaces the term "installation" with the "operation" and provides additional guidance for proper operation such as manufacturer specifications.
3105.1 General. Temporary special event structures shall comply with Sections 3104, 3105.2 through 3105.9 and ANSI E1.21	This is new language for the 2018 IFC which defines a temporary special event structure as one that is not regulated by the building code.

3105.2 Approval. Temporary special event structures in excess of 400 square feet (37 m2) shall not be erected, operated or maintained for any purpose without first obtaining approval and a permit from the fire official and the building official.	The 2015 VSFPC removes fire official approval authority. This was never the intent of the IFC. This section of the IFC requires that both the fire code official and the building official issue a permit to construct a special event structure where the structure exceeds 400 square feet in area. This provides coordination of the respective expertise of the fire code official and the building official. This encourages teamwork and cooperation. The current VSFPC language does not.
3105.3 Permits shall be required as set forth in section 107.2	Sections 105.6 and 105.7 do not exist in the 2015 VSFPC. This proposal, although doesn't add a new permit, provides the correct reference for future use or those localities that add such a permit.
3105.5 Required documents. The following documents shall be submitted to the fire official for approval. 1. Designation of responsible party: The owner of the temporary special event structure shall designate in writing a person to have responsibility for the temporary special event structure on the site. The designated person shall have sufficient knowledge of the construction documents, manufacturer's recommendations and operations plan to make judgments regarding the structure's safety and to coordinate with the fire code official. 2. Operations plan: The operations plan shall reflect manufacturer's operational guidelines, procedures for environmental monitoring and actions to be taken under specified conditions consistent with the construction documents. NOTE: Construction documents shall be submitted to the building official where required by the USBC.	The proposed language removes the construction language (originally item 1) and keeps the operational items as indicated in the 2018 IFC. The operations plan must identify the responsible person, designate safe evacuation routes and locations, and evaluate the potential for canceling the show when the weather creates an unsafe condition.
3105.6.2 Inspection report. The inspecting agency or individual shall furnish an inspection report to the building official and fire code official. The inspection report shall indicate that the temporary special event structure was inspected and was or was not installed in accordance with the approved construction documents. Discrepancies shall be brought to the immediate attention of the installer for correction. Where any discrepancy is not corrected, it shall be brought to the attention of the building official and fire code official and the designated responsible party	No content change other than "temporary stage canopy" to "temporary special event structure"
3105.7 Means of egress. The means of egress for temporary special event structure shall comply with Chapter 10 of the International Fire Code.	See item 3104.14 above regarding how "applicable building code" ultimately references back to the IFC. These are temporary facilities only and often do not include a specific occupant load or occupancy permit from the building official.

3105.8 Location. Temporary stage canopies shall be located a distance from property lines and buildings to accommodate guy wires, cross-bracing, ground anchors or ballast. Location shall not interfere with egress from a building or encroach on fire apparatus access roads in accordance with this code.	This is a critical operational section for coordination between structural requirements, emergency access and fire separation. Separation distance requirements of this section are consistent with requirements for conventional structures, especially those that could represent an above-average fire hazard. A fire of any size within a temporary stage structure would almost certainly involve any membrane coverings and structural support elements. Because the support ropes and ground anchors are under tension, particularly with large structures, a structure weakened by fire would likely fail, causing the ropes or wires to recoil and possibly pull portions of the burning temporary stage structure out of its original position. Requiring clear space around the structure helps reduce the likelihood that burning membrane sections and flying embers would endanger other structures or interfere with the functions of the open space, which include providing a clear egress path from the stage canopy or any structure adjacent to it and fire department access to the structure.

3201.3 High-piled storage operational plan. Prior to the use and operation of high-piled storage in new structures or buildings requesting a change of occupancy/use, plans and specifications shall be submitted to the building official for review and approval. Following approval of the plans, a copy of the approved plans shall be maintained on the premises in an approved location. The on-site plans shall include the following applicable items: 1.Floor plan of the building showing locations and dimensions of high-piled storage areas. 2.Usable storage height for each storage area. 3.Number of tiers within each rack, if applicable. 4.Commodity clearance between top of storage and the sprinkler deflector for each storage arrangement. 5.Aisle dimensions between each storage array. 6.Maximum pile volume for each storage array. 7.Location and classification of commodities in accordance with Section 3203 or the applicable building code. 8.Location of commodities which are banded or encapsulated. 9.Location of required fire department access doors. 10.Type of fire suppression and fire detection systems. 11.Location of valves controlling the water supply of ceiling and in-rack sprinklers. 12.Type, location and specifications of smoke removal and curtain board systems. 13.Dimension and location of transverse and longitudinal flue spaces. 14.Additional information regarding required design features, commodities, storage arrangement and fire protection features within the high-piled storage area when required by the fire code official.	Changed the title from "construction documents" to "operational plan" This section still retains direction to submit the list of information to the building official for approval but also indicates that a copy of the plan shall be on site for reference. This operational plan is critical to ensure that the building is being used in the manor in which it was designed and approved. Section 3201.3 contains provisions that are unique to the needs of the fire department. These construction document requirements are in addition to those encountered in the IBC and specifically require detailed information that is essential for the permit review process and for future use when conducting fire inspections, in the development of the fire department's prefire emergency plans and when conducting fire incident management during an emergency. Items 1, 2, 3 and 5 are general requirements that address the general description of work for which the application must be submitted. Item 4 is significant because the height of any storage in relation to the sprinkler heads will determine sprinkler effectiveness. Sprinklers should be designed for the maximum allowable heights of the stored commodities and the minimum amount of unobstructed space below the sprinkler heads. Items 6, 7 and 8 recognize that a storage building can contain multiple classes and groups of commodities. As a result, this section requires that the construction documents illustrate the location, size and classification of the various types of commodities. Items 9, 10, 11 and 12 are important for the development of a prefire emergency plan. Such a plan can be established by the building owner or the tenant in cooperation with the local fire department that will be called to the building during an emergency. Developing and maintaining a prefire emergency plan can help during the incipient stages of a fire by reducing the amount of damage from the fire and containing the fire within a short time. Item 13 requires a detailed description of the locations of transverse and longitudinal flue spaces. The provisions for minimum flue space dimensions are contained in Section 3208.3. Item 14 allows the fire code official to use the enforcement powers of that office to collect more detailed information to make a more educated decision. These provisions recognize that technology is evolving. As a result, the situation presented to the fire code official can require that additional fire protection and life safety measures be applied to address those new designs for storage or new class of commodity.

3204.1 General. The operation and maintenance of high-piled storage areas, and portions of high-piled storage areas intended for storage, shall be maintained in accordance with the approved plan specified in section 3201.3 and the applicable building code.	There are no maintenance requirements in the building code.
3206.1 General. Fire protection and life safety features for high-piled storage areas shall be maintained in accordance with Sections 3206.2 through 3206.10	There are no maintenance requirements in the Building Code.
3206.3 Separation of high-piled storage areas. High-piled storage areas shall be maintained as separated from other portions of the building where required by the storage plan in section 3201.3 and the applicable building code.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
3206.3.1 Separation from other uses. Mixed occupancies shall be maintained as separated in accordance with the storage plan in section 3201.3 and applicable building code.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
3206.3.2 Multiple high-piled storage areas. Multiple high-piled storage areas shall be maintained in accordance with the storage plan in section 3201.3 and the applicable building code.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
3206.4 Automatic sprinklers. Automatic sprinkler systems shall be maintained in accordance with Chapter 9 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
3206.4.1 Pallets. The requirements based on the presence of pallets shall be maintained in accordance with the storage plan in section 3201.3 and the applicable building code.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
3206.5 Fire detection. Fire detection provided for high-piled storage areas shall be maintained in accordance with Chapter 9 and remain in accordance with the approved storage plan in section 3201.3 and the applicable building code.	There are no maintenance requirements in the building code.

3206.6 Building access. Where building access is required by the applicable building code, fire apparatus access roads in accordance with Section 503 shall be provided within 150 feet (45 720 mm) of all portions of the exterior walls of buildings used for high-piled storage. Exception: Where fire apparatus access roads cannot be installed because of topography, railways, waterways, non-negotiable grades or other similar conditions, the fire code official is authorized to require additional fire protection.	There are no maintenance requirements in the building code. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
3206.6.1 Access doors. Access doors shall be maintained accessible, available at all times and remain in accordance with the approved storage plan in section 3201.3 and the applicable building code.	There are no maintenance requirements in the building code.
3206.6.1.1 Number of doors required. The minimum number of doors shall be maintained in accordance with the approved storage plan in section 3201.3 and remain in accordance with the applicable building code..	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
3206.6.1.2 Door size and type. Access doors shall be maintained in accordance with the approved storage plan in section 3201.3 and remain in accordance with the applicable building code.. Roll-up doors shall not be used unless approved.	There are no maintenance requirements in the building code. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
3206.7 Smoke and heat removal. Where smoke and heat removal systems including draft curtains are required, they shall be maintained in accordance with Chapter 9, the approved storage plan in section 3201.3 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
3206.8 Fire department hose connections. Where a standpipe system is provided, it shall be maintained in accordance with Chapter 9 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
3206.9 Aisles. Aisles separating storage piles or racks shall be maintained unobstructed and remain in accordance with the approved storage plan in section 3201.3 and applicable building code.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.

3206.9.1 Width. Aisle width shall be maintained to the approved storage plan in section 3201.3 and remain in accordance with the applicable building code. Exceptions: 1.Aisles crossing rack structures or storage piles, which are used only for employee access, shall be a minimum of 24 inches (610 mm) wide. 2.Aisles separating shelves classified as shelf storage shall be a minimum of 30 inches (762 mm) wide.	There are no maintenance requirements in the building code. Exceptions are not requirements but rather options for compliance when present.
delete	This section as written in the 2015 VSFPC is repetitive and not needed.
delete	This section as written in the 2015 VSFPC is not needed. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
3206.9.2 Clear height. The required aisle width shall be maintained from the floor to ceiling in accordance with the approved storage plan in Section 3201.3 and applicable building code. Rack structural supports and catwalks are allowed to cross aisles at a minimum height of 6 feet 8 inches (2032 mm) above the finished floor level, provided that such supports do not interfere with fire department hose stream trajectory.	There are no maintenance requirements in the building code. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
3206.9.3 Dead ends. Dead-end aisles shall not exceed the approved storage plan in section 3201.3.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
delete	This section as written in the 2015 VSFPC is repetitive and not needed.
3207.3 Pile dimension and height limitations. Pile dimensions, the maximum permissible storage height and pile volume shall be maintained in accordance with the approved storage plan in section 3201.3 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
3207.4 Array. Where an automatic sprinkler system design utilizes protection based on a closed array, array clearances shall be maintained as specified by the standard used and approved storage plan in section 3201.3.	Adds reference to the approved storage plan which should indicate the approved array arrangements.
3208.2 Fire protection. Where automatic sprinklers are provided, they shall be maintained in accordance with chapter 9.	There are no maintenance requirements in the building code.

3208.2.2 Racks with solid shelving. Racks with solid shelving having an area greater than 20 square feet (1.9 m2), measured between approved flue spaces at all four edges of the shelf, shall be maintained in accordance with this section. Exceptions: 1. Racks with mesh, grated, slatted or similar shelves having uniform openings not more than 6 inches (152 mm) apart, comprising not less than 50% of the overall shelf area, and with approved flue spaces are allowed to be treated as racks without solid shelves. 2. Racks used for the storage of combustible paper records with solid shelving shall be in accordance with the applicable NFPA 13 standard.	The only change is to use "applicable NFPA 13 standard" in place of "applicable building code.
delete	This section as written in the 2015 VSFPC is not needed.
3208.3 Flue spaces. Flue spaces shall be maintained in accordance with table 2308.3 or the approved storage plan in section 3201.3 and remain in accordance with the applicable building code.	In high-piled combustible storage racks, flue spaces are an important component of the fire protection design and must be maintained. Flue spaces permit water discharged from a ceiling sprinkler to penetrate into the rack system so it can begin to either control or suppress the fire, depending on the automatic sprinkler system design. When the sprinkler system is designed to control the fire, flue spaces allow the additional sprinkler discharge to prewet the storage commodities, which slows vertical and horizontal fire spread within the rack, thus limiting the number of sprinklers that may operate.
3208.4 Column protection. Fire protection for steel building columns shall be maintained in accordance with approved storage plan in section 3201.3, Chapter 9 and remain in accordance with the applicable building code.	It is not uncommon for highpile storage to have additional sprinkler protection for steel-columns. Specifically, NFPA 13 provides steel-column protection criteria in areas used for the rack storage of Class I through IV commodities in Section 16.1.4, for rack storage of plastic and rubber products in Section 17.1.4 and for rack storage of rubber tires in Section 18.2. This required protection is important to specifically reference to ensure that it is maintained.
delete	There are no maintenance requirements in the building code. In addition, there is no need to have an additional reference for maintaining the sprinkler system provided. This requirement is covered in Chapter 9 for all types of sprinkler systems.
delete	There are no maintenance requirements in the building code. In addition, there is no need to have an additional reference for maintaining the sprinkler system provided. This requirement is covered in Chapter 9 for all types of sprinkler systems.

3209.3 Carousel storage. High-piled storage areas having greater than 500 square feet (46 m2) of carousel storage, including automatic shutdown devices, shall be maintained in accordance with the approved storage plan in section 3201.3 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction. Carousel storage is used in large storage operations when the commodity must be protected (security), when the commodity requires strict environmental control or both. In addition, carousel storage is selected because it may provide an economic advantage to an operation or business by having the commodity come directly to the employee rather than the employee stocking and retrieving the commodity. The carousel area is normally not occupied. An exception to this may be when the carousel system is undergoing maintenance or repair or during an annual inspection of the fire protection features. Examples of commodities within carousel storage may include distribution centers that distribute pharmaceutical or refrigerated/frozen foods and beverages. The additional fire safety requirements are precautionary, directly resulting from the limited access to these types of storage areas and addressing the potential of a moving fire via the carousel mechanism. Because the area of the carousel is controlled by a mechanized, generally computer-controlled system, immediate access to the actual storage area is normally limited. These limits serve to protect both personnel and the commodity. This precaution prevents the fire from spreading throughout the entire storage area.
3209.4 Automated rack storage. High-piled storage areas with automated rack storage shall be maintained in accordance with the approved storage plan in section 3201.3. A manually activated emergency shutdown switch for use by emergency personnel shall be clearly identified and shall be maintained in a location approved by the fire code official.	There are no maintenance requirements in the building code. Emergency shut down buttons shall be maintained and remain clearly identifiable at all times. This section requires that if an emergency occurs in an automated rack storage facility, the remotely controlled pallet moving equipment be manually shut down. This shutdown accomplishes two objectives. First, the potential to either move additional product into the fire or move burning product through the storage area is removed. Second, it is not safe to place emergency personnel within the automated storage area when the system is still active. Many of these automated devices move much faster than personnel can get out of the way, and there is a physical danger to personnel. This shutdown will eliminate danger to personnel and reduce property damage. Since the shutdown of such systems is a tactical maneuver, the fire chief is required to approve the location for the switch and ensure that it is properly identified. The switch should be in a readily accessible location outside of the boundaries of the automated rack storage area.
3210.1 General. Records storage facilities used for the rack or shelf storage of combustible paper records greater than 12 feet (3658 mm) in height shall be maintained in accordance with Section 3206 and 3208, the approved storage plan in section 3201.3 and remain in accordance with the applicable building code. Palletized storage of records shall be maintained in accordance with Section 3207.	There are no maintenance requirements in the building code.

3314.1 Completion before occupancy. In buildings where an automatic sprinkler system is required by this code or the applicable building code, it shall be unlawful to occupy any portion of a building or structure until the automatic sprinkler system installation has been tested and approved, except as provided in Section 109.2	Section 109.2 is a better reference for this situation so that building and fire officials coordinate inspections and directions. This section is very clear in that when the sprinkler system is not tested and approved, the building cannot be occupied by the owner or tenants. In other words “no protection; no people” as one fire code official has put it. This is especially important in a building that has been given construction alternatives (i.e., increased travel distances, increased height and area, or reduced fire-resistance ratings) based on the installation of a sprinkler system, because the building is not safe for people when the system is not functional. Since the issuance of a Certificate of Occupancy is regulated by the applicable building code, the administration of this section should be coordinated with the building official.
3401.1 Scope. The maintenance and operation of tire rebuilding plants, tire storage, and tire byproduct facilities shall comply with this chapter, other applicable requirements of this code. Tire storage in buildings shall also comply with Chapter 32.	NFPA 13 is not a maintenance standard and is not needed to be referenced.
3403.1 Construction. Tire rebuilding plants shall maintain the requirements of the applicable building code, as to construction, separation from other buildings or other portions of the same building, and protection.	The proposed language more closely mirrors the model code language and stays within the scope of maintenance requirements only. This is not construction.
3403.2 Location. Unless otherwise approved by the applicable building code, buffing operations shall be located in a room separated from the remainder of the building housing the tire rebuilding or tire recapping operations by a fire-resistance rated separation in accordance with the applicable building code. Exception: Where permitted by the applicable building code, buffing operations are not required to be separated where all of the following conditions are met: 1.Buffing operations are equipped with an approved continuous automatic water-spray system directed at the point of cutting action; 2.Buffing machines are connected to particle-collecting systems providing a minimum air movement of 1,500 cubic feet per minute (cfm) (0.71 m3/s) in volume and 4,500 feet per minute (fpm) (23 m/s) in-line velocity; and 3.The collecting system shall discharge the rubber particles to an approved outdoor noncombustible or fire-resistant container, which is emptied at frequent intervals to prevent overflow.	Buffing operations are not a specific occupancy use group or and approved area are not typically noted on occupancy permits. Nevertheless, it is critical that these operations are conducted in an appropriate location. This section specifies that the buffing operation areas must be separated from the other operations by a fire resistance rated separation in accordance with the applicable building code. The intent is identical to the intent regarding construction: to keep the higher hazard operations separate, thereby reducing the potential for a rapidly spreading fire. The exceptions are not requirements but rather options that are available to achieve compliance.

3604.2 Standpipes. Marinas and boatyards equipped with standpipe systems shall be maintained in accordance with NFPA 303 and Chapter 9.	There are no maintenance requirements in the applicable building code. Standpipe systems in marinas are basically a horizontal standpipe to reach all parts of the float system, piers and buildings with no more than 150 feet (15 240 mm) of travel distance from a fire hose connection. These systems shall be maintained like other standpipe systems in accordance with Chapter 9.
3703.5 Dust collection. Where located within a building, equipment or machinery that generates or emits combustible fibers shall be operated with an approved dust-collecting and exhaust system in accordance with the applicable building code and maintained in accordance with Chapter 22.	There are no maintenance requirements in the building code. The intent of this section is operational not just maintenance. It is to identify where dust collection systems may need to be considered for the operation of equipment or machinery. Dust may create a considerable explosion when displaced from a surface on which it rests, and it may also be ignited by static sparks. For this reason, a dust-collecting hood and exhaust system is often required by the applicable building code.
3704.3 Storage of more than 100 cubic feet to 500 cubic feet. Loose combustible fibers in quantities exceeding 100 cubic feet (3 m3) but not exceeding 500 cubic feet (14 m3) shall be stored in rooms in accordance with the applicable building code. NOTE: These rooms are typically required to be fire resistance rated in accordance with the applicable building code.	Moderate quantities of material are often required to be stored in fire-resistance-rated rooms in accordance with the applicable building code. This is an operational storage location requirement, not a construction requirement.
3704.4 Storage of more than 500 cubic feet to 1,000 cubic feet. Loose combustible fibers in quantities exceeding 500 cubic feet (14 m3) but not exceeding 1,000 cubic feet (28 m3) shall be stored in rooms in accordance with the applicable building code. NOTE: These rooms are typically required to be fire resistance rated in accordance with the applicable building code.	Large amounts of material require an increased fire-resistance-rated enclosure in accordance with the applicable building code. This is an operational storage location requirement, not a construction requirement.
3704.5 Storage of more than 1,000 cubic feet. Loose combustible fibers in quantities exceeding 1,000 cubic feet (28 m3) shall be stored in rooms in accordance with the applicable building code. NOTE: These rooms may be required to be fire resistance rated and fire suppression systems in accordance with the applicable building code.	Very Large amounts of material typically require an increased fire-resistance-rated enclosure and a fire suppression system in accordance with the applicable building code. This is an operational storage location requirement, not a construction requirement.

CHAPTER 20
AVIATION FACILITIES

CHAPTER 21
DRY CLEANING

CHAPTER 23
MOTOR FUEL-DISPENSING FACILITIES AND REPAIR GARAGES

CHAPTER 24
FLAMMABLE FINISHES

CHAPTER 25
FRUIT AND CROP RIPENING

CHAPTER 28
LUMBER YARDS AND AGRO-INDUSTRIAL, SOLID BIOMASS AND WOODWORKING FACILITIES

CHAPTER 29
MANUFACTURE OF ORGANIC COATINGS

CHAPTER 30
INDUSTRIAL OVENS

CHAPTER 31
TENTS AND OTHER MEMBRANE STRUCTURES

CHAPTER 32
HIGH-PILED COMBUSTIBLE STORAGE

CHAPTER 33
FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

CHAPTER 34
TIRE REBUILDING AND TIRE STORAGE

CHAPTER 36
MARINAS

CHAPTER 37
COMBUSTIBLE FIBERS

Reason Statement: Note: This proposal was submitted by the Virginia Fire Service Board SFPC edit committee and includes suggested edits to SFPC Chapters 20 - 37 (except Chapters 24 and 27). This proposal was submitted for consideration during the Special Fire Code Edit Workgroup meeting(s).

Cost Impact Statement: The code change proposal will not increase or decrease the cost of construction
No information from proponent.

Resiliency Impact Statement: This proposal will neither increase nor decrease Resiliency
No information from proponent

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: Consensus Approval

Workgroup 2 - Proposed Reason:

SFPC Edit Workgroup - Proposed Workgroup Recommendation: Consensus Approval

SFPC Edit Workgroup - Proposed Reason:

Board Decision

Board Decision: None

Board Reason: N/A

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

Public Comments for FP103.2.1 (VFSB SFPC Edit Part 1)-18

Public Comment by Jeffrey Brown
Aug 15, 2019 22:13 UTC

This spreadsheet includes the results from all proposed phase SFPC Edit workgroup meetings.
Attachments:
https://va.cdpaccess.com/proposal/135/discuss/35/file/download/96/20190815%20SFPC%20Edit%20WG%20Prop%20Phase
37%20except%2027.xlsx

Public Comment by Richard Potts
Aug 8, 2019 16:35 UTC

Attached is a spreadsheet with the August 7th workgroup decisions.

Public Comment by Richard Potts
Aug 1, 2019 17:35 UTC

Attached is a spreadsheet with the May 23rd workgroup decisions.

> **Public Comment by Richard Potts**
> Aug 1, 2019 17:37 UTC
>
> Workgroup decisions.

SFPC Edit Workgroup Proposed Phase Recommendations: 2018 VSFPC Chapters 20-37, Except Ch 27

1	CA			2007.1 General. Helistops and heliports shall be maintained in accordance with Sections 2007.2 through 2007.8.	There are no maintenance requirements in the applicable building codes.
2	CA			2007.4 Exits. Exits and stairways shall be maintained in accordance with chapter 10 and the applicable building code.	There are no maintenance requirements in the applicable building codes.
3	CAAM		2007.5 Standpipe systems. A building with a rooftop helistop or heliport provided with a Class I or III standpipe system shall be maintained in accordance with Chapter 9 and the applicable building code.	2007.5 Standpipe systems. A building with a rooftop helistop or heliport provided with a Class I or III standpipe system shall be maintained in accordance with Chapter 9 and remain in accordance with the applicable building code.	Provides a reference to Chapter 9 fire protection system maintenance requirements. There are no maintenance requirements in the applicable building codes.
4	CAAM		2007.6 Foam protection. Where provided or required by the applicable building code, foam fire-protection capabilities shall be maintained for rooftop heliports. Such systems shall be maintained in accordance with the applicable provisions of Chapter 9 and the applicable building code.	2007.6 Foam protection. Where provided or required by the applicable building code, foam fire-protection capabilities shall be maintained for rooftop heliports. Such systems shall be maintained in accordance with the applicable provisions of Chapter 9.	Provides a reference to Chapter 9 fire protection system maintenance requirements. There are no maintenance requirements in the applicable building codes.
5	CAAM		2104.2.1 Ventilation. Ventilation shall be operated and maintained. Ventilation systems provided shall remain in accordance with the applicable building code.	2104.2.1 Ventilation. Adequate ventilation shall be operated and maintained. Ventilation systems provided shall remain in accordance with the applicable building code.	The building code does not include maintenance requirements. This section is intended to ensure ventilation in dry cleaning plants that is maintained and adequate to protect plant employees and the public from the hazards associated with dry cleaning operations using any of the various classes of dry cleaning solvents, both in approved dry cleaning machines and in spotting and pretreating operations in the open. This is an operational requirement not construction.
6	CAAM		2104.2.3 Electrical wiring and equipment. Electrical wiring and equipment in dry cleaning rooms or other locations subject to flammable vapors shall be maintained in accordance with applicable provisions of NFPA 70 and Chapter 6. Where provided, such systems and equipment shall comply with the applicable building code.	2104.2.3 Electrical wiring and equipment. Electrical wiring and equipment in dry cleaning rooms or other locations subject to flammable vapors shall be maintained in accordance with NFPA 70 and Chapter 6. Where provided, such systems and equipment shall comply with the applicable building code.	The building code does not include maintenance requirements. To reduce the likelihood of a vapor ignition, electrical wiring and equipment located where flammable vapors might be released by malfunctioning equipment, rupture or breakage is typically classified as Class I, Division 1 equipment under the provisions of NFPA 70. This would include rooms or spaces containing closed-system dry cleaning equipment that, under normal conditions, keeps the solvent vapors confined within the equipment. For the same reason, in areas where flammable vapors are present under normal operating conditions, such as in spotting or pretreating areas, using Class I solvents in the open, in tubs or on soaking tables, electrical wiring and equipment typically must be classified as Class I, Division 1, equipment to meet the requirements of NFPA 70.
7	CAAM		2105.2.3 Ventilation. Ventilation shall be operated and maintained. Ventilation systems provided shall remain in accordance with the applicable building code.	2105.2.3 Ventilation. Ventilation shall be maintained and operated. Ventilation systems provided must remain in accordance with the applicable building code.	The building code does not include maintenance requirements. his section intended to prevent solvent vapors from Type II dry cleaning systems from accumulating to an ignitable concentration in the room in which those appliances are located by providing adequate mechanical ventilation.

9	CA		2107.2 Type II systems. Unless otherwise approved by the applicable building code, Type II dry cleaning and solvent tank storage rooms shall not be operated below grade or above the lowest floor level of the building and shall be maintained in accordance with Sections 2107.2.1 through 2107.2.3. Exception: Solvent storage tanks installed underground, in vaults or in special enclosures in accordance with Chapter 57.	If the subsections remain, the main sections should remain as well. The exception is also an important pointer to Chapter 57. This proposal addresses the location hazards of these operations and is not requiring construction. Type II dry cleaning systems are those systems using a Class II combustible liquid [flash point from 100°F (38°C) to 140°F (60°C)] as a cleaning solvent, sometimes at or above its lowest flash point under normal plant operating conditions. For this reason, this section prohibits the operation of these systems and solvent storage at other than the level of fire department access or exit discharge (i.e., other than at grade). Because of the higher relative hazards of these systems and their solvents, locating them above or below the lowest grade floor level could affect rapid egress by employees, as well as rapid access to the system by fire fighters in case of an emergency.
10	CAAM	2107.2.2 Number of means of egress. The number and means of egress for Type II dry cleaning rooms shall be maintained in accordance with Chapter 10 and the applicable building code.	2107.2.2 Number of means of egress. The number and means of egress for Type II dry cleaning rooms shall be maintained in accordance with Chapter 10 and remain in accordance with the applicable building code.	The building code does not include maintenance requirements. The proposal also removes construction language.
11	CA		2107.2.3 Spill control and secondary containment. Curbs, drains or other provisions for spill control and secondary containment shall be maintained in accordance with Section 5004.2 to collect solvent leakage and fire protection water as approved in accordance with the applicable building code.	Not construction. The building code does not include maintenance requirements. To prevent the flow of Class II solvents to rooms or spaces adjoining the dry cleaning room, spill control complying with Section 5004.2 is required to be maintained by this section. Runoff from spills or manual fire suppression activities may result in environmental contamination if not properly controlled.
12	CAAM	2107.3 Solvent storage tanks. Solvent storage tanks for Class II, IIIA and IIIB liquids shall be maintained in accordance with Chapter 57 and as approved in accordance with the applicable building code. Exception: As provided in applicable provisions of NFPA 32 for inside storage or treatment tanks.	2107.3 Solvent storage tanks. Solvent storage tanks for Class II, IIIA and IIIB liquids shall be maintained in accordance with Chapter 57 and remain as approved in accordance with the applicable building code. Exception: As provided in NFPA 32 for inside storage or treatment tanks.	Storage tank maintenance requirements, not construction. The building code does not include maintenance requirements. The exception allows for compliance with NFPA 32 where applicable. Safe and proper storage of solvents is a paramount concern in the safe operation of a dry cleaning plant or facility. This section requires that combustible solvents be stored in approved tanks located either underground or above ground outside the building, and references Chapter 57 for detailed requirements.
13	CA		2108.1 General. Fire protection systems, devices and equipment shall be inspected, tested and maintained in accordance with Chapter 9.	Not construction. The building code does not include maintenance requirements. Restores maintenance reference to Chapter 9.
15	CAAM	2301.5 Electrical. Electrical wiring and equipment shall be suitable for the locations in which they are installed in accordance with the applicable building code, and shall be maintained in accordance with Section 605, applicable provisions of NFPA 30A and NFPA 70.	2301.5 Electrical. Electrical wiring and equipment shall be suitable for the locations in which they are installed in accordance with the applicable building code, and shall be maintained in accordance with Section 605, NFPA 30A and NFPA 70.	Not construction. The building code does not include maintenance requirements. Chapter 8 of NFPA 30A addresses electrical equipment at motor fuel-dispensing facilities and is correlated with NFPA 70. Electrical equipment must be approved for the particular hazards anticipated at motor fuel-dispensing facilities and the hazardous nature of flammable and combustible liquids and gases.
16	CAAM	2301.6 Heat-producing appliances. Heat producing appliances shall be suitable for the locations in which they are located and shall comply with applicable provisions of NFPA 30A and the applicable building code.	2301.6 Heat-producing appliances. Heat producing appliances shall be suitable for the locations in which they are located and shall comply with NFPA 30A and the applicable building code.	Not construction. The building code does not include maintenance requirements. Heat-producing appliances are ignition sources. Precautions must be taken when using such appliances around flammable and combustible liquids. NFPA 30A, and the applicable building code provide requirements for the safe use of these appliances.

17	CAAM	2303.1 Dispensing operations. Dispensing operations shall be maintained in accordance with the following unless otherwise approved in accordance with the applicable building code. In no case should any of these provisions require demolition or relocation of existing equipment when approved in accordance with the applicable building code: 1.Ten feet (3048 mm) or more from lot lines. 2.Ten feet (3048 mm) or more from buildings having combustible exterior wall surfaces or buildings having noncombustible exterior wall surfaces that are not part of a 1-hour fire-resistance-rated assembly or buildings having combustible overhangs. Exception: Canopies constructed in accordance with the applicable building code providing weather protection for the fuel islands. 3.Such that all portions of the vehicle being fueled will be on the premises of the motor fuel-dispensing facility. 4.Such that the nozzle, when the hose is fully extended, will not reach within 5 feet (1524 mm) of building openings. 5.Twenty feet (6096 mm) or more from fixed sources of ignition.	2303.1 Location of dispensing operations. The location of dispensing operations shall be maintained in accordance with the following unless otherwise approved in accordance with the applicable building code: 1.Ten feet (3048 mm) or more from lot lines. 2.Ten feet (3048 mm) or more from buildings having combustible exterior wall surfaces or buildings having noncombustible exterior wall surfaces that are not part of a 1-hour fire-resistance-rated assembly or buildings having combustible overhangs. Exception: Canopies constructed in accordance with the applicable building code providing weather protection for the fuel islands. 3.Such that all portions of the vehicle being fueled will be on the premises of the motor fuel-dispensing facility. 4.Such that the nozzle, when the hose is fully extended, will not reach within 5 feet (1524 mm) of building openings. 5.Twenty feet (6096 mm) or more from fixed sources of ignition.	These operational items have been consistently in the code for decades and are an important operational control. In order to reduce the likelihood of motor fuels coming into contact with ignition sources or posing a hazard to persons, adjoining property or on-site buildings, this section provides very specific dispensing operation requirements in relation to buildings, lot lines and ignition sources. These are operational controls, not construction requirements.
18	CA		2303.2 Emergency disconnect switches. An approved, clearly identified and readily accessible emergency disconnect switch shall be maintained at an approved location in accordance with the applicable building code to stop the transfer of fuel to the fuel dispensers in the event of a fuel spill or other emergency. Such devices shall be distinctly labeled as: EMERGENCY FUEL SHUTOFF. Signs shall be provided in approved locations.	This section establishes the maintenance requirements for emergency disconnect switches to shut off the flow of fuel in an emergency. The switch location must be prominently indicated by an approved sign and access to the switch must be free of any obstructions, such as displayed merchandise. This section does not include specific installation or location requirements as those are provided in the applicable building code.
19	CAAM	2304.2.2 Emergency controls. Emergency disconnect switches shall be maintained in accordance with Section 2303.2.	2304.2.2 Emergency controls. Approved emergency controls shall be maintained in accordance with Section 2303.2.	Restores reference 2303.2 since the building code does not include maintenance requirements.
20	CA		2304.3.2 Dispensers. Dispensing devices shall be maintained in accordance with Section 2306.7. Dispensing devices operated by the insertion of coins or currency shall not be used unless approved in accordance with the applicable building code.	Restores reference to 2306.7 for maintenance of fuel dispensing devices. Provides operational reference to ensure that coin or currency devices are not added or modified without approval.
21	CAAM	2304.3.3 Emergency controls. Emergency disconnect switches shall be maintained in accordance with Section 2303.2. Emergency controls shall be of a type that is only manually resettable.	2304.3.3 Emergency controls. Approved emergency controls shall be maintained in accordance with Section 2303.2. Emergency controls shall be of a type that is only manually resettable.	There are not maintenance requirements in the building code. This proposal simply restores reference to maintenance requirements of Section 2303.2.

22	CA		2306.2.2 Above-ground tanks located inside buildings. Above-ground tanks for the storage of Class I, II and IIA liquid fuels are allowed to be located in buildings where permitted by the applicable building code.	
23	CA		2306.2.3 Above-ground tanks located outside above grade. Above-ground tanks shall not be used for the storage of Class I, II or III liquid motor fuels unless approved in accordance with the applicable building code. Tanks located at farms, construction projects or rural areas shall comply with Section 5706.2.	The installation and arrangement of tanks is regulated by the applicable building code. The improper use of unapproved tanks is an operational issue. Also includes important reference to Chapter 57 for tank operations at farms and construction sites.
24	CAAM	2306.2.4 Above-ground tanks located in above-grade vaults or below grade vaults. Above-ground tanks used for storage of Class I, II or IIIA liquid motor fuels are allowed to be in vaults located above grade or below grade where permitted by the applicable building code.	2306.2.4 Above-ground tanks located in above-grade vaults or below grade vaults. Above-ground tanks used for storage of Class I, II or IIIA liquid motor fuels are allowed to be installed in vaults located above grade or below grade where permitted by the applicable building code.	There are no maintenance requirements in the building code. This section provides a reminder to the user that additional requirements may be required by the applicable building code.
28	CAAM	2306.5 Secondary containment. Drainage control or diking for above-ground tanks shall be maintained in accordance with Chapter 57. Secondary containment systems shall be monitored either visually or automatically. Emergency venting for enclosed secondary containment systems shall be maintained and remain in accordance with the applicable building code. NOTE: Drainage control and diking is not required for listed secondary containment tanks.	2306.5 Secondary containment. Drainage control or diking for above-ground tanks shall be maintained in accordance with Chapter 57. Secondary containment systems shall be monitored with visually or automatically. Emergency venting for enclosed secondary containment systems shall be maintained and remain in accordance with the applicable building code. NOTE: Drainage control and diking is not required for listed secondary containment tanks.	There are no maintenance requirements in the building code. This section restores basic operational requirements such as visual monitoring as well as maintenance of emergency venting if provided. It also add a note, not a requirement, regarding listed secondary containment tanks not requiring drainage or diking.
29	CA		2306.6 Piping, valves, fittings and ancillary equipment for use with flammable or combustible liquids. The design, fabrication and assembly of piping, valves, fittings and ancillary equipment shall be in accordance with the applicable building code. The testing and inspection of piping, valves, fittings and ancillary equipment for use with flammable or combustible liquids shall be in accordance with Chapter 57 and Sections 2306.6.1 through 2606.6.3.	There are no maintenance requirements in the building code. Removes the words "design, fabrication and assembly" and restores the reference to Chapter 57 for testing/inspection (not construction). The majority of leaks come from piping, valves, fittings and ancillary equipment, not from the tank itself. Therefore, this section is intended to reduce fuel spills by addressing the requirements for this equipment.
30	CAAM	2306.6.2 Piping, valves, fittings and ancillary equipment for above-ground tanks for Class I, II and III liquids. Piping, valves, fittings and ancillary equipment for above ground tanks storing Class I, II and III liquids shall be maintained in accordance with this section in accordance with the applicable building code.	2306.6.2 Piping, valves, fittings and ancillary equipment for above-ground tanks for Class I, II and III liquids. Piping, valves, fittings and ancillary equipment for above ground tanks storing Class I, II and III liquids shall be maintained in accordance with this section and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code but there are in the following sections.
31	CA		2306.6.2.1 Tank openings. Tank openings for above-ground tanks shall be through the top only unless specifically approved in accordance with the applicable building code.	The presence of tank openings or uncovered openings on tanks is an operational concern unless specifically approved during installation.

32	CAAM	2306.6.2.2 Fill-pipe connections. Unless otherwise approved in accordance with the applicable building code, the fill pipe operation for above-ground tanks shall be provided with a means for making a direct connection to the tank vehicle's fuel-delivery hose so that the delivery of fuel is not exposed to the open air during the filling operation.	2306.6.2.2 Fill-pipe connections. Unless otherwise approved in accordance with the applicable building code, the fill pipe for above-ground tanks shall be provided with a means for making a direct connection to the tank vehicle's fuel-delivery hose so that the delivery of fuel is not exposed to the open air during the filling operation.	The exposure of fuel-delivery to the open air is an operational hazard regulated by this section to ensure proper fuel-delivery hose arrangements. This is an operational control, not construction.
33	CAAM	2306.6.2.3 Overfill protection. Overfill protection for above-ground flammable and combustible liquid storage tanks shall be maintained in accordance with Chapter 57 and the applicable building code.	2306.6.2.3 Overfill protection. Overfill protection for above-ground flammable and combustible liquid storage tanks shall be maintained in accordance with Chapter 57 and remain in accordance with the applicable building code.	Overfill prevention is a major concern when dealing with above-ground tanks. There are no maintenance requirements in the building code. This proposal also provides additional context to the maintenance requirements.
34	CAAM	2306.6.2.4 Siphon prevention. Antisiphon methods provided in the piping system to prevent flow of liquid by siphon action shall be maintained in accordance with the applicable building code.	2306.6.2.4 Siphon prevention. Antisiphon methods provided in the piping system to prevent flow of liquid by siphon action shall be maintained and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. This proposal also provides additional context to the requirements listed. This section requires that an approved anti-siphon device be maintained in the liquid piping near the top of the tank to prevent liquid flow from the tank by siphon action if the supply pipe from the tank to the dispenser is damaged.
35	CAAM	2306.6.2.5 Emergency relief venting. Emergency relief venting for above-ground storage tanks, tank compartments and enclosed secondary containment spaces shall be maintained in accordance with Chapter 57 and the applicable building code.	2306.6.2.5 Emergency relief venting. Emergency relief venting for above-ground storage tanks, tank compartments and enclosed secondary containment spaces shall be maintained in accordance with Chapter 57 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. This proposal also restores the reference to Chapter 57. The emergency relief vent is the most important safety device installed on the tank. The emergency relief vent prevents the tank from overpressurizing in the event the tank is exposed to fire. In the case of a secondary containment above-ground tank there must be an emergency relief vent maintained for each tank compartment and an emergency relief vent for the interstitial space.
36	CA		2306.6.2.6 Spill containers. A spill container having a capacity of not less than 5 gallons (19 L) shall be provided for each fill connection. For tanks with a top fill connection, spill containers shall be noncombustible and shall be fixed to the tank and equipped with a manual drain valve that drains into the primary tank unless specifically approved otherwise in accordance with the applicable building code. For tanks with a remote fill connection, a portable spill container is allowed.	Spill containers are operational items, not construction.
37	CAAM	2306.6.3 Piping, valves, fittings and ancillary equipment for underground tanks. Piping, valves, fittings and ancillary equipment for underground tanks shall be maintained in accordance with Chapter 57, the applicable provisions of NFPA 30A, and the applicable building code.	2306.6.3 Piping, valves, fittings and ancillary equipment for underground tanks. Piping, valves, fittings and ancillary equipment for underground tanks shall be maintained in accordance with Chapter 57 of this code, NFPA 30A and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. This proposal also restores the reference to Chapter 57 and NFPA 30A.
38	CAAM	2306.7 Fuel-dispensing systems for flammable and combustible liquids. Fuel dispensing systems for flammable and combustible liquid fuels shall be maintained in accordance with sections 2306.7.1 through 2306.7.9.2.4 and the applicable building code. Alcohol-blended fuel-dispensing systems shall also be maintained in accordance with Section 2306.8.	2306.7 Fuel-dispensing systems for flammable and combustible liquids. Fuel dispensing systems for flammable and combustible liquid fuels shall be maintained in accordance with this sections 2306.7.1 through 2306.7.9.2.4 and remain in accordance with the applicable building code. Alcohol-blended fuel-dispensing systems shall also be maintained in accordance with Section 2306.8.	There are no maintenance requirements in the building code. This proposal also provides reference to alcohol-blended fuels which is consistent with the original intent of the section. Alternative alcohol-blended fuels, while they are considered in this category of fuels, possess characteristics that require the systems for dispensing them to comply with additional requirements contained in Section 2306.8.

39	CA		2306.7.1 Listed equipment. Electrical equipment, dispensers, hose, nozzles and submersible or subsurface pumps used in fuel dispensing systems shall be listed unless otherwise approved in accordance with the applicable building code.	Operational equipment not construction. Ensuring that electrical and dispensing equipment maintain listings is a key operational requirement of the life of a facility. This is consistent with other "Listing" sections of the code. The use of listed equipment and devices provides evidence that they have been evaluated by a third-party agency for safe use in the applications for which they are designed. This is especially important where flammable liquids are being transferred or dispensed.
40	CAAM	2306.7.2 Fixed pumps required. Unless otherwise approved in accordance with the applicable building code, Class I and II liquids shall be transferred from tanks by means of fixed pumps that allow control of the flow and prevent leakage or accidental discharge.	2306.7.2 Fixed pumps required. Unless otherwise approved in accordance with the applicable building code, class I and II liquids shall be transferred from tanks by means of fixed pumps that allow control of the flow and prevent leakage or accidental discharge.	Operational requirements not installation of pumps or construction.
41	CA		2306.7.3 Mounting of dispensers. Unless otherwise approved in accordance with the applicable building code, dispensing devices, except those installed on top of a protected above-ground tank that qualifies as vehicle-impact resistant, shall be maintained as protected against physical damage by a concrete island 6 inches (152 mm) or more in height, or shall maintain protection in accordance with Section 312. Dispensing devices shall be maintained securely fastened to their mounting surface in accordance with the dispenser manufacturer's instructions. Dispensing devices installed indoors shall be located in a position where they cannot be struck by an out-of-control vehicle descending a ramp or other slope unless otherwise approved in accordance with the applicable building code.	Operational maintenance requirements of dispensing equipment (impact damage protection, securely fastened, etc.) Not construction. These requirements have been consistent in the code since at least the 1978 BOCA edition.
42	CAAM	2306.7.4 Dispenser emergency shutoff valve. Unless otherwise approved in accordance with the applicable building code, an approved automatic emergency shutoff valve designed to close in the event of a fire or impact shall be maintained in the liquid supply line at the base of dispenser supplied by a remote pump. Such valve shall be maintained in accordance with the applicable building code. Emergency shutoff valves shall be maintained in accordance with the manufacturer's instructions and tested at least yearly in accordance with Section 2305.2.4.	2306.7.4 Dispenser emergency shutoff valve. Unless otherwise approved in accordance with the applicable building code, an approved automatic emergency shutoff valve designed to close in the event of a fire or impact shall be maintained in the liquid supply line at the base of dispenser supplied by a remote pump. Such valve shall be maintained and remain in accordance with the applicable building code. Emergency shutoff valves shall be maintained in accordance with the manufacturer's instructions and tested at least yearly in accordance with Section 2305.2.4.	Provide context for maintenance of dispenser emergency shutoff valve devices. Restores annual testing requirement that was removed.
43	CA		2306.7.5 Dispenser hose. Dispenser hoses shall be a maximum of 18 feet (5486 mm) in length unless otherwise approved in accordance with the applicable building code. Dispenser hoses shall be maintained as listed and approved. When not in use, hoses shall be reeled, racked or otherwise protected from damage.	Operational equipment requirements for hoses, not construction. Requirements have been consistent and standardized to this limit in the industry and code for years.

44	CA		2306.7.5.1 Emergency breakaway devices. Unless otherwise approved in accordance with the applicable building code, dispenser hoses for Class I and II liquids shall be maintained with a listed emergency breakaway device designed to retain liquid on both sides of a breakaway point. Such devices shall be maintained in accordance with the manufacturer's instructions. Where hoses are attached to hose retrieving mechanisms, the emergency breakaway device shall remain between the hose nozzle and the point of attachment of the hose-retrieval mechanism to the hose.	Important context and specific requirements for the maintenance and operation of emergency breakaway devices. Not construction or installation. This provision requires a breakaway device on dispenser hoses delivering gasoline, diesel and kerosene (Class I and II liquids). These devices are installed to prevent a pull-down of the motor fuel dispenser in the event a car drives away with the hose nozzle valve still in the car's fill pipe. When these valves operate, the separated sections of the hose are sealed to prevent leakage of liquid from the hose. The placement of the breakaway device between the hose-retrieving mechanism clamp and the nozzle is important to the proper operation of the valve by preventing the pulling force of the driveoff from being transmitted via the retrieving cable directly to the dispenser.
45	CA		2306.7.6 Fuel delivery nozzles. Unless specifically approved otherwise in accordance with the applicable building code: island-type dispensers used for dispensing Class I, II or III liquids shall be maintained with a listed automatic-closing-type nozzle valve with or without a latch-open device and overhead-type dispensing units shall be maintained with a listed automatic-closing-type nozzle valve without a latch-open device. Exception: A listed automatic-closing-type hose nozzle valve with latch-open device is allowed to be used on overhead-type dispensing units where the design of the system is such that the hose nozzle valve will close automatically in the event the valve is released from a fill opening or upon impact with a driveway.	There are no maintenance requirements in the building code. This proposal restores context to the proper maintenance of fuel delivery nozzles and an optional exception. A listed automatic-closing-type hose nozzle with or without a latch-open device is designed to automatically close when the fuel spits back through the vent line or if the hose nozzle were to fall out of the car fill pipe and strike the ground. When the nozzle is equipped with certain types of vapor recovery equipment, it is designed to shut off when the nozzle is removed from the vehicle. The nozzle on island-type dispensers may or may not be equipped with a latchopen device. The distinction between an overhead-type dispenser and an island-type dispenser is included in this section even though the overhead dispenser is rarely used. However, the concern was that since the hose is on a retractable reel built into the canopy, the nozzle would not strike the ground if it were to fall out of the vehicle and a latch-open device would fail to work, allowing dangerous, uncontrolled fuel spills. The exception is that if the overhead-type dispenser hose mechanism is designed to allow the nozzle to strike the ground and automatically shut off or if the nozzle was equipped with vapor return bellows that would automatically shut off the nozzle if it was removed from the vehicle, the latch-open device would be approved.
46	CAAM	2306.7.7 Remote pumping systems. Remote pumping systems for liquid fuels shall be maintained in accordance with 2306.7.7.1 and 2306.7.7.2 and the applicable building code.	2306.7.7 Remote pumping systems. Remote pumping systems for liquid fuels shall be maintained in accordance with 2306.7.7.1 and 2306.7.7.2 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Remote pumping systems (sometimes referred to as "pressure systems") are systems in which liquid motor fuels are transferred from the storage tank to the dispensing devices by submersible pumps located at the storage tank rather than by suction pumps located within the dispensing device. The intent of this section is to maintain special safety devices on pumping systems that deliver fuel to the dispenser by pressure rather than suction.
47	CA		2306.7.7.1 Leak detection. Leak detection devices shall be maintained. Unless otherwise approved by the applicable building code, where remote pumps are used to supply fuel dispensers, each pump shall maintain a listed leak detection device on the discharge side that will detect a leak in the piping and dispensers and provide an indication of the leak. A leak detection device is not required if the piping from the pump discharge to under the dispenser is above ground and visible.	There are no maintenance requirements in the building code. This section highlights operational requirements for leak detection and restores a exception where detection is not necessary. In remote pumping systems, the piping between the remote pump and the dispenser, because it is under pressure, is the number-one location of fuel spills caused by leaks.

48	CAAM	2306.7.7.2 Location. Remote pumps installed above grade, outside of buildings, shall remain in approved locations in accordance with the applicable building code. Dispensing operations shall not be less than 10 feet (3048 mm) from lines of adjoining property that can be built upon and not less than 5 feet (1524 mm) from any building opening. Pumps shall be maintained substantially anchored and protected against physical damage. In no case should any of these provisions require demolition or relocation of existing equipment when approved in accordance with the applicable building code.	2306.7.7.2 Location. Remote pumps installed above grade, outside of buildings, shall remain in approved locations in accordance with the applicable building code. Dispensing operations shall not be less than 10 feet (3048 mm) from lines of adjoining property that can be built upon and not less than 5 feet (1524 mm) from any building opening. Pumps shall be maintained substantially anchored and protected against physical damage.	The location of physical pumps is to remain as originally approved however it is still important to also maintain operational controls which have been consistently in the code for decades. These are not construction requirements.
49	CAAM	2306.7.9 Vapor-recovery and vapor-processing systems. Vapor-recovery and vapor-processing systems shall be maintained in accordance with Sections 2306.7.9.1.1 through 2306.7.9.2.4 and the applicable building code.	2306.7.9 Vapor-recovery and vapor-processing systems. Vapor-recovery and vapor-processing system shall be maintained in accordance with sections 2306.7.9.1.1 through 2306.7.9.2.4 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Because of clean-air environmental concerns, some jurisdictions prohibit fuel vapors displaced during tanker deliveries or routine fuel-dispensing operations from being discharged into the atmosphere and require vapor recovery or vapor-processing systems to prevent pollution. This section contains the provisions for returning the vapors to the tank or processing the vapors on site. Note that the code does not require these systems to be installed, but where they are installed, they must comply with these regulations.
50	CAAM	2306.7.9.1 Vapor-balance systems. Vapor balance systems shall be maintained in accordance with Section 2306.7.9.1.1 through 2306.7.9.1.5 and the applicable building code.	2306.7.9.1 Vapor-balance systems. Vapor balance systems shall be maintained in accordance with section 2306.7.9.1.1 through 2306.7.9.1.5 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. As fuel enters the fuel tank of the vehicle it displaces fuel vapors. The vapor-balance system simply captures these vapors and returns them to the storage tank.
51	CAAM	2306.7.9.1.1 Dispensing devices. Dispensing devices incorporating provisions for vapor recovery shall be listed and labeled unless otherwise approved in accordance with the applicable building code. Where dispensing devices are modified for vapor recovery, such modifications shall be approved in accordance with the applicable building code and include a listing report by a nationally recognized testing laboratory to the Fire Offiical upon request. Means shall be maintained to shut down fuel dispensing in the event the vapor return line becomes blocked.	2306.7.9.1.1 Dispensing devices. Dispensing devices incorporating provisions for vapor recovery shall be listed and labeled unless otherwise approved in accordance with the applicable building code. Where dispensing devices are modified for vapor recovery, such modifications shall be approved in accordance with the applicable building code and include a listing report by a nationally recognized testing laboratory. Any listing by report shall contain a description of the component parts used in the modification and recommended method of installation on the specific dispensers. Where provided, such report shall be approved by the building official and made available on request of the fire official. Means shall be maintained to shut down fuel dispensing in the event the vapor return line becomes blocked.	Clarifies that dispensing equipment is to be listed and any modifications approved by the building official. Motor fuel dispensers equipped with vapor-recovery equipment must be listed and labeled by a recognized testing laboratory attesting that they will function properly when maintained in accordance with the terms of their listing. When existing dispensing equipment is retrofitted with vapor-recovery equipment, the equipment being added must be listed to work with the existing equipment. In other words, a person cannot modify an existing dispensing device manufactured by one company with vapor-recovery component parts manufactured by the same or a different company unless a report from a recognized testing laboratory is submitted to the building official verifying that the retrofit components will work properly with the dispensing device. This is called “listed by report” and is a service provided by major testing laboratories to document equipment compatibility. The report from the testing laboratory must also be provided when requested by the fire official during inspections. Means must be maintained to shut down fuel dispensing in the event the vapor-return line becomes blocked. This provision is self-explanatory. To prevent vapors from entering the atmosphere, the dispensing operation must be stopped if the vapor return is blocked.

52	CA		2306.7.9.1.2 Vapor-return line close off. An acceptable method in accordance with the applicable building code shall be maintained as to close off the vapor return line from dispensers when the product is not being dispensed.	Operational requirements for the vapor-return line are indicated. To prevent vapors from escaping after dispensing has stopped, some type of device must be maintained that will prevent vapors in the tank from escaping out of the return line. This could be accomplished by a one-way check valve.
53	CAAM	2306.7.9.1.3 Piping. Piping in vapor-balance systems shall be maintained in accordance with Sections 5703.6, 5704.2.9 and 5704.2.11. Unless otherwise approved in accordance with the applicable building code, vapor return piping shall be maintained in a manner that drains back to the tank, without sags or traps in which the liquid can become trapped. Where provided, condensate tanks shall be maintained so that they can be drained without opening.	2306.7.9.1.3 Piping. Piping in vapor-balance systems shall be maintained in accordance with Sections 5703.6, 5704.2.9 and 5704.2.11 of this code. Unless otherwise approved in accordance with the applicable building code, vapor return piping shall be maintained in a manner that drains back to the tank, without sags or traps in which the liquid can become trapped. Where provided, condensate tanks shall be maintained so that they can be drained without opening.	There are no maintenance requirements in the building code. This also provides language to make sure that piping continues to be operationally functional.
54	CAAM	2306.7.9.1.4 Flexible joints and shear joints. Flexible joints shall be maintained in accordance with Section 5703.6.9. Unless otherwise approved in accordance with the applicable building code, shear joints shall remain rigidly mounted and connected by a union in the vapor return piping at the base of each dispensing device and shall remain mounted flush with the top of the surface on which the dispenser is mounted.	2306.7.9.1.4 Flexible joints and shear joints. Flexible joints shall be maintained in accordance with 5703.6.9. Unless otherwise approved in accordance with the applicable building code, shear joints shall remain rigidly mounted and connected by a union in the vapor return piping at the base of each dispensing device and shall remain mounted flush with the top of the surface on which the dispenser is mounted.	There are no maintenance requirements in the building code. The shear joint mentioned here serves the same function for the vapor-recovery lines as the dispenser emergency valve does for the pressurized fuel supply piping to the dispenser (see commentary, Section 2306.7.4). This shear valve must be securely mounted so that the shear groove is located flush or within 1/2 inch (12.7 mm) of the surface of the dispenser island or top of the sump. This shear valve is designed to close in case of a dispenser fire or a dispenser knock-down..
55	CA	Fire Official or fire code official - make the same throughout.	2306.7.9.1.5 Testing. Existing vapor return lines and vent piping shall be tested in accordance with Section 5703.6.3 where the fire code official has reasonable cause to believe that a leak exists.	The ability to test for leaks is a key operational requirement and is not a construction requirement.
56	CAAM	2306.7.9.2 Vapor-processing systems. Vapor-processing systems shall be maintained in accordance with Sections 2306.7.9.2.1 through 2306.7.9.2.4 and the applicable building code.	2306.7.9.2 Vapor-processing systems. Vapor-processing systems shall be maintained in accordance with section 2306.7.9.2.1 through 2306.7.9.2.4 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Where vapor-recovery systems capture the vapors and return them to the tank, vapor-processing systems do not return the vapors to the tank. Instead, they process the vapors either by refrigeration, absorption or burning them off..
57	CAAM	2306.7.9.2.1 Equipment. Unless otherwise approved in accordance with the applicable building code, equipment in vapor-processing-systems, including hose nozzle valves, vapor pumps, flame arresters, fire checks or systems for prevention of flame propagation, controls and vapor-processing equipment, shall be individually maintained as listed for the intended use in a specified manner. Equipment for prevention of flame or propagation that has been tested and listed as suitable for the intended use in vapor processing systems that introduce air into the underground piping or storage tanks shall be maintained.	2306.7.9.2.1 Equipment. Unless otherwise approved in accordance with the applicable building code, equipment in vapor-processing-systems, including hose nozzle valves, vapor pumps, flame arresters, fire checks or systems for prevention of flame propagation, controls and vapor-processing equipment, shall be individually maintained as listed for the intended use in a specified manner. Vapor processing systems that introduce air into the underground piping or storage tanks shall maintain equipment for prevention of flame or propagation that has been tested and listed as suitable for the intended use.	Maintenance of listing requirements for equipment and devices. Unlisted vapor-processing equipment may not be used. Equipment that is used must be done in accordance with its listing. Vapor-processing systems that introduce air into the underground piping or storage tanks must be provided with equipment for prevention of flame propagation that has been tested and listed as suitable for the intended use. When blowers are used to introduce air, equipment, such as listed flame arresters, must be used to prevent vapors in the flammable range from being ignited.

58	CA		2306.7.9.2.2 Location. Unless otherwise approved in accordance with the applicable building code, vapor-processing equipment shall remain located at or above grade and vapor processing units shall be operated not less than 10 feet (3048 mm) from the nearest building or lot line of a property which can be building upon. Sources of ignition shall be located not less than 50 feet (15 240 mm) from fuel-transfer areas and not less than 18 inches (457 mm) above tank fill openings and tops of dispenser islands.	Important dispensing operation requirements are provided. Not construction. This section is intended to protect vapor-processing equipment from fire exposure, not to protect other structures or equipment from a fire involving the vapor-recovery equipment. Clearance to lot lines is intended to provide a measure of exposure protection to the vapor-processing equipment from potential offsite fires. The exception provides several acceptable clearance alternatives, recognizing that the required clearances cannot, in all cases, be achieved.
59	CA		2306.7.9.2.2.1 Distance from dispensing devices. Unless otherwise approved in accordance with the applicable building code, vapor-processing equipment functioning during dispensing operations shall maintain a minimum of 20 feet (6096 mm) from dispensing devices.	Dispensing devices and vapor-processing equipment need to be separated during dispensing operations This is consistent with NFPA 70 for classified flammable vapor areas.
60	CAAM	2306.7.9.2.2.2 Physical protection. Physical protection for vapor-processing equipment shall be maintained in accordance with Section 312 or the applicable building code. Where approved protective enclosures are used, approved means shall be maintained to ventilate the volume within the enclosure to prevent pocketing of flammable vapors.	2306.7.9.2.2.2 Physical protection. Vapor-processing equipment shall remain protected against physical damage by maintaining guardrails, curbs, protective enclosures or fencing required in accordance with the applicable building code. Where approved protective enclosures are used, approved means shall be maintained to ventilate the volume within the enclosure to prevent pocketing of flammable vapors.	There are no maintenance requirements in the building code. Functional and operational intent is provided for context. Vapor-processing equipment must not only be physically protected from vehicles and other physical damage but, if the protection means includes an enclosure, the enclosed area must be adequately ventilated to prevent the accumulation of flammable vapors within where it could become a hazard to anyone entering the enclosure.
61	CA		2306.7.9.2.3 Mounting. Unless otherwise approved in accordance with the applicable building code, vapor-processing units shall be maintained securely mounted on concrete, masonry or structural steel supports on concrete or other noncombustible foundations. Vapor-recover and vapor-processing equipment is allowed to be operated on roofs where approved in accordance with the applicable building code.	Not construction. Maintenance language for secure mounting as well as a note about roof operations.
62	CAAM	2306.7.9.2.4 Piping. Piping in a mechanical assist system shall be maintained in accordance with Section 5703.6 and the applicable building code.	2306.7.9.2.4 Piping. Piping in a mechanical assist system shall be maintained in accordance with 5703.6 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
63	CAAM	2306.8 Alcohol-blended fuel dispensing operations. Alcohol-blended fuel-dispensing systems shall be maintained in accordance with Sections 2306.7 and 2306.8.1 through 2306.8.5 and the applicable building code.	2306.8 Alcohol-blended fuel dispensing operations. Alcohol-blended fuel-dispensing systems shall be maintained in accordance with 2306.7, Section 2306.8.1 through 2306.8.5 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. This section addresses hazards specifically related to the dispensing of alcohol-blended fuels as compared to gasoline and the more established gasoline-alcohol blends (“gasohol”), which are treated the same as gasoline in the code.
64	CAAM	2306.8.6 Compatibility. Dispensers shall only be used with the fuels for which they have been listed, which are marked on the product in accordance with 59.1-167.1 of the Code of Virginia. Field installed components including hose assemblies, breakaway couplings, swivel connectors, and hose nozzle valves shall be maintained in accordance with the listing and marking on the unit.	2306.8.6 Compatibility. Dispensers shall only be used with the fuels for which they have been listed, which are marked on the product. Field installed components including hose assemblies, breakaway couplings, swivel connectors, and hose nozzle valves shall be maintained in accordance with the listing and marking on the unit.	Compatibility is an ongoing operational issue, not construction. Dispensers and certain field-installed dispensing system components may be made of materials commonly used with gasoline but which may be incompatible with high-level alcohol blends and may degrade over time in their presence. Zinc, brass, lead and aluminum are some of the more sensitive metals. This section requires that dispensers and their field-installed components be marked by the equipment manufacturer with the names of the fuels with which they are compatible, confirming their suitability for use with alcohol blended fuels.

65	CAAM	2306.8.3 Facility identification. Facilities dispensing alcohol-blended fuels shall be identified in accordance with 59.1-167.1 of the Code of Virginia.	2306.8.3 Facility identification. Facilities dispensing alcohol-blended fuels shall be identified by an approved means.	Facility identification is a key firefighter operation and safety issue. Signage is not construction. This section addresses dispensing facility identification for alcohol-blended fuels. Identification of the facility is intended to promote first-responder awareness of the presence of alcohol-blended fuels. According to the U.S. Department of Energy (DOE) Handbook for Handling, Storing, and Dispensing E85, each state, along with the U.S. Department of Transportation (DOT), has developed signage to place at refueling stations. Code users should contact their individual state DOT to obtain the correct signage criteria for their area.
66	CA		2306.8.4 Marking. Dispensers shall be marked in an approved manner to identify the types of alcohol-blended fuels being dispensed.	Dispenser identification is a key firefighter operation and safety issue. Signage is not construction. Identification of equipment for specific alcohol blended fuels communicates the intended use of the installed equipment to both customers and emergency personnel. The Federal Trade Commission (FTC) requires a small sticker to be placed on the face of the fuel dispenser as close as possible to the price per unit of fuel. The sticker should have a black background with orange text
67	CA		2307.2 Approvals. Unless otherwise approved in accordance with the applicable building code, storage vessels and equipment for the storage or dispensing of LP-gas shall be maintained as approved or listed in accordance with Sections 2307.2.1 and 2307.2.2 and the applicable building code.	Using approved storage vessels is an operational issue and is not construction. All equipment used in connection with the storage and dispensing of LP-gas motor fuel must be either approved or listed, as specified in the following sections.
68	CAAM	2307.2.1 Approved equipment. Unless otherwise approved in accordance with the applicable building code, containers, pressure relief devices, including pressure relief valves, pressure regulators and piping for LP-gas shall be approved in accordance with the applicable building code.	2307.2.1 Approved equipment. Unless otherwise approved in accordance with the applicable building code, containers, pressure relief devices (including pressure relief valves), pressure regulators and piping for LP-gas shall be approved in accordance with the applicable building code.	Using approved equipment is an operational issue and is not construction.
69	CA		2307.2.2 Listed equipment. Unless specifically approved otherwise in accordance with the applicable building code, hoses, hose connections, vehicle fuel connections, dispensers, LP-gas pumps and electrical equipment for LP-gas shall be listed in accordance with the applicable building code.	Using approved equipment is an operational issue and is not construction.
70	CA		2307.3 Attendants. Motor fuel-dispensing operations for LP-gas shall be conducted by qualified attendants or in accordance with Section 2307.6 by persons trained in the proper handling of LP-gas..	The 2015 VSFPC language give two options that basically mean the same thing to the reader. This proposal restores the reference to trained persons when using privately operated and properly maintained dispensers. LP-gas must be dispensed into a vehicle by trained and qualified persons. Unattended and self-service LP-gas stations that are open to the public are not allowed. Section 2307.6 does allow self-service as long as it is closed to the public; that is, the vehicles belong to the operator of the LP-gas-fueling facility and the persons dispensing the fuel are employees of the LP-gas-fueling operation and are properly trained

71	CAAM	2307.4 Location of dispensing operations and equipment. Unless specifically approved otherwise in accordance with the applicable building code, the point of transfer for LP-gas dispensing operations shall be 25 feet (7620 mm) or more from buildings having combustible exterior wall surfaces, buildings having noncombustible exterior wall surfaces that are not part of a 1-hour fire-resistance-rated assembly, or buildings having combustible overhands, lot lines of property which could be built on, public streets, or sidewalks and railroads; and at least 10 feet (3048 mm) from driveways and buildings having noncombustible exterior wall surfaces that are part of a fire-resistance-rated assembly having a rating of 1 hour or more. In no case should any of these provisions require demolition or relocation of existing equipment when approved in accordance with the applicable building code. Exception: The point of transfer for LP-gas dispensing operations need not be separated from canopies that are constructed in accordance with the applicable building code and which provide weather protection for the dispensing equipment. LP-gas containers shall remain located in accordance with Chapter 61 and the applicable building code. LP-gas storage and dispensing equipment shall be operated outdoors and in accordance with Section 2307.6 unless otherwise approved in	2307.4 Location of dispensing operations and equipment. Unless specifically approved otherwise in accordance with the applicable building code, the point of transfer for LP-gas dispensing operations shall be 25 feet (7620 mm) or more from buildings having combustible exterior wall surfaces, buildings having noncombustible exterior wall surfaces that are not part of a 1-hour fire-resistance-rated assembly, or buildings having combustible overhands, lot lines of property which could be built on, public streets, or sidewalks and railroads; and at least 10 feet (3048 mm) from driveways and buildings having noncombustible exterior wall surfaces that are part of a fire-resistance-rated assembly having a rating of 1 hour or more. Exception: The point of transfer for LP-gas dispensing operations need not be separated from canopies that are constructed in accordance with the applicable building code and which provide weather protection for the dispensing equipment. LP-gas containers shall remain located in accordance with Chapter 61 and the applicable building code. LP-gas storage and dispensing equipment shall be operated outdoors and in accordance with Section 2306.7 unless otherwise approved in accordance with the applicable building code.	The location of dispensing operations is a key safety issue that is not a construction requirement. Although technical factors remain in the language, all are options for compliance and are not sole prescriptive construction requirements. This section regulates the location of the point of transfer of the LP gas motor fuel into the vehicle fuel tank. The intent of the term “point of transfer” is to describe the location where LP-gas fueling connections are made and broken and any location where LP-gas is vented during transfer or fueling operations. Whenever LP-gas is dispensed or transferred, there is always at least a “puff” of LP gas released at the point where the LP-gas dispensing hose connects to and disconnects from the vehicle fuel tank or other LP-gas container, and it is at those locations that a flammable mixture will exist, even if momentarily. This section intends to isolate these “movable locations” by regulating how far away from potential ignition sources or other properties they must remain under in all circumstances. This section is also in agreement with NFPA 58 with respect to separation distances
72	CAAM	2307.5 Additional requirements for LP-gas dispensers and equipment. Unless specifically approved otherwise in accordance with the applicable building code, LP-gas dispensers and related equipment shall be maintained in accordance with the following provisions: 1. Pumps shall remain fixed in place and shall be maintained to allow control of the flow and to prevent leakage and accidental discharge. 2. Dispensing devices operated within 10 feet (3048 mm) of where vehicular traffic occurs shall be protected against physical damage by mounting on a concrete island 6 inches (152 mm) or more in height, or shall be protected in accordance with Section 312. 3. Dispensing devices shall remain securely fastened to their mounting surface in accordance with the dispenser manufacturer's instructions.	2307.5 Additional requirements for LP-gas dispensers and equipment. Unless specifically approved otherwise in accordance with the applicable building code, LP-gas dispensers and related equipment shall remain in accordance with the applicable building code and be maintain the following provisions: 1. Pumps shall remain fixed in place and shall be maintained to allow control of the flow and to prevent leakage and accidental discharge. 2. Dispensing devices operated within 10 feet (3048 mm) of where vehicular traffic occurs shall be protected against physical damage by mounting on a concrete island 6 inches (152 mm) or more in height, or shall be protected in accordance with Section 312. 3. Dispensing devices shall remain securely fastened to their mounting surface in accordance with the dispenser manufacturer's instructions.	Additional operational and maintenance language about dispensing. Not construction. In order to reduce the likelihood of a leak or the accidental discharge of LP-gas, Item 1 requires that dispensing pumps be fixed in place and equipped with a means of controlling the flow of LP-gas. Similar to the provisions of Section 2306.7.3, Items 2 and 3 of this section address two alternatives for operating dispensers so as to provide impact protection. One is to mount the dispenser on an elevated island. The other is to protect the dispenser in accordance with Section 312, which requires the dispenser to be protected by steel posts filled with concrete. Regardless of which alternative is chosen, the stability and protection of the dispenser and operation depends on its maintenance in accordance with the manufacturer’s instructions.

73	CA		2307.6 Maintenance of LP-gas dispensing devices and equipment. LP-gas dispensing systems shall be maintained and remain in accordance with the applicable building code. The operation of LP-gas dispensing systems shall be in accordance with Sections 2307.5.1 through 2307.5.3 and Chapter 61. LP-gas dispensers and dispensing stations shall be maintained in accordance with the manufacturer's specifications and their listing.	Operational requirements and references to other maintenance sections. This provision specifically addresses the maintenance requirements for valves, hoses and impact protection for LPgas-dispensing equipment.
74	CAAM	2307.6.1 Valves. Unless otherwise approved in accordance with the applicable building code: a manual shutoff valve and an excess flow-control check valve shall be maintained in the liquid line between the pump and the dispenser inlet where the dispensing device is installed at a remote location and is not part of a complete storage and dispensing unit mounted on a common base; an excess flow-control check valve or an emergency shutoff valve shall be maintained in or on the dispenser at the point at which the dispenser hose is connected to the liquid piping; a differential backpressure valve shall be considered equivalent protection; a listed shutoff valve shall be maintained at the discharge end of the transfer hose.	2307.6.1 Valves. Unless otherwise approved in accordance with the applicable building code, a manual shutoff valve and an excess flow-control check valve shall be maintained in the liquid line between the pump and the dispenser inlet where the dispensing device is installed at a remote location and is not part of a complete storage and dispensing unit mounted on a common base. An excess flow-control check valve or an emergency shutoff valve shall be maintained in or on the dispenser at the point at which the dispenser hose is connected to the liquid piping. A differential backpressure valve shall be considered equivalent protection. A listed shutoff valve shall be maintained at the discharge end of the transfer hose.	Maintenance language for valves including options for alternative compliance. The maintenance provisions of this section are similar to certain maintenance provisions in Section 2306.7 that are applicable to flammable and combustible liquid dispensing operations.
75	CA		2307.6.2 Hoses. Unless otherwise approved in accordance with the applicable building code, hoses and piping for the dispensing of LP-gas shall maintain hydrostatic relief valves. Hose length for dispensing operations shall not exceed 18 feet (5486 mm). An approved method shall be maintained to protect the hose against mechanical damage.	Maintenance of hydrostatic relief valves and other operational requirements. To prevent over pressurization of the hoses and piping, a relief valve must be maintained in the system. The hose length is limited to 18 feet (5486 mm) to prevent excessive amounts of hose from lying on the ground and being damaged by vehicles. The general public is familiar with the 18-foot (5486 mm) length because of the 18-foot (5486 mm) requirement for liquid fuel dispensing hoses in Section 2306.7.5 and they know where to position their vehicles for refueling.
76	CAAM	2307.6.3 Emergency breakaway devices. Unless otherwise approved in accordance with the applicable building code,a listed emergency breakaway device to retain liquid on both sides of the breakaway point shall be maintained on dispensing hoses. Where hoses are attached to hose-retrieving mechanisms, the emergency breakaway device shall be maintained such that the breakaway device activates to protect the dispenser from being displaced.	2307.6.3 Emergency breakaway devices. Unless otherwise approved in accordance with the applicable building code, dispenser hoses shall maintain a listed emergency breakaway device to retain liquid on both sides of the breakaway point. Where hoses are attached to hose-retrieving mechanisms, the emergency breakaway device shall be maintained such that the breakaway device activates to protect the dispenser from being displaced. 2307.6.4 Vehicle impact protection. Where operated within 10 feet of vehicle traffic, LP-gas storage containers, pumps and dispensers shall be protected in accordance with Section 2307.5, Item 2, unless otherwise approved in accordance with the applicable building code.	Maintenance of emergency breakaway devices, not installation. Similar to Section 2306.7.5.1 of the code and Section 6.25.4.2 of NFPA 58, this section requires maintenance breakaway devices on dispenser hoses delivering LP-gas motor fuel. These devices prevent a pull-down of the motor fuel dispenser in the event that a car drives away with the hose nozzle valve still attached to the car's fill pipe. The design of these valves is such that when they operate, the separated sections of the hose are sealed to prevent leakage of fuel from the hose. Where a hose is equipped with a hose retrieval mechanism, placing the breakaway device between the mechanism's clamp and nozzle is important to the proper operation of the valve by preventing the pulling force of the drive-off from being transmitted via the retrieving cable directly to the dispenser.
77	CA		2307.6.4 Vehicle impact protection. Where operated within 10 feet of vehicle traffic, LP-gas storage containers, pumps and dispensers shall maintain protection in accordance with Section 2307.5, Item 2, unless otherwise approved in accordance with the applicable building code.	Maintenance of vehicle impact protection, not installation. This section is intended to prevent leaks and spills caused by vehicle impact by requiring vehicle impact protection.

78	CAAM	2307.7 Public fueling of motor vehicles. Self-service LP-gas dispensing systems, including key, code, and card lock dispensing systems, shall be limited to the filling of permanently mounted containers providing fuel to the LP-gas powered vehicle. The requirements for self-service LP-gas dispensing shall be in accordance with the following: 1. The arrangement and operation of the transfer of product into a vehicle shall be in accordance with this section and Chapter 61. 2. The system shall maintain an emergency shut-off switch located in accordance with the applicable building code. 3. The owner of the LP-gas motor fuel-dispensing facility or the owner's designee shall provide for the safe operation of the system and the training of users. 4. Unless otherwise approved in accordance with the applicable building code, the dispenser	2307.7 Public fueling of motor vehicles. Self-service LP-gas dispensing systems, including key, code, and card lock dispensing systems, shall be limited to the filling of permanently mounted containers providing fuel to the LP-gas powered vehicle. The requirements for self-service LP-gas dispensing shall be in accordance with the following: 1. The arrangement and operation of the transfer of product into a vehicle shall be in accordance with this section and Chapter 61. 2. Unless otherwise approved in accordance with the applicable building code, the system shall maintain an emergency shut-off switch located in accordance with the applicable building code. 3. The owner of the LP-gas motor fuel-dispensing facility or the owner's designee shall provide for the safe operation of the system and the training of users. 4. Unless otherwise approved in accordance with the applicable building code, the dispenser and hose-end valve shall release not more than 1/8 fluid ounce (4 cc) of liquid to the atmosphere upon breaking the connection with the fill valve on the vehicle. 5. Portable fire extinguishers shall be provided in accordance with Section 2305.5. 6. Warning signs shall be provided in accordance with Section 2305.6.	Fueling procedures and equipment function is an operational issue, not construction. This section is in response to new technologies available to safeguard refueling operations. If the vehicles being refueled do not belong to the owner of the fuel dispensing facility and the fuel-dispensing operator is not an employee of the owner, the facility is considered to be "public." This section allows vehicle owners to refuel their own vehicles under the supervision of, or after having been trained by, the LP-gas motor fuel-dispensing facility owner or the owner's designee. This section contains provisions for the safe operation of the facility and an emergency shutoff switch similar to the emergency shutoff switch required to be maintained at motor fuel-dispensing facilities in Section 2303.2.
79	CA		2308.1 General. Motor fuel-dispensing facilities for compressed natural gas (CNG) fuel shall be maintained and remain in accordance with the applicable building code. Such facilities shall be operated and maintained in accordance with this section and Chapter 53.	This proposal restores a key reference to Chapter 53. he federal government is mandating that automakers move toward alternative fuels to replace conventional gasoline and diesel. One of the more popular alternative fuels is compressed natural gas (CNG). As more vehicles use alternative fuels, codes will have to be modified to address the safe dispensing of these fuels. This section addresses the dispensing of CNG at motor fuel-dispensing facilities. Chapter 53 contains the general provisions for CNG.
80	CA		2308.2 Approvals. Unless otherwise approved in accordance with the applicable building code, storage vessels and equipment used for the storage, compression or dispensing of CNG shall be approved or listed in accordance with Sections 2308.2.1 and 2308.2.2 and the applicable building code. 2308.2.1 Approved equipment. Containers, compressors, pressure relief devices (including pressure relief valves) and pressure regulators and piping used for CNG shall be approved. 2308.2.2 Listed equipment. Hoses, hose connections, dispensers, gas detection systems and electrical equipment used for CNG shall be maintained in accordance with their listing. Vehicle-fueling connections shall be listed and labeled in accordance with the applicable building code..	Maintenance of approvals and listing, not construction. All equipment used in connection with the storage and dispensing of CNG motor fuel must be either approved or listed in accordance with the applicable building code.
81	CAAM	2308.3 Location of dispensing operations and equipment. Unless approved otherwise in accordance with the applicable building code and Chapter 53, compression, storage and dispensing equipment shall be located above ground, outside.	2308.3 Location of dispensing operations and equipment. Unless approved otherwise in accordance with the applicable building code or Chapter 53, compression, storage and dispensing equipment shall be located above ground, outside.	Storage, compression and dispensing are functional operations, not construction. Because of the potential for leakage, the compression, storage and dispensing equipment and operations must be located either outdoors or in a noncombustible, substantially open building, except as allowed by Chapter 53.

82	CAAM	2308.3.1 Location of operations on property. Unless otherwise approved in accordance with the applicable building code, compression, storage and dispensing equipment not located in vaults complying with Chapter 53 shall be maintained and operated in accordance with Section 2303.1 and the following. In no case should any of these provisions require demolition or relocation of existing equipment when approved in accordance with the applicable building code: 1. Not beneath power lines. 2. Ten feet (3048 mm) or more from the nearest building or lot line that could be built on, public street, sidewalk or source of ignition. Exception: Dispensing equipment need not be separated from canopies that are constructed in accordance with the applicable building code and that provide weather protection for the dispensing equipment. 3. Twenty-five feet (7620 mm) or more from the nearest rail of any railroad track and 50 feet (15 240 mm) or more from the nearest rail of any railroad main track or any railroad or transit line where power for train propulsion is provided by an outside electrical source, such as third rail or overhead catenary. 4. Fifty feet (15 240 mm) or more from the vertical plane below the nearest overhead wire of a trolley bus line.	2308.3.1 Location of operations on property. Unless otherwise approved in accordance with the applicable building code, compression, storage and dispensing equipment not located in vaults complying with Chapter 53 shall be maintained and operated in accordance with Section 2303.1 and as follows: 1. Not beneath power lines. 2. Ten feet (3048 mm) or more from the nearest building or lot line that could be built on, public street, sidewalk or source of ignition. Exception: Dispensing equipment need not be separated from canopies that are constructed in accordance with the applicable building code and that provide weather protection for the dispensing equipment. 3. Twenty-five feet (7620 mm) or more from the nearest rail of any railroad track and 50 feet (15 240 mm) or more from the nearest rail of any railroad main track or any railroad or transit line where power for train propulsion is provided by an outside electrical source, such as third rail or overhead catenary. 4. Fifty feet (15 240 mm) or more from the vertical plane below the nearest overhead wire of a trolley bus line.	Storage, compression and dispensing are functional operations, not construction. Natural gas is lighter than air. The requirements for the operational location of the activity and associated equipment that compresses and dispenses the gas must take this into consideration. The separation distances from overhead ignition sources should be noted.
83	CA		2308.5 Pressure regulators. Unless otherwise approved in accordance with the applicable building code, pressure regulators shall be maintained so that their operation will not be affected by the elements (freezing rain, sleet, snow or ice), mud or debris. The protection is allowed to be an integral part of the regulator.	Maintenance of pressure regulator operations and protection. The pressure regulator must be maintained protected from the elements and is intended to prevent the over pressurization of the vehicle fuel tank and the delivery hose. Pressure regulator failure could result in dangerous overpressure and the opening of relief valves; therefore, they must be dependable. The regulator vent is susceptible to blockage by debris and ice.
84	CAAM	2308.6 Valves. Unless otherwise approved in accordance with the applicable building code, the remote, readily accessible manual shutoff valve shall be maintained.	2308.6 Valves. Unless otherwise approved in accordance with the applicable building code, gas piping to equipment shall maintain a remote, readily accessible manual shutoff valve.	Maintenance and accessibility of a manual shut off valve, not construction. Shutoff valves allow isolation of components for service, repair, replacement and emergency shutdown. This valve is independent of the emergency shutdown device required by Section 2308.7.

85	CA		2308.7 Emergency shutdown control. Emergency shutdown controls shall be maintained and remain within 75 feet (22 860 mm) of, but not less than 25 feet (7620 mm) from, dispensers as well as in the compressor area unless otherwise approved in accordance with the applicable building code. Where provided and, upon activation, the emergency shutdown system shall be maintained to automatically shut off the power supply to the compressor and close valves between the main gas supply and the compressor and between the storage containers and dispensers.	Maintenance and operations of emergency shutdown controls. Includes context regarding function of the equipment. CNG systems take natural gas from the utility supply line, compress it to very high pressures and store the compressed gas in vessels from which the dispensers draw the gas for transfer to the vehicle onboard containers. The emergency shutdown device, usually no farther than 75 feet (22 860 mm) from and no closer than 25 feet (7620 mm) to the dispensers, must be maintained. An additional shutdown device must also be maintained near the compressors; the compressors may be remote from the dispensers. The shutdown device must be maintained to disconnect the power to the compressors, must actuate automatic valves that isolate the gas supply from the compressors and isolate the storage vessels from the dispenser, thus limiting accidental gas discharge.
86	CA		2309.1 General. Hydrogen motor fuel-dispensing facilities shall be maintained and remain in accordance with the applicable building code. Such facilities shall be operated and maintained in accordance with this section and Chapter 58. Where a fuel-dispensing facility also includes a repair garage, the repair operation shall comply with Section 2311.	Restores the important reference to Chapter 58. The federal government is mandating that automakers move toward alternative fuels to replace conventional gasoline and diesel. Hydrogen is one alternative fuel likely to grow in popularity. Section 2309, along with the provisions of Chapter 58, clearly defines gaseous hydrogen refueling and generating stations within the scope of the code and provides fire code officials with the necessary tools to create a safe consumer environment as the use of hydrogen as a motor fuel increases. In many cases, the hydrogen fuel is utilized, with air, within a fuel cell to produce electricity and, in some cases, cogenerate heat. Typically, fire code officials will be faced with two classes of equipment—those that generate hydrogen (for use by other devices) and those that utilize hydrogen as their energy input.
87	CA		2309.2 Equipment. Unless otherwise approved in accordance with the applicable building code, equipment used for the generation, compression, storage or dispensing of hydrogen shall be maintained for the specific application in accordance with Sections 2309.2.1 through 2309.2.3.	There are no maintenance requirements in the building code. All equipment used in connection with the storage and dispensing of hydrogen motor fuel must be either approved or listed, as specified in the following sections.
88	CA		2309.2.1 Approved equipment. Unless otherwise approved in accordance with the applicable building code, cylinders, containers and tanks; pressure relief devices, including pressure valves; hydrogen vaporizers; pressure regulators; and piping used for gaseous hydrogen systems shall be maintained in accordance with Chapters 53, 55 and 58.	Key maintenance reference to specific chapters. The equipment identified in this section must be approved. Listing of the specified components could be the basis for approval, but listing is not mandated. Any such components must be designed and recommended for the application by the manufacturer.
89	CAAM	2309.2.2 Listed or approved equipment. Unless otherwise approved in accordance with the applicable building code, hoses, hose connections, compressors, hydrogen generators, dispensers, detection systems and electrical equipment used for hydrogen shall be maintained as listed and labeled or approved for use with hydrogen.	2309.2.2 Listed or approved equipment. Unless otherwise approved in accordance with the applicable building code, hoses, hose connections, compressors, hydrogen generators, dispensers, detection systems and electrical equipment used for hydrogen shall be maintained as listed or approved for use with hydrogen. Hydrogen motor-fueling connections shall remain listed and labeled or approved for use with hydrogen in accordance with the applicable building code.	Maintenance of listings and approvals, not construction. The equipment identified in this section must be approved. Listing of the specified components could be the basis for approval, but listing is not mandated. Any such components must be designed and recommended for the application by the manufacturer.
90	CA		2309.2.3 Electrical equipment. Electrical installations shall be maintained and remain in accordance with the applicable building code. Portable or temporary electrical equipment shall be in accordance with NFPA 70.	There are no maintenance requirements in the building code. This section addresses electrical equipment at hydrogen motor fuel-dispensing facilities and is correlated with NFPA 70. Electrical equipment use must be approved for the particular hazards anticipated at hydrogen motor fuel-dispensing facilities.

91	CA		2309.3 Location on property. Unless otherwise approved in accordance with the applicable building code, dispensing equipment operations shall be remain located in accordance with the applicable building code and maintained in accordance with Section 2301.1 and Sections 2309.3.1 through 2309.3.2.	Dispensing area operational requirements, not construction. In order to reduce the likelihood of hydrogen motor fuels coming into contact with ignition sources or posing a hazard to persons, adjoining property or on-site buildings, this section provides dispensing equipment operation location requirements in relation to outdoor equipment, canopies and overhead power lines.
92	CAAM	2309.3.1.1 Outdoors. Generation, compression, or storage equipment shall be allowed outdoors where maintained in accordance with Chapter 58 and NFPA 2 or the applicable building code.	2309.3.1.1 Outdoors. Generation, compression, or storage equipment shall be allowed outdoors where maintained in accordance with Chapter 58 and NFPA 2.	Generation, compression or storage are operational activities, not construction. Restores reference to Chapter 58. This section requires that hydrogen generation, compression and storage equipment installed outdoors be provided with the minimum separations prescribed by Chapter 58 and NFPA 2.
93	CAAM	2309.3.1.2 Indoors. Generation, compression, storage and dispensing equipment operations located in indoor rooms or other approved areas shall remain in accordance with the requirements of the applicable building code and the maintenance provisions of NFPA 2, including ventilation.	2309.3.1.2 Indoors. Generation, compression, storage and dispensing equipment operations located in indoor rooms or other approved areas shall remain in accordance with the requirements of the applicable building code and NFPA 2 including ventilation.	Location of generation, compression, storage and dispensing operations, not construction. The overriding theme of the indoor location requirements for the generation, compression, storage or dispensing of hydrogen motor fuel is to never permit the maximum concentration of flammable contaminants in air to exceed 25 percent of the lower flammable limit (LFL) for hydrogen during the period that a credible leak exists. This can be accomplished using natural or mechanical means to maintain adequate ventilation to prevent a hazardous buildup of hydrogen gas in buildings or confined spaces.
94	CAAM	2309.3.1.3 Gaseous hydrogen storage. Unless otherwise approved in accordance with the applicable building code, storage of gaseous hydrogen shall be maintained in accordance with Chapters 53 and 58.	2309.3.1.3 Gaseous hydrogen storage. Unless otherwise approved in accordance with the applicable building code, storage of gaseous hydrogen shall be in accordance with Chapters 53 and 58.	There are no maintenance requirements in the building code. This proposal restores important references to Chapters 53 and 58. Although Section 2309 includes substantial safeguards for the generation, compression, storage or dispensing of hydrogen motor fuel, gaseous hydrogen is also classified as a flammable gas requiring compliance with Chapter 58 and possesses compressed gas hazards requiring compliance with Chapter 53.
95	CAAM	2309.3.1.4 Liquefied hydrogen storage. Unless otherwise approved in accordance with the applicable building code, storage of liquefied hydrogen shall be maintained in accordance with Chapters 55 and 58.	2309.3.1.4 Liquefied hydrogen storage. Unless otherwise approved in accordance with the applicable building code, storage of liquefied hydrogen shall be in accordance with Chapters 55 and 58.	Storage is an operational activity, not construction. Although Section 2309 includes substantial safeguards for the generation, compression, storage or dispensing of hydrogen motor fuel, stored liquefied hydrogen is also classified as a flammable cryogenic fluid requiring compliance with Chapter 55, which in turn requires compliance with NFPA 55. Chapter 58 is referenced because it includes requirements for underground liquid hydrogen storage tanks.
96	CAAM	2309.3.1.5 Canopy tops. Unless otherwise approved in accordance with the applicable building code, gaseous hydrogen compression and storage equipment operations located on top of motor fuel-dispensing canopies shall be maintained in accordance with Sections 2309.3.1.5.1 through 2309.3.1.5.5, Chapters 53 and 58 and the applicable building code. NOTE: Canopy methods and materials require special conditions that must be maintained in accordance with the applicable building code.	2309.3.1.5 Canopy tops. Unless otherwise approved in accordance with the applicable building code, gaseous hydrogen compression and storage equipment operations located on top of motor fuel-dispensing canopies shall be maintained in accordance with Sections 2309.3.1.5.1 through 2309.3.1.5.5, Chapters 53 and 58 and the applicable building code.	Regulations for operations on top of canopies, not construction. Overhead placement enhances safety because the equipment remains removed from possible vehicular impact and ground-level ignition sources. This option has gained popularity, especially in more congested urban areas where real estate prices prohibit the purchase of sufficient property to meet the separation requirements of IFC Section 2309.3.2.5.1 for new motor fuel-dispensing facilities.
97	CAAM	Withdrawn	2309.3.1.5.1 Construction. Canopy construction shall be maintained and remain in accordance with the applicable building code. NOTE: See Motor Fuel Dispensing Canopy Requirements of the applicable building code.	Maintenance of construction, not construction. VCC Section 406.7.2 regulates installation of motor fuel-dispensing facility canopies and includes special requirements for canopies used to support hydrogen motor fuel equipment.

98	CA			2309.3.1.5.2 Fire Extinguishing systems. Fire-extinguishing systems provided for fuel-dispensing areas under canopies shall be maintained in accordance with Chapter 9 and remain in accordance with the applicable building code.	Removes construction language and provides maintenance language with pointer to Chapter 9
99	CA			2309.3.1.5.3 Emergency discharge. Where provided, operation of the fire extinguishing system shall be maintained to activate an automatic emergency discharge system which will discharge the hydrogen gas from the equipment on the canopy top through the vent pipe system.	Maintenance of emergency discharge. As part of protecting the hydrogen equipment mounted on top of the canopy from a fire developing below, this section requires that an approved emergency discharge system be provided to “dump” the hydrogen content of the system safely into the atmosphere.
100	CA			2309.3.1.5.4 Emergency shutdown control. Where provided, operation of the fire extinguishing system shall be maintained to activate the emergency shutdown control required to be maintained by Section 2309.5.3.	Maintenance of emergency shutdown Whereas Section 2309.3.2.6.2.1 requires maintenance of a precautionary hydrogen “dump” procedure from the canopy-mounted hydrogen equipment, this section requires maintenance of the emergency shutoff such process where also required to operate upon fire extinguishing system activation.
101	CA			2309.4.1 Dispensing systems. Unless otherwise approved in accordance with the applicable building code, dispensing systems with an overpressure protection device shall be maintained set at 140 percent of the service pressure of the fueling nozzle it supplies.	Maintenance of overpressure protection device with technical data. This section provides the overpressure protection of the vehicle fuel system by the fuel-dispensing system. Nearly all of the hydrogen fuel cell vehicles that are currently deployed or will be deployed in the near future rely on the fuel dispenser for overpressure protection. Similar language appears in NFPA 52.
102	CAAM		2309.5 Safety precautions. Safety precautions at hydrogen motor fuel-dispensing and generation facilities shall be in accordance with Section 2309.5.1 through 2309.5.3.1.	2309.5.3 Safety precautions. Safety precautions at hydrogen motor fuel-dispensing and generation facilities shall be in accordance with Section 2309.5.1 through 2309.5.3.1.	Scoping language. This section establishes a minimum level of safety for hydrogen motor fuel generation and dispensing.
103	CAAM		2309.5.2 Emergency shutoff valves. Unless otherwise approved in accordance with the applicable building code, a manual emergency shutoff valve to shut down the flow of gas from the hydrogen supply to the piping system shall be maintained.	2309.5.2 Emergency shutoff valves. Unless otherwise approved in accordance with the applicable building code, a manual emergency shutoff valve shall be maintained to shut down the flow of gas from the hydrogen supply to the piping system.	Maintenance of shutoff valves. To prevent spillage and to allow servicing of equipment, a remote accessible manual shutoff valve must be maintained. This valve is independent of the emergency shutdown equipment referenced in Section 2309.5.3.
104	CA			2309.5.3 Emergency shutdown controls. Unless otherwise approved in accordance with the applicable building code, a remotely located, manually activated shutdown control shall be maintained in addition to the manual emergency shutoff valve referenced by Section 2309.5.2. This emergency shutdown control shall be maintained within 75 feet (22 860 mm) of, but not less than 25 feet (7620 mm) from, dispensers and hydrogen generators unless otherwise approved by the applicable building code.	Maintenance of shutdown controls, not construction. Two emergency shutdown devices must be maintained, one in the compressor area in accordance with Section 2309.5.2 and the other no closer than 25 feet (7620 mm) or farther than 75 feet (22 860 mm) from the dispenser. These distances and devices are to be maintained at a location such that the emergency shutdown control is, at its furthest, no further from the hydrogen dispensers or generators than a portable fire extinguisher would be but not close enough to put personnel at risk of injury in the event of an emergency.
105	CA			2309.5.3.1 System requirements. Unless otherwise approved in accordance with the applicable building code, activation of the emergency shutdown control shall be maintained to automatically shut off the power supply to all hydrogen storage, compression and dispensing equipment; shut off natural gas or other fuel supply to the hydrogen generator; and close valves between the main supply and the compressor and between the storage containers and dispensing equipment.	Maintenance of system shutdown operations, not installation. Emergency shutdown controls must be maintained to shut down the power supply to the hydrogen storage, compression and dispensing equipment and close the valves leading to and from the compressor and between the storage containers and dispensers in the event of an emergency. Activation of any one emergency shutdown device must be maintained to activate total shutdown of all generation and dispensing operations on site.

106	CAAM	Withdrawn	2309.6.1.2.1.2 Vent pipe maximum diameter. Unless otherwise approved in accordance with the applicable building code, defueling vent pipes shall maintain a maximum inside diameter of 1 inch (25 mm).	Maintenance of vent pipe size including a minimum threshold for successful operations. When discharging hydrogen to the atmosphere, it is important that the size of the vent pipe on the equipment be such that it will provide sufficient discharge velocity to disperse the hydrogen in the air.
107	CAAM	Withdrawn	2309.6.1.2.1.3 Maximum flow rate. Unless otherwise approved in accordance with the applicable building code, the maximum rate of hydrogen flow through the vent pipe system shall not exceed 1,000 cfm at NTP (0.47 m3/s) and shall be controlled by means of the manufacturer's equipment, at low pressure and without adjustment.	When gas flows through piping, friction with the pipe wall generates heat. Limiting the flow rate limits the amount of heat generated by the flow of gas. This is an operational control, not construction.
108	CAAM	Withdrawn	2309.6.1.2.2 System documentation. System documentation illustrating the defueling system to be utilized shall be provided. Documentation shall be of sufficient detail and clarity to allow for evaluation of the piping and control systems to be utilized and include the method of support for cylinders, containers or tanks to be used as part of a closed transfer system, the method of grounding and bonding and other requirements specified herein.	Defueling systems and equipment are operational components of a repair garage. Each system can be different and it is important for the fire official to have access to the system documents to ensure that they are being used and maintained properly.
109	CAAM	Withdrawn	2309.6.1.2.3 Stability of cylinders, containers and tanks. A method of rigidly supporting cylinders, containers or tanks used during the closed transfer system discharge or defueling of hydrogen shall be provided. The method shall provide not less than two points of support and shall be designed to resist lateral movement of the receiving cylinder, container or tank. The system shall be designed to resist movement of the receiver based on the highest gas-release velocity through valve orifices at the receiver's rated service pressure and volume. Supporting structures or appurtenances used to support receivers shall be constructed of noncombustible materials in accordance with the applicable building code.	Stability of cylinders is an operational issue with equipment, not construction. Vehicle hydrogen fuel containers can hold extremely high pressures, which, if released quickly, can produce large thrust forces that would propel the container like a rocket. Hydrogen does not liquefy at normal ambient temperatures; therefore, in order to hold the required amount of fuel on board the vehicle, the gaseous fuel must be compressed to extreme pressures of 3,000 to 5,000 psia (20 613 to 34 355 kPa).
110	CAAM	Withdrawn	2309.6.1.2.4 Grounding and bonding. Cylinders, containers or tanks and piping systems used for defueling shall be bonded and grounded. Unless specifically approved otherwise in accordance with the applicable building code, structures or appurtenances used for supporting the cylinders, containers or tanks shall be grounded in accordance with NFPA 70. The valve of the vehicle storage tank shall be bonded with the defueling system prior to the commencement of discharge or defueling operations.	Grounding and bonding is an operational procedure, not construction.
111	CAAM	Withdrawn	2309.6.2 Repair of hydrogen piping. Piping systems containing hydrogen shall not be opened to the atmosphere for repair without first purging the piping with an inert gas to achieve 1%t hydrogen or less by volume. Defueling operations and exiting purge flow shall be vented in accordance with Section 2309.6.1.2.	Operational procedures, not construction. The proposal restores the last sentence referencing proper discharge. To prevent the release of flammable hydrogen gas to the atmosphere and to prevent an explosive hydrogen-air mixture (above 1-percent hydrogen based on the pipe volume) within system piping, this section requires that piping be purged with an inert gas before being disconnected and repaired.
112	CAAM	2310.1 General. Marine motor fuel-dispensing facilities shall be maintained and remain in accordance with the applicable building code and the maintenance provisions of NFPA 30A. The storage of Class I, II or IIIA liquids at marine motor fuel-dispensing facilities shall be maintained in accordance with this chapter and Chapter 57.	2310.1 General. Marine motor fuel-dispensing facilities shall be maintained and remain in accordance with the applicable building code and NFPA 30A. The storage of Class I, II or IIIA liquids at marine motor fuel-dispensing facilities shall be maintained in accordance with this chapter and Chapter 57.	Scoping section regarding maintenance of motor fuel-dispensing facilities.

113	CA		2310.2 Storage and handling. The storage and handling of Class I, II or IIIA liquids at marine motor vehicle fuel-dispensing facilities shall be in accordance with Sections 2310.2.1 through 2310.2.3.	There are no maintenance requirements in the building code.
114	CA		2310.2.1 Class I, II or IIIA liquid storage. Unless otherwise approved in accordance with the applicable building code, Class I, II or IIIA liquids stored inside of buildings used for marine motor fuel-dispensing facilities shall be stored in approved containers or portable tanks. Storage of Class I liquids shall not exceed 10 gallons (38 L). Exception: Storage in liquid storage rooms in accordance with the applicable building code.	Maintenance of storage, not construction. There are no maintenance requirements in the building code.
115	CA		2310.2.2 Class II or IIIA liquid storage and dispensing. Unless specifically approved otherwise in accordance with the applicable building code, Class II or IIIA liquids stored or dispensed inside of buildings used for marine motor vehicle fuel-dispensing facilities shall be stored in and dispensed from approved containers or portable tanks. Storage of Class II and IIIA liquids shall be maintained to not exceed 120 gallons (454 L).	There are no maintenance or operational requirements in the building code.
116	CA		2310.2.3 Heating equipment. Heating equipment installed in Class I, II or IIIA liquid storage or dispensing areas shall comply with Section 2301.6.	There are no maintenance requirements in the building code.
117	CA		2310.3.3 Hoses and nozzles. Unless otherwise approved in accordance with the applicable building code, dispensing of Class I, II or IIIA liquids into the fuel tanks of marine craft shall be by means of an approved-type hose equipped with a listed automatic-closing nozzle without a latch-open device. Hoses used for dispensing or transferring Class I, II or IIIA liquids, when not in use, shall be reeled, racked or otherwise protected from mechanical damage.	Operational procedures, not construction. The automatic-closing-type nozzle is designed to operate with automotive-type fuel receivers. Many marine craft are not equipped with automotive-type fuel receivers with the vent line terminating in the receiver tube. It is the fuel returning in the vent line that shuts off the automatic-type nozzle. Therefore, the latch-open device must not be used on marine craft.
118	CA		2310.3.5 Liquefied petroleum gas. Liquefied petroleum gas cylinders shall not be filled at marine motor fuel-dispensing facilities unless approved. Approved storage facilities for LP-gas cylinders shall be provided. See also Section 2307.	Operational procedures for filling cylinders, not construction. Many marine vessels use LP-gas for heating and cooking. LP-gas cylinders may not be refilled at a marina, unless specifically approved. Section 2307 has requirements for dispensing LP-gas at motor fuel-dispensing facilities, and this section can be used in making the decision on whether to approve the dispensing operations of LP-gas at marinas.
119	CA		2310.6 Fire protection. Fire protection features for marine motor fuel-dispensing facilities shall be maintained in accordance with Sections 2310.6.1 through 2310.6.4 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
120	CA		2311.2 Storage and use of flammable and combustible liquids. The storage and use of flammable and combustible liquids in repair garages shall be maintained in accordance with Chapter 57 and Sections 2311.2.1 through 2311.2.4 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
121	CAAM	2311.3.1 Equipment. Appliances and equipment installed in a repair garage shall be maintained in accordance with Chapter 6, the applicable building code and the maintenance provisions of NFPA 70.	2311.3.1 Equipment. Appliances and equipment installed in a repair garage shall be maintained and the provisions NFPA 70, Chapter 6 of this code and remain in accordance with the applicable building code.	Maintenance of appliances and equipment. There are no maintenance requirements in the building code.
122	CA		2311.4 Below-grade areas. Pits and below-grade work areas in repair garages shall comply with Sections 2311.4.1 through 2311.4.3.	Scoping section only, there are no maintenance requirements in the building code.

123	CAAM	2311.4.2 Means of egress. Means of egress for pits and below-grade work areas shall be maintained in accordance with Chapter 10 and in accordance with the applicable building code.	2311.4.2 Means of egress. Means of egress for pits and below-grade work areas shall be maintained in accordance with Chapter 10 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
124	CAAM	2311.4.3 Ventilation. Where Class I liquids or LP-gas are stored or used within a building having a basement or pit wherein flammable vapors could accumulate, the basement or pit shall maintain mechanical ventilation in accordance with the applicable building code, to prevent the accumulation of flammable vapors.	2311.4.3 Ventilation. Where Class I liquids or LP-gas are stored or used within a building having a basement or pit wherein flammable vapors could accumulate, the basement or pit shall maintain mechanical ventilation and remain in accordance with the applicable building code, to prevent the accumulation of flammable vapors.	There are no maintenance requirements in the building code. It is critical that a ventilation system must be operated and maintained in any below grade area where flammable and combustible vapors might accumulate. The ventilation system must be in operation any time the repair garage is open for business, if a vehicle is left parked over the pit when the garage is closed for business or anytime there is a chance that vapors may accumulate in the below grade area. It is never ok to allow operations which permit the accumulation of flammable vapors.
125	CA		2311.8 Repair garages for vehicles fueled by lighter-than-air fuels The room, motor vehicle repair booth or motor vehicle repair space containing repair garage activities for the conversion or repair of vehicles that use CNG, LNG, hydrogen or other lighter-than-air motor fuels shall be in accordance with the applicable building code and Sections 2311.8 through 2311.8.11 in addition to the other requirements of Section 2311. Repair garages for the repair of vehicles that use hydrogen fuel shall be in accordance with this code, the applicable building code and NFPA 2. Exceptions: 1.Repair garages where work is conducted only on vehicles that have been defueled and their systems purged with nitrogen gas, and where standard operating procedures to document and maintain the fueling status throughout repair operations are approved. 2. Repair garages where work is not performed on the fuel system and is limited to exchange of parts and maintenance not requiring open flame or welding on the CNG-, LNG-, hydrogen- or other lighter-than-air-fueled motor vehicle. 3. Repair garages for hydrogen-fueled vehicles where work is not performed on the hydrogen storage tank and is limited to the exchange of parts and maintenance not requiring open flame or welding on the hydrogen-fueled vehicle. During the work, the entire hydrogen fuel system shall contain less than 200 cubic feet (5.6 m3) of hydrogen. 4. Repair garages for natural-gas-fueled vehicles where work is not being performed on the fuel storage tank, and is limited to the exchange of parts and maintenance not requiring open flame or welding on the natural-gas-fueled vehicle. During the work, the natural gas, in the vehicle fuel tank shall contain a pressure of not more than 250 psi at 70°F (1724 kPa at 21°C).	
126	CA	No change from 2018 IFC.	2311.8.1 Preparation of vehicles for repair For vehicles powered by gaseous fuels, the fuel shutoff valves shall be closed prior to repairing any portion of the vehicle fuel system. Vehicles powered by gaseous fuels in which the fuel system has been damaged shall be inspected and evaluated for fuel system integrity prior to being brought into the repair garage. The inspection shall include testing of the entire fuel delivery system for leakage.	

127	CAAM		2311.8.2 Repair garages used for the repair of hydrogen-fueled vehicles Repair garages used for the repair of hydrogen-fueled vehicles are required to be provided with an approved exhaust ventilation system in accordance with the applicable building code and maintained in accordance with Chapter 6 of NFPA 2.	2311.8.2 Repair garages used for the repair of hydrogen-fueled vehicles Repair garages used for the repair of hydrogen-fueled vehicles shall be maintained and operated with an approved exhaust ventilation system in accordance with the International Mechanical Code and Chapter 6 of NFPA 2.	Research hydrogen powered vehicles
128	CA		NEW	2311.8.3 Motor vehicle repair rooms Motor vehicle repair rooms shall maintain fire-resistance rated separation from adjacent areas in accordance with Chapter 7 and the applicable building code.	
130	CAAM		2311.8.4.1 Construction Motor vehicle repair booths shall be maintained with approved materials in accordance with the applicable building code. Structural sections of motor vehicle repair booths shall remain sealed in an approved manner.	2311.8.4.1 Construction Motor vehicle repair booths shall be maintained with approved noncombustible materials in accordance with the applicable building code. Structural sections of motor vehicle repair booths shall remain sealed in an approved manner.	
131	CA		NEW	2311.8.4.2 Surfaces The interior surfaces of motor vehicle repair booths shall be maintained to permit the free passage of exhaust air from all parts of the interior.	
132	CAAM		2311.8.4.3 Means of egress Means of egress shall be maintained in accordance with Chapter 10 and the applicable building code. NOTE: Means of egress doors from premanufactured motor vehicle repair booths shall be in accordance with manufacturer's specifications.	2311.8.4.3 Means of egress Means of egress shall be provided in accordance with Chapter 10 and the applicable building code. Exception: Means of egress doors from premanufactured motor vehicle repair booths shall be not less than 30 inches (762 mm) in width by 80 inches (2032 mm) in height.	

133	CAAM	2311.8.4.4 Clear space Unless otherwise approved by the applicable building code, motor vehicle repair booths shall be maintained so that all parts of the booth provide ready access for cleaning. A clear area of not less than 3 feet (914 mm) wide shall be maintained on all sides of the motor vehicle repair booth. This clear area shall be kept free of any storage or combustible construction. Exceptions: 1. This requirement shall not prohibit locating a motor vehicle repair booth closer than 3 feet (914 mm) to or directly against an interior partition, wall or floor/ceiling assembly that has a fire-resistance rating of not less than 1 hour in accordance with the applicable building code, provided that the motor vehicle repair booth can be adequately maintained and cleaned. 2. This requirement shall not prohibit locating a motor vehicle repair booth closer than 3 feet (914 mm) to an exterior wall or a roof assembly, provided that the wall or roof is maintained of noncombustible material in accordance with the applicable building code and the motor vehicle repair booth can be adequately maintained and cleaned.	2311.8.4.4 Clear space Motor vehicle repair booths shall be maintained so that all parts of the booth provide ready access for cleaning. A clear area of not less than 3 feet (914 mm) wide shall be maintained on all sides of the motor vehicle repair booth. This clear area shall be kept free of any storage or combustible construction. Exceptions: 1. This requirement shall not prohibit locating a motor vehicle repair booth closer than 3 feet (914 mm) to or directly against an interior partition, wall or floor/ceiling assembly that has a fire-resistance rating of not less than 1 hour in accordance with the applicable building code, provided that the motor vehicle repair booth can be adequately maintained and cleaned. 2. This requirement shall not prohibit locating a motor vehicle repair booth closer than 3 feet (914 mm) to an exterior wall or a roof assembly, provided that the wall or roof is maintained of noncombustible material in accordance with the applicable building code and the motor vehicle repair booth can be adequately maintained and cleaned.	
134	CAAM	2311.8.5 Motor vehicle repair spaces Where such spaces are not separately enclosed, noncombustible spray curtains shall be maintained and used to restrict the spread of flammable gases in accordance with the applicable building code.	2311.8.5 Motor vehicle repair spaces Where such spaces are not separately enclosed, noncombustible spray curtains shall be maintained and used to restrict the spread of flammable gases.	
135	CA	Withdrawn	2311.8.6 Fire protection Motor vehicle repair booths or spaces located in a room or area protected by an automatic sprinkler system shall have the protection extended to include the inside of the motor vehicle repair booth or space in accordance with the applicable building code.	
136	CA	NEW	2311.8.7 Fire extinguishers Portable fire extinguishers complying with Section 906 shall be provided and maintained for motor vehicle repair rooms, motor vehicle repair booths or motor vehicle repair spaces.	

137	CAAM	2311.8.8 Exhaust ventilation system Where required by the applicable building code, repair garages used for the repair of CNG, LNG, or other lighter-than-air motor fuels other than hydrogen shall be maintained and operated with an approved mechanical ventilation system. The mechanical exhaust ventilation system shall be in accordance with the applicable building code and Sections 2311.8.8.1 and 2311.8.8.2. Where approved by the applicable building code, natural ventilation shall be permitted in lieu of mechanical exhaust ventilation.	2311.8.8 Exhaust ventilation system Repair garages used for the repair of CNG, LNG, or other lighter-than-air motor fuels other than hydrogen shall be maintained and operated with an approved mechanical ventilation system. The mechanical exhaust ventilation system shall be in accordance with the applicable building code and Sections 2311.8.8.1 and 2311.8.8.2. Exception: Where approved by the fire code official, natural ventilation shall be permitted in lieu of mechanical exhaust ventilation.	
138	CAAM	2311.8.8.2 Operation Where required by the applicable building code, the mechanical exhaust ventilation system shall operate continuously. Exceptions: 1.Mechanical exhaust ventilation systems that are interlocked with a gas detection system designed in accordance with Sections 2311.8.9 through 2311.8.9.2. 2.Mechanical exhaust ventilation systems in repair garages that are used only for repair of vehicles fueled by liquid fuels or odorized gases, such as CNG, where the ventilation system is electrically interlocked with the lighting circuit.	2311.8.8.2 Operation The mechanical exhaust ventilation system shall operate continuously. Exceptions: 1.Mechanical exhaust ventilation systems that are interlocked with a gas detection system designed in accordance with Sections 2311.8.9 through 2311.8.9.2. 2.Mechanical exhaust ventilation systems in repair garages that are used only for repair of vehicles fueled by liquid fuels or odorized gases, such as CNG, where the ventilation system is electrically interlocked with the lighting circuit.	
139	CAAM	2311.8.9 Gas detection system Where required by the applicable building code, repair garages used for repair of vehicles fueled by nonodorized gases including, but not limited to, hydrogen and nonodorized LNG the gas detection system shall be maintained. Where lubrication or chassis service pits are provided in garages used for repairing nonodorized LNG-fueled vehicles, gas sensors shall be maintained and operated in such pits.	2311.8.9 Gas detection system Repair garages used for repair of vehicles fueled by nonodorized gases including, but not limited to, hydrogen and nonodorized LNG, shall maintain a gas detection system that complies with the applicable building code. The gas detection system shall be designed to detect leakage of nonodorized gaseous fuel. Where lubrication or chassis service pits are provided in garages used for repairing nonodorized LNG-fueled vehicles, gas sensors shall be maintained and operated in such pits.	
140	CAAM	2311.8.9.1 System activation Required systems shall be maintained and operated as approved to result in all of the following if required by the applicable building code: 1. Initiation of local audible and visual alarms in approved locations. 2. Deactivation of heating systems located in the repair garage. 3. Activation of the mechanical exhaust ventilation system, where the ventilation system is interlocked with gas detection.	2311.8.9.1 System activation Where provided in accordance with the applicable building code, activation of the gas detection alarm shall be maintained and operated to result in all of the following: 1. Initiation of local audible and visual alarms in approved locations. 2. Deactivation of heating systems located in the repair garage. 3. Activation of the mechanical exhaust ventilation system, where the ventilation system is interlocked with gas detection.	

141	CA	NEW	2311.8.9.2 Failure of the gas detection system Unless otherwise permitted by the applicable building code, failure of the gas detection system shall automatically deactivate the heating system, activate the mechanical exhaust ventilation system where the system is interlocked with the gas detection system and cause a trouble signal to sound in an approved location.	
142	CAAM	2311.8.10 Classified electrical area Classified electrical areas within 18 inches (450 mm) of a ceiling, shall be maintained in accordance with the applicable building code and free of electrical hazards.	2311.8.10 Classified electrical area Areas within 18 inches (450 mm) of a ceiling within a motor vehicle repair room or motor vehicle repair booth shall be in accordance with the requirements for Class I, Division 2 classified locations, as set forth in NFPA 70 and the applicable building code. Exceptions: 1. Rooms with exhaust ventilation of not less than 1 cubic foot per minute per square foot (0.3 m3/ min/m2) of floor area, with suction taken from a point within 18 inches (450 mm) of the highest point in the ceiling in repair garages for vehicles that use CNG, liquefied natural gas (LNG) or other lighter-than-air motor fuels. 2. Rooms used for the repair of hydrogen-fueled vehicles that have an approved exhaust ventilation system in accordance with the International Mechanical Code and NFPA 2.	
143	CA		2311.8.11 Defueling equipment required at vehicle maintenance and repair facilities Facilities for repairing or replacing hydrogen fuel tanks on hydrogen-fueled vehicles shall have equipment to defuel vehicle storage tanks. Where work must be performed on a vehicle's fuel storage tank for the purpose of maintenance, repair or cylinder certification, defueling and purging shall be conducted in accordance with Section 2309.6 and NFPA 2.	
144	CAAM	2403.2.1 Electrical wiring and equipment. Electrical wiring and equipment shall be maintained in accordance with this chapter, the applicable building code, the applicable provisions of NFPA 70 and Chapter 6 of this code.	2403.2.1 Electrical wiring and equipment. Electrical wiring and equipment shall be maintained in accordance with this chapter, chapter 6 and NFPA 70.	Regulation of ignition sources is most commonly an operational is about equipment and arrangements, not permanent construction. In order to control the ignition and personnel hazards of electrical wiring and equipment, they must meet the requirements of NFPA 70. Those requirements are found in Article 516 of NFPA 70 for areas in and around the spraying equipment, which places restrictions on the use of portable electric lamps. The classification of an area is based on the amount of flammable vapors, combustible mists, residues, dust or deposits present.
145	CAAM	2403.2.1.1 Flammable vapor areas. Electrical wiring and equipment in flammable vapor areas shall be of an explosion proof type approved for use in such hazardous locations as classified by the applicable building code, and shall be maintained in accordance with the applicable provisions of NFPA 70 and Chapter 6 of this code.	2403.2.1.1 Flammable vapor areas. Electrical wiring and equipment in flammable vapor areas shall be of an explosion proof type approved for use in such hazardous locations as classified by the applicable building code and maintained in accordance with NFPA 70, and chapter 6.	Classification of areas is an operational requirement that may evolve over the lifespan of a facility. The areas where flammable vapors [defined as flammable constituents in air that exceed 25 percent of the lower flammable limit (LFL)] are present must meet the requirements for Class I, Division 1 hazardous locations. The areas where combustible residues (such as dusts or deposits) are present must meet the requirements for the Class II, Division 1 (for dusts and residue) electrical classification. This is a very critical aspect of prevention of sources of ignition. Based on the definition of "Flammable vapor area," the fire code official is authorized to define the extent of the flammable vapor area in any specific case. Otherwise, the areas described in that definition, such as the interior of spray booths, are used for electrical classification.

146	CA		2403.2.1.2 Areas subject to deposits of residues. Electrical equipment, flammable vapor areas or drying operations that are subject to splashing or dripping of liquids shall be specifically approved for locations containing deposits of readily ignitable residue and explosive vapors. Exceptions: 1.This provision shall not apply to wiring in rigid conduit, threaded boxes or fittings not containing taps, splices or terminal connections. 2.This provision shall not apply to electrostatic equipment allowed by Section 2407. In resin application areas, electrical wiring and equipment that is subject to deposits of combustible residues shall be listed for such exposure and shall be installed as required for hazardous (classified) locations. Electrical wiring and equipment not subject to deposits of combustible residues shall be installed as required for ordinary hazard locations.	Residues and overspray are a result of operations, not construction. It is critical that only specifically approved electrical equipment be allowed in spraying spaces where deposits of combustible residues may readily accumulate. This section limits the use of electrical equipment in the above-mentioned area subject to deposit of residue for two primary reasons: 1.Sparks from such equipment could cause ignition of flammable vapors or overspray residue. 2.Buildup of combustible overspray or splashed residue accumulating on the surfaces of electrical equipment subject to heating may cause equipment to overheat and ignite. Taps, splices or terminal connections (similar to those of connections within flammable liquid transfer systems) are the areas where accidents are most likely to occur. By removing risks associated with such fittings and installing rigid conduit to protect against splashing or dripping of liquids, the hazards associated with such electrical equipment are reduced substantially. Because the electrostatic equipment is part of many flammable-finish processes, Section 2407 requires that the equipment be approved.
147	CAAM	2403.2.1.3 Areas adjacent to spray booths. Unless otherwise approved by the applicable building code, electrical wiring and equipment located outside of, but within 5 feet (1524 mm) horizontally and 3 feet (914 mm) vertically of openings in a spray booth or a spray room, shall be approved for hazardous locations.	2403.2.1.3 Areas adjacent to spray booths. Electrical wiring and equipment located outside of, but within 5 feet (1524 mm) horizontally and 3 feet (914 mm) vertically of openings in a spray booth or a spray room, shall be approved for hazardous locations in accordance with the applicable building code and maintained in accordance with NFPA 70 and Chapter 6.	Designation of hazardous areas can change depending on the type and scale of operation. This is an operational requirement that needs guidance during the lifetime of the facility. Class I, Division 2, and Class II, Division 2 typically apply to areas where accumulation of flammable vapors and combustible dust are prevented through ventilation and dust collection systems. However, flammable vapors and combustible dusts may be present in these areas if the ventilation system fails.
148	CA		2403.2.5 Grounding. Metal parts of spray booths, exhaust ducts and piping systems conveying Class I or II liquids shall be electrically grounded in accordance with NFPA 70. Metallic parts located in resin application areas, including but not limited to exhaust ducts, ventilation fans, spray application equipment, workpieces and piping, shall be electrically grounded.	Static electricity is one of the most insidious and most common of all ignition sources. According to D.R. Scarborough in 2003, static sparks are the most common ignition sources involving spray-finishing operations. Additionally, humans are conductors of electricity, meaning that operators must also be considered when grounding systems are determined.

149	CAAM	2404.2 Location of spray-finishing operations. Unless otherwise approved by the applicable building code, spray finishing operations shall not be conducted in buildings used for Group A, E, I or R occupancies except where approved in accordance with the applicable building code. In other occupancies, spray-finishing operations shall be conducted in a spray room, spray booth or spraying space approved for such use where required by the applicable building code. Exceptions: 1.Automobile undercoating spray operations and spray-on automotive lining operations conducted in areas with approved natural or mechanical ventilation shall be exempt from the provisions of Section 2404 when approved and where utilizing Class IIIA or IIIB combustible liquids. 2.In buildings other than Group A, E, I or R occupancies, approved limited spraying space in accordance with Section 2404.9. 3.Resin application areas used for manufacturing of reinforced plastics complying with Section 2409 shall not be required to be located in a spray room, spray booth or spraying space.	2404.2 Location of spray-finishing operations. Spray finishing operations shall not be conducted in buildings used for Group A, E, I or R occupancies except where approved in accordance with the applicable building code. In other occupancies, spray-finishing operations shall be conducted in a spray room, spray booth or spraying space approved for such use. Exceptions: 1.Automobile undercoating spray operations and spray-on automotive lining operations conducted in areas with approved natural or mechanical ventilation shall be exempt from the provisions of Section 2404 when approved and where utilizing Class IIIA or IIIB combustible liquids. 2.In buildings other than Group A, E, I or R occupancies, approved limited spraying space in accordance with Section 2404.9. 3.Resin application areas used for manufacturing of reinforced plastics complying with Section 2409 shall not be required to be located in a spray room, spray booth or spraying space.	Regulates the location of spray finishing operations to reduce risk. Not construction. In the listed occupancy groups, separating spray-finishing operations from other portions of the building and protecting those portions from spraying-associated hazards are critical for several reasons. Spray finishing operations are generally too hazardous to be conducted in occupancies with a high life or property exposure. The number of occupants in such buildings and the physical conditions of those occupants vary. People exposed to the danger of a fire involving spray finishing must be able to evacuate or protect themselves promptly and effectively to avoid the risk of serious injury or death. Also, the psychology of people in a Group A, E, I or R occupancy is very different from those in a Group F manufacturing occupancy where spraying operations are usually found. A person walking in a manufacturing environment where flammable-finish processes take place in a large area where spray booths and signs are in plain view, for example, is more aware of the physical dangers associated with these processes than someone in a Group R occupancy who may be merely relaxing with a cigarette. Also note that the protection provided in these occupancies is, in many cases, less than would be found in manufacturing occupancies. Separation and protection in the form of fire-resistance-rated construction and automatic fire suppression must be provided where such operations are to be conducted in the same building.
150	CA		2404.3 Design and construction. Design and construction of spray rooms, spray booths and spray spaces shall be in accordance with the applicable building code. These area shall be maintained in accordance with Sections 2404.3 through 2404.3.3.1.	Restores reference to the applicable building code for construction of spray rooms, booths and spaces. Also provides editorial language for the subsequent subsections.
151	CA		2404.3.1 Spray rooms. Spray rooms shall be maintained in accordance with this section and remain in accordance with the applicable building code.	Changes construction language to maintenance language for spray rooms.
152	CA		2404.3.1.1 Floor. Combustible floor construction in spray rooms shall be covered by approved, noncombustible, nonsparking material, except where combustible coverings, including but not limited to thin paper or plastic and strippable coatings, are utilized over noncombustible materials to facilitate cleaning operations in spray rooms.	Floor covering is not construction. In spray rooms, noncombustible floors would be the preferred type of floor construction so as not to contribute to the fuel load available to an unwanted fire. However, if the floor is not noncombustible, noncombustible and nonsparking material must be used to cover the floor. Kraft paper and similar coverings are commonly used in spraying spaces to protect against overspray. Such coverings must be removed and discarded when accumulation becomes excessive.
153	CAAM	2404.3.2 Spray booths. The design and construction of spray booths shall be in accordance with the applicable building code and maintained in accordance with section 2404.3.2.2 through 2403.3.2.5 and 2304 through 2304.8 and the applicable sections of NFPA 33.	2404.3.2 Spray booths. The design and construction of spray booths shall be in accordance with the applicable building code and maintained in accordance with section 2404.3.2.2 through 2403.3.2.5 and 2304 through 2304.8 and NFPA 33.	Sections 2404.3.2.1 through 2404.3.2.6 and 2404.4 through 2404.8 and NFPA 33 contain requirements for controlling hazards associated with spray booths. Much of the hazard prevention and mitigation of flammable-finish fires in a spray booth depend on the proper construction and design of the spray booth.

154	CA		2404.3.2.2 Surfaces. The interior surfaces of spray booths shall be smooth; shall be maintained so as to permit the free passage of exhaust air from all parts of the interior, and to facilitate washing and cleaning; and shall be maintained to confine residues within the booth. Aluminum shall not be used unless approved by the applicable building code.	Maintenance of surfaces is not construction. Rough, corrugated or uneven surfaces are difficult to clean. Periodic cleaning of the interior surfaces reduces the fire hazard posed by the accumulation of flammable or combustible coatings. Because flammable or combustible vapors and dusts are typically heavier than air, design considerations should include the passage of exhaust air and proper air circulation to all parts of the spray booth, especially at or near the floor level. Due to the physical properties of aluminum, it is unsuitable for cleaning and scraping of overspray residue.
155	CA		2404.3.2.3 Floor covering. Combustible floor construction in spray booths shall be covered by approved, noncombustible, nonsparking material, except where combustible coverings, including but not limited to thin paper or plastic and strippable coatings, are utilized over noncombustible materials to facilitate cleaning operations in spray booths.	Floor covering is not construction. In spray booths, noncombustible floors would be the preferred type of floor construction so as not to contribute to the fuel load available to an unwanted fire. However, if the floor is not noncombustible, noncombustible and nonsparking material must be used to cover the floor. Kraft paper and similar coverings are commonly used in spraying spaces to protect against overspray. Such coverings must be removed and discarded when accumulation becomes excessive.
156	CA		2404.3.2.4 Means of egress. Means of egress shall be maintained in accordance with the applicable building code and Chapter 10.	Add the reference back to Chapter 10 for egress maintenance.
157	CAAM	2404.3.2.5 Clear space. Spray booths shall be maintained so that all parts of the booth are readily accessible for cleaning. Unless otherwise approved by the applicable building code, a clear space of not less than 3 feet (914 mm) shall be maintained on all sides of the spray booth. This clear space shall be kept free of any storage or combustible construction. If approved in accordance with the applicable building code, the following exceptions may apply: 1.This requirement shall not prohibit locating a spray booth closer than 3 feet (914 mm) to or directly against an interior partition, wall or floor/ceiling assembly that has a fire-resistance rating of not less than 1 hour, provided the spray booth can be adequately maintained and cleaned. 2.This requirement shall not prohibit locating a spray booth closer than 3 feet (914 mm) to an exterior wall or a roof assembly, provided the wall or roof is constructed of noncombustible material and the spray booth can be adequately maintained and cleaned.	2404.3.2.5 Clear space. Spray booths shall be maintained so that all parts of the booth are readily accessible for cleaning. A clear space of not less than 3 feet (914 mm) shall be maintained on all sides of the spray booth. This clear space shall be kept free of any storage or combustible construction. Exceptions: If approved in accordance with the applicable building code, 1.This requirement shall not prohibit locating a spray booth closer than 3 feet (914 mm) to or directly against an interior partition, wall or floor/ceiling assembly that has a fire-resistance rating of not less than 1 hour, provided the spray booth can be adequately maintained and cleaned. 2.This requirement shall not prohibit locating a spray booth closer than 3 feet (914 mm) to an exterior wall or a roof assembly, provided the wall or roof is constructed of noncombustible material and the spray booth can be adequately maintained and cleaned.	Restores the exceptions which were deleted. The topic is housekeeping and not construction. Spray booths are viewed as equipment where accessibility is essential to cleaning and maintenance. This section is also included for housekeeping reasons, and to keep combustible debris and materials away from the spray booth to reduce the chances of an ignition on its exterior from a fire that might occur within the booth. This clearance also serves to prevent heat from a fire within a booth from being transferred to adjacent combustible material. It also will prevent a fire near a booth (from combustible storage, for example) from acting as an ignition source for the booth
158	CAAM	2404.3.4 Spraying spaces. The design and construction of spray booths shall be in accordance with the applicable building code and maintained in accordance with Section 2404.3.3.1 and Sections 2404.4 through 2404.8 of this code.	2404.3.3 Spraying spaces. Spraying spaces shall be designed and constructed in accordance with the applicable building code and maintained in accordance with Section 2404.3.3.1 and Sections 2404.4 through 2404.8 of this code.	Restores the references to the subsections.

159	CA		2404.3.3.1 Floor covering. Combustible floor construction in spraying spaces shall be covered by approved, noncombustible, nonsparking material, except where combustible coverings, such as thin paper or plastic and strippable coatings, are utilized over noncombustible materials to facilitate cleaning operations in spraying spaces.	Floor covering is not construction. The spray-booth floor requirements in this section parallel those for spray rooms in Section 2404.3.1.1 and spray booths in Section 2404.3.2.3
160	CA		2404.4 Fire protection. Unless otherwise permitted by the applicable building code, spray booths and spray rooms shall be protected by an approved automatic fire-extinguishing system complying with the requirements of the applicable building code and maintained in accordance with Chapter 9.	Automatic sprinkler protection is the preferred method of protection for spray booths and spray rooms where the building is otherwise sprinklered. In nonsprinklered buildings that contain spray booths and spray rooms, alternative automatic fire-extinguishing systems, such as clean agents, carbon dioxide, dry chemical, etc., are allowed to be installed when approved by the fire code official. See the commentary to Section 904 for further discussion of specific types of alternative fire-extinguishing systems. Fire protection systems, equipment and devices must be installed and maintained in accordance with Chapter 9. Because the flammable-finish operations are subject to accumulation of residue, failure of the system as a result of poor maintenance is more likely in these areas than in most other types of facilities.
161	CA		2404.6.2.1 Glass panels. Panels for luminaires or for observation shall maintain seals to confine vapors, mists, residues, dusts and deposits to the flammable vapor area. Panels for luminaires shall be separated from the luminaire to prevent the surface temperature of the panel from exceeding 200°F (93°C).	Not construction. The surface of incandescent bulbs, halogen lamps and other light fixtures (luminaires) often exceeds the ignition temperature of common flammable and combustible liquids. Separation of light fixtures (luminaires) from the glazing will help reduce the surface temperature on the unexposed side of the glass. Glass panels must be designed, arranged and protected to ease cleaning and prevent breakage.
162	CA		2404.6.2.2 Exterior luminaires. Luminaires attached to the walls or ceilings of a flammable vapor area, but outside of any classified area and separated from the flammable vapor areas by vapor-tight glass panels, shall be suitable for use in ordinary hazard locations. Such luminaires shall be serviced from outside the flammable vapor areas.	External luminaries can change over the life span of a facility. Safety features, such as ventilation and separation using vapor-tight glass panels, allow for the use of ordinary light fixtures (luminaires) that are not electrically classified for hazardous locations. To maintain the integrity of the separation (that is, vapor-tight glass panels and installation outside of the classified area), these light fixtures (luminaires) must be serviced from outside the spraying area.
163	CA		2404.6.2.3 Integral luminaires. Luminaires that are an integral part of the walls or ceiling of a flammable vapor area are allowed to be separated from the flammable vapor area by glass panels that are an integral part of the luminaire. Such luminaires shall be used only if listed for use in hazardous locations in accordance with the applicable building code and also shall be suitable for accumulations of deposits of combustible residues. Such luminaires are allowed to be serviced from inside the flammable vapor area.	Restores reference to listing in accordance with the applicable building code and suitable for accumulations of deposits/residues which are operational concerns.
164	CAAM	2404.7 Ventilation. Mechanical ventilation of flammable vapor areas shall be maintained and operated in accordance with the applicable building code.	2404.7 Ventilation. Mechanical ventilation of flammable vapor areas shall be maintained in accordance with this section and remain in accordance with the applicable building code.	Provides scoping language for the following subsections.

165	CAAM	2404.7.2 Recirculation. Air exhausted from spraying operations shall not be recirculated unless otherwise permitted by the applicable building code.	2404.7.2 Recirculation. Air exhausted from spraying operations shall not be recirculated. Exceptions: 1.Air exhausted from spraying operations is allowed to be recirculated as makeup air for unmanned spray operations, provided that: 1.1.The solid particulate has been removed. 1.2.The vapor concentration is less than 25 percent of the LFL. 1.3.Approved equipment is used to monitor the vapor concentration. 1.4.When the vapor concentration exceeds 25 percent of the LFL, the following shall occur: a.An alarm shall sound; and b.Spray operations shall automatically shut down. 1.5.In the event of shutdown of the vapor concentration monitor, 100 percent of the air volume specified in Section 510 of the International Mechanical Code is automatically exhausted.	Restores a key operational prohibition and provides exceptions for reference. The prohibition of recirculation in this section is specifically directed to the concern that exhaust system makeup air does not add to the fire hazard of the spraying space. The exceptions are fairly specific and focus on the LFL and the monitoring of that limit. The exceptions are based on the environmental community's concerns about the volume of emissions generated by spray finishing. The permissible exposure limit (PEL) is generally more restrictive than the LFL. The recirculation of exhausted air containing flammable vapors could help spread the hazard of flash fires from the area of vapor generation to other parts of the building. At best, it would adversely affect only the area of vapor generation in that it could render the exhaust ventilation useless. It may also give the operators of the facility a false sense that the level of ventilation is safe for the system. Exception 1 lists five conditions that must be met for the recirculation of exhausted air in unmanned spray operations. If solid particulates (dusts) are removed from the exhausted air, the exhausted air is no longer considered a fire hazard because the potential for a dust explosion is eliminated. Flammable vapors are defined in Section 202 as "flammable constituents in air that exceed 25 percent of the LFL." By reducing the flammable vapor concentrations to less than 25 percent of the LFL, the exhausted air is no longer considered a flammable vapor. To increase the likelihood that the concentrations remain at less than 25 percent of the LFL, flammable vapor detection systems must automatically shut down the operations, set off an alarm and exhaust 100 percent of the air. This would allow for energy conservation in unmanned operations, without compromising the safety features typically associated with such ventilation systems. Exception 2 is applicable to manned operations where additional documentation is needed to reduce the risk to personnel, such as people operating the
166	CA		2404.7.3.1 Open-face or open-front spray booth. For spray application operations conducted in an open-face or open-front spray booth, the ventilation system air velocity shall be maintained in accordance with the requirements of the applicable building code.	Restores the words "air velocity" to indicate what specifically must be maintained. To help keep flammable vapors in a designated spraying space and limit the amount of overspray, the code requires that the exhaust system be adequately sized to maintain an average velocity over the open face of the booth or booth cross section.
167	CA		2404.7.3.2 Enclosed spray booth or spray room with openings for product conveyance. For spray application operations conducted in an enclosed spray booth or spray room with openings for product conveyance, the ventilation system air velocity shall be maintained in accordance with the requirements of the applicable building code.	Restores the words "air velocity" to indicate what specifically must be maintained. To help keep flammable vapors in a designated spraying space and limit the amount of overspray, the code requires that the exhaust system be adequately sized to maintain an average velocity over the open face of the booth or booth cross section.

168	CA		2404.7.6 Termination point. Unless otherwise permitted by the applicable building code, the termination point for exhaust ducts discharging to the atmosphere shall be maintained to be not less than the distances listed below. Termination locations at less than these distances shall be evaluated by the building official for compliance in accordance with the applicable building code. 1.Ducts conveying explosive or flammable vapors, fumes or dusts: 30 feet (9144 mm) from the lot line; 10 feet (3048 mm) from openings into the building; 6 feet (1829 mm) from exterior walls and roofs; 30 feet (9144 mm) from combustible walls or openings into the building that are in the direction of the exhaust discharge; 10 feet (3048 mm) above adjoining grade. 2.Other product-conveying outlets: 10 feet (3048 mm) from the lot line; 3 feet (914 mm) from exterior walls and roofs; 10 feet (3048 mm) from openings into the building; 10 feet (3048 mm) above adjoining grade.	Clarifies that distances less than those listed in this section shall be evaluated by the building official for compliance in accordance with the applicable building code. This section details the requirements for safe outlets/ termination points of exhaust ducts conveying spray finish operation effluent. This section gives distances that must be maintained, depending on the type of exhaust, and is consistent most applicable building codes. Item 1 details the requirements of safe outlets/termination points for exhaust ducts that convey explosive or flammable vapors, fumes or dusts like those exhaust systems that serve operations involving the application of flammable finishes. This section is intended to reduce the exposure from the dangerous vapors in the exhaust. This is done to: 1. Protect other parts of the building. 2. Protect other buildings. 3. Reduce a potential reaction from materials that may be incompatible. 4. Reduce the severity of a fire, in case of an ignition. Vapors that are considered flammable and flammable finishes, including dusts, have more restrictive outlet/termination requirements than other vapors due to the potential for ignition. To avoid recirculation of flammable vapors, fumes or dusts back into the building, the duct must be designed and located to reduce such exposures. This may be achieved by physically separating the exhaust outlet from openings in the building, walls and roof, where sources of ignition or incompatible materials may be present. For health and safety reasons, hazardous exhaust cannot be directed onto adjacent property. Maintaining the required distance allows the hazardous contents of the exhaust to disperse into the atmosphere.
169	CAAM	2404.7.8 Filters. Unless otherwise approved by the applicable building code, air intake filters that are part of a wall or ceiling assembly shall be listed as Class I or II in accordance with UL 900. Exhaust filters shall be provided where required by the applicable building code.	2404.7.8 Filters. Air intake filters that are part of a wall or ceiling assembly shall be listed as Class I or II in accordance with UL 900. Exhaust filters shall be required.	Filters are not construction. Spray-booth and ventilation system design should effectively enclose spray operations. To prevent exhausting contaminated vapors into the atmosphere and to prevent accumulation of overspray and residue on duct surfaces and at the duct discharge location, filters must be maintained ahead of the exhaust ventilation systems from spraying spaces. UL 900 requirements cover tests to determine combustibility and the amount of smoke generated for air filter units of both washable and throwaway types used for removal of dust and other air-borne particles from air circulated mechanically in equipment and systems. Because the combustibility and smoke generation of an air filter unit once used depends on the chemicals or materials it is impregnated with, the filter test requirements of UL 900 are for the clean condition only.
170	CA		2404.7.8.1 Supports. Supports and holders for filters shall be maintained as noncombustible materials unless otherwise approved by the applicable building code.	This is not construction but restores expectation of non-combustible materials. This section is intended to minimize the combustible materials in a spray booth. The area near a filter that is used or partially used is very susceptible to ignition.

171	CA		2404.7.8.3 Maintaining air velocity. Where provided, visible gauges, audible alarms or pressure-activated devices shall be maintained to indicate or ensure that the required air velocity is maintained.	Maintenance of equipment, not construction. Maintaining air velocities is critical in maintaining a safe environment outside the spraying space, as well as proper collection of flammable vapors and dusts within the spraying space. If air velocities that the exhaust system is designed for are not maintained, the spray booth operator must be made aware of this malfunction.
172	CA		2404.7.8.4 Filter rolls. Unless otherwise permitted by the applicable building code, where spray booths are equipped with a filter roll that is automatically advanced it shall be arranged to shut down the spraying operation if the filter roll fails to advance automatically.	Not construction but rather an operational control on automatic equipment. IF a system has automatic equipment, that the equipment must be maintained to operate properly and not modified. In the case of roll-type filters, fresh filter material is advanced into the air stream when the air velocity is reduced. The impregnated filter is wound on a take-up reel. When the entire filter roll is consumed, it is discarded and replaced with a fresh roll of filter material. Shutting down the spray booth when the filter cannot automatically advance (either because of system failure or the need for cartridge replacement) ensures that the operator of the spray booth does not fail in his or her task of replacing the filter.
173	CA		2404.7.8.7 Waterwash spray booths. Waterwash spray booths shall be maintained so as to prevent excessive accumulation of deposits in ducts and residue at duct outlets. Such booths shall be maintained so that air and overspray are drawn through a continuously flowing water curtain before entering an exhaust duct to the building exterior.	Maintaining equipment to prevent excessive residue/deposits is operational not construction. Waterwash booths are typically used for high-volume paint and lacquer usage. Many paints and lacquers are susceptible to spontaneous heating and combustion when left in a poorly ventilated or enclosed area. Materials containing linseed oil are especially prone to this type of reaction. Spray-finishing operations involving these materials should be confined to waterwash booths when possible because water is used as the filtration medium instead of dry filters.
174	CAAM	(N)2404.8 Interlocks. Interlocks for spray application finishes shall be maintained fully operational in accordance with the applicable building code.	(N)2404.8 Interlocks. Interlocks for spray application finishes shall be maintained fully operational and remain in accordance with the applicable building code.	Adds the words "fully operational" to indicate the expected status of the system if so equipped.
175	CAAM	2404.8.1 Automated spray application operations. Unless otherwise permitted by the applicable building code, where protecting automated spray application operations, automatic fire-extinguishing systems with an an approved interlock feature shall maintain that feature such that, upon discharge of the system, it will automatically stop the spraying operations and workpiece conveyors into and out of the flammable vapor areas. Where the building is equipped with a fire alarm system, discharge of the automatic fire-extinguishing system shall be maintained to activate the building alarm notification appliances in accordance with the applicable building code.	2404.8.1 Automated spray application operations. Where protecting automated spray application operations, automatic fire-extinguishing systems with an an approved interlock feature shall maintain that feature such that, upon discharge of the system, it will automatically stop the spraying operations and workpiece conveyors into and out of the flammable vapor areas. Where the building is equipped with a fire alarm system, discharge of the automatic fire-extinguishing system shall be maintained to activate the building alarm notification appliances in accordance with the applicable building code.	Changed from construction language to maintenance language. An interlock is a practical solution to avoid a fire situation in which the automated system would allow for a “moving fire” as the pieces within the automated assembly move through the spraying space. The interlock would stop the spray application, which would further contribute to the flammable fuel/vapors, and prevent a moving fire from spreading faster and farther than expected. This is especially significant in larger conveyor and multiple spraying-space/spraybooth systems, where fire could spread quickly beyond the designed sprinkler area. The interlock between the suppression system and the alarm system would notify the occupants of a building to evacuate.
176	CAAM	2404.8.1.1 Alarm station. Where required, a manual fire alarm and emergency system shutdown station shall be maintained accessible and fully operational in accordance with the applicable building code.	2404.8.1.1 Alarm station. Where required, a manual fire alarm and emergency system shutdown station shall be maintained accessible, fully operational and remain in accordance with the applicable building code.	Added operational terms "accessible" and "fully operational" In case the operator of a spraying area becomes aware of a fire prior to the actuation of the extinguishing system, or in case there is an emergency not related to a fire where there is a risk to the occupants of the building, a manual fire alarm station is needed.

177	CAAM	2404.8.2 Ventilation interlock prohibited. Unless otherwise permitted by the applicable building code, air makeup and flammable vapor area exhaust systems shall not be interlocked with the fire alarm system and shall remain in operation during a fire alarm condition. Exception: Where the applicable building code requires such ventilation to be discontinued and dampers closed.	2404.8.2 Ventilation interlock prohibited. Unless otherwise permitted by the applicable building code, air makeup and flammable vapor area exhaust systems shall not be interlocked with the fire alarm system and shall remain in operation during a fire alarm condition. Exception: Where permitted by the applicable building code such as where the type of fire-extinguishing system used requires such ventilation to be discontinued and dampers close.	Restores an important operational prohibition against interlocking ventilation shutdown. Exhaust ventilation of flammable vapors and smoke during a fire may help reduce the fire severity and increase visibility. Therefore, an interlock system to shut down the spray operations during a fire should not include the safety systems, such as ventilation. In an emergency, the success of the fire-extinguishing system takes precedence over the function of the ventilation system. Therefore, if the ventilation system in any way compromises the fire-extinguishing system, the exception allows these systems to be interlocked to shut down in the event of a fire. Examples of systems that may be compromised if the ventilation system is on are many of the extinguishing systems that are not water based, such as carbon dioxide, halogenated agent, clean agent, etc.
178	CAAM	2405.2 Location of dip-tank operations. Where required by the applicable building code, dip-tank operations conducted in buildings used for Group A, I or R occupancies shall be located in a room designed for that purpose, equipped with an approved automatic sprinkler system and separated vertically and horizontally from other areas in accordance with the applicable building code.	2405.2 Location of dip-tank operations. Dip-tank operations conducted in buildings used for Group A, I or R occupancies shall be located in a room designed for that purpose, equipped with an approved automatic sprinkler system and separated vertically and horizontally from other areas in accordance with the applicable building code.	Operational requirement, not construction, to regulate where dip-tank operations are hazardous and should not be conducted. Separation and protection from hazards of other portions of a building housing the occupancy groups listed in this section are critical for several reasons. Dipping and coating processes are too hazardous to be conducted in occupancies with a high life or property exposure. The number of occupants in such buildings and their physical conditions vary. People exposed to the danger of a fire involving dip-tank operations must be able to evacuate or protect themselves promptly and effectively to avoid the risk of serious injury or death. Also, the behavior psychology of people in a Group A, I or R occupancy is very different from those in a Group F manufacturing occupancy. A person walking in a manufacturing facility where dipping operations/processes take place in a large area where the dip tanks and signs are in plain view is more aware of the physical dangers associated with these processes than someone in a Group R occupancy, who would more likely be relaxing and thinking of things other than physical hazards.
179	CAAM	2405.3 Construction of dip tanks. Dip tanks shall be constructed in accordance with Sections 2405.3.1 through 2405.3.4.3 and NFPA 34. Dip tanks, including drain boards, shall be constructed of noncombustible material and their supports shall be of heavy metal, reinforced concrete or masonry unless otherwise approved by the applicable building code.	2405.3 Construction of dip tanks. Unless regulated by the applicable building code, dip tanks shall be constructed in accordance with Sections 2405.3.1 through 2405.3.4.3 and NFPA 34. Dip tanks, including drain boards, shall be constructed of noncombustible material and their supports shall be of heavy metal, reinforced concrete or masonry.	Dip tank operations are not necessarily fixed processes that require building permits. The selection of materials and design of dipping and coating processes must consider the physical properties of the liquid and the processing environment. The corrosivity, density, viscosity, vapor pressure and flash point of the liquid influences the selection of materials and arrangement of processing equipment.
180	CA		2405.3.1 Overflow. To operate dip tanks greater than 150 gallons (568 L) in capacity or 10 square feet (0.93 m2) in liquid surface area, they shall be equipped with a trapped overflow pipe leading to an approved location outside the building in accordance with the building code.	This section highlights a requirement for proper drainage of large tanks and directs compliance in accordance with the applicable building code. An overflow drain is required for tanks with capacities greater than 150 gallons (568 L) or having a surface area greater than 10 square feet (0.93 m2) to confine spills or uncontrolled releases caused by overfilling or overflowing when parts are immersed. The capacity of overflow drains should exceed the capacity of the tank and discharge through an approved trap and separator or to an approved salvage tank.

181	CA			2405.3.2 Bottom drains. Unless otherwise permitted by the applicable building code, dip tanks greater than 500 gallons (1893 L) in liquid capacity shall only be operated with bottom drains that are arranged to automatically and manually drain the tank quickly in the event of a fire unless the viscosity of the liquid at normal atmospheric temperature makes this impractical. Manual operation shall continue to be from a safe, accessible location. Such drains shall be trapped and discharged to a closed, vented salvage tank or to an approved outside location in accordance with the applicable building code. Exception: Dip tanks containing Class IIIB combustible liquids where the liquids are not heated above room temperature and the process area is protected by automatic sprinklers.	This section highlights special requirements for large tanks and directs compliance in accordance with the applicable building code. Emergency release drains permit flammable liquids in dip tanks to be safely discharged if a fire occurs. A trap between the drain opening and the separator or salvage tank reduces the likelihood that the fire will flash back into the tank. The arrangement of emergency release drains must permit both automatic and manual operation. Moreover, viscous liquids are exempt from these requirements. These liquids, however, generally have higher flash points and are more difficult to ignite than other, less viscous materials. If a highly viscous combustible liquid is heated for use as a coating material, having a drain remains a good practice. If installed, the drain should be sized for the volume and viscosity of the liquid under normal usage conditions. The exception covers Class IIIB combustible liquids, which have a flashpoint above 200°F (93°C). These liquids are not viewed by the code as extremely hazardous, especially when they are not heated above room temperature.
182	CA			2405.4 Fire protection. Dip tank operations shall be protected with a fire protection system in accordance with the applicable building code and maintained in accordance with Chapter 9.	Restores the term "fire protection system" to provide proper context. Also references Chapter 9 for maintenance requirements.
183	CAAM		2405.4.1 Fixed fire-extinguishing equipment. Where required by the applicable building code, an automatic fire-extingusihing system or dip-tank cover shall be maintained.	2405.4.1 Fixed fire-extinguishing equipment. Unless otherwise permitted by the applicable building code, an approved automatic fire-extinguishing system or dip-tank cover in accordance with Section 2405.3.4 shall be maintained for the following dip tanks: 1.Dip tanks less than 150 gallons (568 L) in capacity or 10 square feet (0.93 m2) in liquid surface area. 2.Dip tanks containing a liquid with a flash point below 110°F (43°C) used in such manner that the liquid temperature could equal or be greater than its flash point from artificial or natural causes, and having both a capacity of more than 10 gallons (37.9 L) and a liquid surface area of more than 4 square feet (0.37 m2)	This section applies to fire-extinguishing equipment for certain smaller sizes of dip tanks. It offers the option of dip-tank covers instead of a fixed fire-extinguishing system. Tanks equipped with noncombustible automatic-closing covers conforming to Section 2405.3.4 need not be protected by a fire suppression system on the basis that the cover can be closed, thus containing a dip tank fire and further restricting oxygen supply to the fire. Additionally, the suppression system will not be effective in controlling a fire when the cover is in the sloped position because the sprinkler water would simply run off the cover and away from the fire. Water-spray fixed systems are more effective at controlling flammable liquid pool fires, such as those involving dip tanks, because they produce finer water droplets that are more effective at absorbing heat from these rapidly burning, intense fires. Most water droplets are quickly vaporized by the fire and rarely pose a significant danger of boil-over, froth-over or slop-over from penetrating the surface of the flammable or combustible liquid (see NFPA 30 for further information on these phenomena unique to flammable and combustible liquids in tanks).
184	CA			2405.4.1.1 Fire-extinguishing system. Unless otherwise permitted by the applicable building code, an approved automatic fire-extinguishing system shall be provided for dip tanks with a 150-gallon (568 L) or more capacity or 10 square feet (0.93 m2) or larger in a liquid surface area.	Restores clarification that tanks over 150 gallons are expected to have a fire extinguishing system.
185	CAAM		2405.7 Ventilation of flammable vapor areas. Mechanical ventilation in flammable vapor areas shall be operated and maintained to prevent the dangerous accumulation of vapors. Where required by the applicable building code, the failure of any ventilating fan shall automatically stop the dipping conveyor system.	2405.7 Ventilation of flammable vapor areas. Flammable vapor areas shall be operated with mechanical ventilation adequate to prevent the dangerous accumulation of vapors in accordance with the applicable building code. Where required, ventilation systems shall be maintained such that the failure of any ventilating fan shall automatically stop the dipping conveyor system.	This section includes performance-based language for dip tank operations that requires ventilation to prevent the dangerous accumulation of vapors. Additionally, conveyor systems used with dipping operations need to be interlocked with the ventilation system to avoid continuation of operations in the event of a ventilation system failure.

186	CA		2405.9.1 Location. Unless otherwise required by the applicable building code, tanks shall be located as far as practical from furnaces and shall not be located on or near combustible floors.	Dip tank operations are not necessarily fixed processes that require building permits. High temperatures produced by hardening and tempering processes require the maintenance of separation between tanks, ignition sources and combustible materials
187	CA		2405.9.2 Hoods. Unless otherwise required by the applicable building code, tanks shall be operated only with a noncombustible hood and vent or other approved venting means, terminating outside of the structure to serve as a vent in case of a fire. Such vent ducts shall be treated as flues and proper clearances shall be maintained from combustible materials.	Housekeeping requirements for ventilation hoods and ducts. Though the materials in hardening and tempering baths are usually not considered flammable, the elevated temperatures may represent an ignition source to other combustibles. The contents of oil-quenching tanks used for high flash-point liquids may be difficult to ignite, but once ignited, the rate of heat release is comparable to other flammable and combustible liquids. Hoods over hardening, tempering and oilquenching tanks will help maintain tenable conditions near the tanks and help control a fire, should it occur, by providing a controlled avenue of vertical spread. Therefore, exhaust hood materials must be noncombustible and separated from combustible structural components.
188	CAAM	2405.9.3 Alarms. Tanks shall be operated with a high-temperature limit switch maintained to sound an alarm when the temperature of the quenching medium reaches 50°F (10°C) below the flash point or other approved level as required by the applicable building code.	2405.9.3 Alarms. Where equipped, tanks shall be operated with a high-temperature limit switch maintained to sound an alarm when the temperature of the quenching medium reaches 50°F (10°C) below the flash point or other approved level as required by the applicable building code.	Important operational alarm settings to maintain. Thermostats may be used to limit the heat input to the oil bath for temperature maintenance. However, many systems require cooling systems to maintain oil baths within specified temperature limitations. Water leaking from these cooling systems can pose a special hazard from boil-over as the water is converted to steam
189	CAAM	2405.9.4 Fire protection. Unless otherwise permitted by the applicable building code, hardening and tempering tanks greater than 500 gallons (1893 L) in capacity or 25 square feet (2.3 m2) in liquid surface area shall be protected by an approved automatic fire-extinguishing system maintained in accordance with Chapter 9.	2405.9.4 Fire protection. Unless otherwise required by the applicable building code, hardening and tempering tanks greater than 500 gallons (1893 L) in capacity or 25 square feet (2.3 m2) in liquid surface area shall be protected by an approved automatic fire-extinguishing system maintained in accordance with Chapter 9.	Tanks larger than 500 gallons (1893 L) in capacity or 25 square feet (2.3 m2) in surface area present a significant enough hazard as to be required to maintain protection by an automatic fire-suppression system
190	CAAM	2405.10.1 Paint supply. Unless otherwise permitted by the applicable building code, paint operations shall be supplied by a gravity tank not exceeding 10 gallons (38 L) in capacity or by direct low-pressure pumps arranged to shut down automatically in case of a fire by means of approved heat-actuated devices in accordance with the applicable building code.	2405.10.1 Paint supply. Unless otherwise required by the applicable building code, paint operations shall be supplied by a gravity tank not exceeding 10 gallons (38 L) in capacity or by direct low-pressure pumps arranged to shut down automatically in case of a fire by means of approved heat-actuated devices in accordance with the applicable building code.	Positive displacement pumps are most commonly used to recirculate paint and coating material from the reservoir to the nozzles. Gravity tanks not exceeding 10 gallons (38 L) in capacity are also permitted. When a pump is used, the pump power supply must remain interlocked with heat detectors to shut down (in accordance with the applicable building code) if a fire occurs.
191	CA		2405.11 Roll-coating operations. Roll-coating operations shall comply with Section 2405.10. In roll-coating operations utilizing flammable or combustible liquids, sparks from static electricity shall be prevented by electrically bonding and grounding all metallic rotating and other parts of machinery and equipment and by the installation of static collectors, or by maintaining a conductive atmosphere such as a high relative humidity.	Restores the technical maintenance requirements for roll-coating operations. Roll-coating methods apply material to flat work pieces, usually paper, cardboard, cloth or thin metals, using liquid-coated cylinders or rollers. Coating material may be applied to the rollers by rotating them in an open trough or pan or applying liquid to the space between two rollers

192	CAAM	2406.3 Construction of powder coating rooms and booths. The design and construction of powder coating rooms shall be in accordance with the applicable building code. Spray booths shall be constructed in accordance with Section 2404.3.2. Exception: Listed spray-booth assemblies that are constructed of other materials shall be allowed.	2406.3 Construction of powder coating rooms and booths. Powder coating rooms shall be constructed of noncombustible materials in accordance with the applicable building code. Spray booths shall be constructed in accordance with Section 2404.3.2. Exception: Listed spray-booth assemblies that are constructed of other materials shall be allowed.	Provides guidance for illegal powder coating arrangements and provides direction back to the applicable building code for construction requirements.
193	CAAM	2406.4 Fire protection. Where required by the applicable building code automatic fire-extinguishing system shall be maintained in accordance with Chapter 9.	2406.4 Fire protection. Areas used for powder coating shall be protected by an approved automatic fire-extinguishing system in accordance with the applicable building code and maintained in accordance with Chapter 9.	Provides reference to Chapter 9 for maintenance of fire protection systems.
194	CA		2406.6.4 Grounding and bonding. Precautions shall be taken to minimize the possibility of ignition by static electrical sparks through static bonding and grounding, where possible, of powder transport, application and recovery equipment.	Restores technical language for grounding and bonding requirements. Static electricity is one of the most insidious and most common of all ignition sources. According to D.R. Scarborough in 2003, static sparks are the most common ignition sources involving spray-finishing operations. Additionally, humans are conductors of electricity, meaning that operators must also be considered when grounding systems are determined.
195	CA		2406.7 Ventilation. Exhaust ventilation shall be sufficient to maintain the atmosphere below one-half the minimum explosive concentration for the material being applied. Nondeposited, air-suspended powders shall be removed through exhaust ducts to the powder recovery system.	Restores critical technical thresholds for effective system operations. Powder coating creates explosive atmospheres because of the large surface areas of the particles when dispersed in the air. The explosive limit or concentration, just as with flammable vapors, will depend on the type of material being used. For example, Factory Mutual tested several powder-coating materials and found a range of lower explosive limit (LEL) of 0.026 to 0.097 ounces per square foot and auto-ignition temperatures between 790°F to 1,039°F (412°C to 559°C). Therefore, ventilation system requirements may vary from one type of coating to another. Also, a collection system is required to collect any unused powder. This requirement is similar to ventilation requirements for flammable vapors in its intent to limit the amount of vapors or dusts to a concentration that would not support ignition. Therefore “one-half the minimum explosive concentration” for powder coating is similar in intent to the “25 percent of the lower flammable limit (LFL).” The safety factor in the combustible dust is 2, while the safety factor for the LFL is 4. This is partly the result of the lower ignitibility of a dust compared to a vapor
196	CA		2407.2 Location and clear space. A space of at least twice the sparking distance shall be maintained between goods being painted or deteared and electrodes, electrostatic atomizing heads or conductors. A sign stating the sparking distance shall be conspicuously posted near the assembly. Exception: Portable electrostatic paint-spraying apparatus listed for use in Class I, Division 1, locations.	Restores technical requirements that not only maintain the level of safety required by the IFC but also define the clear space in more detail. It also restores the exception for listed portable equipment. The change in the 2015 version significantly reduced the level of safety required by the IFC.

197	CAAM	2407.3 Construction of equipment. Electrodes and electrostatic atomizing heads shall be maintained in accordance with the applicable building code. Portable electrostatic paint-spraying apparatus shall be listed for use in Class I, Division 1, locations.	2407.3 Construction of equipment. Electrodes and electrostatic atomizing heads shall be maintained of approved construction, rigidly supported in permanent locations and effectively insulated from ground. Insulators shall be nonporous and noncombustible. Exception: Portable electrostatic paint-spraying apparatus listed for use in Class I, Division 1, locations.	Restores maintenance language for critically important equipment that must remain as required by the applicable building code.
198	CA		2407.3.1 Barriers. Booths, fencing, railings or guards shall be maintained about the equipment such that either by their location or character, or both, isolation of the process is maintained from plant storage and personnel. Railings, fencing and guards shall be of conductive material, adequately grounded, and at least 5 feet (1524 mm) from processing equipment in accordance with the applicable building code. Exception: Portable electrostatic paint-spraying apparatus listed for use in Class I, Division 1, locations.	Restores technical provisions for maintaining guards or barriers. Key expectations about conductive material, grounding, etc. are noted to ensure that illegal modifications are identified. Also restores the exception for listed portable equipment.
199	CAAM	2407.4 Fire protection. Approved automatic fire-extinguishing systems shall be maintained in accordance with Chapter 9.	2407.4 Fire protection. Areas used for electrostatic spray finishing with fixed equipment shall be protected with an approved automatic fire-extinguishing system and maintained in accordance with Chapter 9.	Provides reference to Chapter 9 for fire protection system maintenance.
200	CAAM	2407.4.1 Protection for automated liquid electrostatic spray application equipment. Where required by the applicable building code, automated liquid electrostatic spray application equipment shall maintain an approved, supervised flame detection apparatus that shall, in the event of ignition, react to the presence of flame and shall accomplish all of the following if required by the applicable building code: 1.Activation of a local alarm in the vicinity of the spraying operation and activation of the building alarm system, if such a system is provided. 2.Shutting down of the coating material delivery system. 3.Termination of all spray application operations. 4.Stopping of conveyors into and out of the flammable vapor areas. 5.Disconnection of power to the high-voltage elements in the flammable vapor areas and disconnection of power to the system.	2407.4.1 Protection for automated liquid electrostatic spray application equipment. Where provided, automated liquid electrostatic spray application equipment shall maintain an approved, supervised flame detection apparatus that shall, in the event of ignition, react to the presence of flame and shall accomplish all of the following unless otherwise required by the applicable building code: 1.Activation of a local alarm in the vicinity of the spraying operation and activation of the building alarm system, if such a system is provided. 2.Shutting down of the coating material delivery system. 3.Termination of all spray application operations. 4.Stopping of conveyors into and out of the flammable vapor areas. 5.Disconnection of power to the high-voltage elements in the flammable vapor areas and disconnection of power to the system.	Restores technical requirements and expectations for automated equipment. Automated liquid electrostatic spray application may or may not have operators who would take steps to reduce the severity of the fire, such as shutting down the supply of coating material, warning occupants for evacuation purposes, etc. The flame detection system and its associated interlocks are part of the protection system, in case ignition has already occurred. Systems that are designed to reduce the severity of the accident in the event of a fire need to be initiated automatically. Supervised flame detection systems are required by this section to stop the flow of additional fuel into the system, stop the spread of fire by shutting down the conveyor, activate an alarm for evacuation, terminate spray application operations that would further add to the fuel and disconnect power to the system. The power disconnection referred to in this section is for the spray booth equipment, but does not include power to emergency systems.

201	CAAM	2407.8 Emergency shutdown. Where emergency shutdowns are required by the applicable building code such devices shall be maintained with automatic controls operating without time delay to disconnect the power supply to the high-voltage transformer and signal the operator under any of the following conditions unless otherwise permitted by the applicable building code: 1.Stoppage of ventilating fans or failure of ventilating equipment from any cause. 2.Stoppage of the conveyor carrying articles past the high-voltage grid. 3.Occurrence of a ground or an imminent ground at any point of the high-voltage system. 4.Reduction of clearance below that required in Section 2407.2.	2407.8 Emergency shutdown. Where provided, electrostatic apparatus shall be maintained with automatic controls operating without time delay to disconnect the power supply to the high-voltage transformer and signal the operator under any of the following conditions unless otherwise required by the applicable building code: 1.Stoppage of ventilating fans or failure of ventilating equipment from any cause. 2.Stoppage of the conveyor carrying articles past the high-voltage grid. 3.Occurrence of a ground or an imminent ground at any point of the high-voltage system. 4.Reduction of clearance below that required in Section 2407.2.	Restores technical requirements and expectations for emergency shutdowns. The required interlocks reduce the likelihood of the apparatus igniting flammable vapors in the event of any of the specified conditions. Conditions 1 and 2 may lead to an increase in the concentration of flammable vapors in the atmosphere. Condition 3 may lead to the release of a spark or arc capable of igniting flammable vapors. Additionally, occurrence of Condition 4 could bring those parts of the system capable of producing an ignition into an area containing an ignitable vapor concentration.
202	CA		2407.9 Ventilation interlock. Unless otherwise permitted by the applicable building code, hand electrostatic equipment shall be maintained as interlocked with the ventilation system for the spraying area so that the equipment cannot be operated unless the ventilating system is in operation.	This important requirement has not changes since at least the 1978 BOCA. The required interlock is intended to prevent the use of hand sprayers without ventilation equipment in operation. Failure to operate exhaust ventilation may lead to the creation of ignitable vapor concentration in the spraying space.
203	CAAM	2408.2 Use of organic peroxide coatings. Unless otherwise permitted by the applicable building code, spraying operations involving the use of organic peroxides and other dual-component coatings shall be conducted in approved sprinklered spray booths complying with the applicable building code.	2408.2 Use of organic peroxide coatings. Unless otherwise required by the applicable building code, spraying operations involving the use of organic peroxides and other dual-component coatings shall be conducted in approved sprinklered spray booths complying with the applicable building code.	Proper use/location is a critical operational requirement, not construction. Because of the reactivity of the material, the use of organic peroxide and other dual-component coating systems is limited to spray booths only. For example, organic peroxide coatings cannot be applied in the limited spraying spaces described in Section 2404.1.4. This section is more specific and, therefore, supersedes the more general requirements. Storage of organic peroxides shall comply with Chapter 62
204	CAAM	2409.3 Fire protection. Where required by the applicable building code automatic fire-extinguishing system shall be maintained in accordance with Chapter 9.	2409.3 Fire protection. Areas used for spray application of resin shall be maintained with an approved automatic fire-extinguishing system in accordance with Chapter 9 and remain in accordance with the applicable building code.	Provides reference to Chapter 9 for maintenance of fire protection systems.
205	CAAM	2409.6 Ventilation. Mechanical ventilation shall be maintained throughout resin application areas in accordance with 2404.7 and the applicable building code. The ventilation rate shall be adequate to maintain the concentration of flammable vapors in the resin application area at or below 25 percent of the LFL unless otherwise permitted by the applicable building code. Exception: Mechanical ventilation is not required for buildings that have 75 percent of the perimeter unenclosed.	2409.6 Ventilation. Mechanical ventilation shall be maintained throughout resin application areas in accordance with 2404.7 and remain in accordance with the building code. The ventilation rate shall be adequate to maintain the concentration of flammable vapors in the resin application area at or below 25 percent of the LFL. Exception: Mechanical ventilation is not required for buildings that have 75 percent of the perimeter unenclosed.	Restores technical provisions for operation of ventilation systems. In many cases, acetone is used for cleanup of resin accumulations. Therefore, the LFL for both resin and the cleaning solvent must be considered when designing the ventilation for the resin application areas. The exception recognizes that natural ventilation is considered adequate if the perimeter of the building is 75 percent open.
206	CA		2409.6.1 Local ventilation. Local ventilation shall be provided inside of workpieces where personnel will be under or inside of the workpiece.	The use of ventilation is not a construction requirement. Ventilation in areas where personnel are present is required for fire prevention as well as for reduction of health risks.

207	CAAM	2501.3 Ethylene generators. Approved ethylene generators shall be operated and maintained in accordance with Section 2506 and the applicable building code.	2501.3 Ethylene generators. Approved ethylene generators shall be operated and maintained in accordance with Section 2506.	Chapter 25 recognizes the use of listed ethylene generators as a means of safely producing ethylene concentrations needed to ripen crops. This section requires that those devices be properly operated and maintained
208	CA		2503.2 Dispensing. Valves controlling discharge of ethylene shall be maintained to limit the concentration of gas in accordance with this chapter and the applicable building code.	Although the hazards of using ethylene should be of considerable concern, technological innovation has produced a safe alternative to the old method of distributing ethylene to the ripening rooms. In the past, compressed ethylene gas in cylinders was piped through regulating equipment into rooms. Regulating equipment was calibrated to restrict gas quantity to a volume that would produce concentrations below the lower explosive gas limit; however, excessive concentrations occasionally escaped and uncontrolled ignition sources produced serious explosions. Ideally, gas sensors should be used to stop gas flow as it approaches the desired level. Manual overrides must be provided to interrupt the gas flow if a danger exists. A 1:1,000 concentration is only 0.1 percent in air. The LFL of ethylene is 2.6 percent. When used properly, this gas poses little hazard.
209	CA		2504.1 Ignition prevention. Sources of ignition shall be controlled or protected in accordance with this section and Chapter 3.	There are no ignition prevention requirements in the building code. Lighted smoking materials and other open-flame sources are prohibited in crop-ripening and color-processing rooms. This prohibition should also be extended to the immediate vicinity of the entrance to such rooms. “No Smoking” signs are to be conspicuously posted and stringently enforced.
210	CAAM	2504.2 Electrical wiring and equipment. Electrical wiring and equipment, including luminaires, shall be classified and maintained in accordance with Chapter 6, the applicable building code and the maintenance provisions of NFPA 70.	(N)2504.2 Electrical wiring and equipment. Electrical wiring and equipment, including luminaires, shall be classified and maintained in accordance with Chapter 6, NFPA 70 and remain in accordance with the applicable building code.	Maintenance and operation of electrical equipment in flammable vapor areas, not installation. Atmospheres containing ethylene are classified as Class 1, Division 1, Group C hazardous locations by NFPA 70. All electrical wiring and equipment must be suitably listed and labeled for use in such atmospheres.
211	CA		2504.3 Static electricity. Bonding and grounding provided for permanent containers, piping and equipment shall be maintained in accordance with the applicable building code. Portable containers, piping and equipment shall be bonded and grounded in accordance with Chapter 57.	Bonding and grounding is an operational issue, not construction. Suitable grounds must be provided on all ethylene-handling systems and equipment to permit the dissipation of static electricity, thus preventing the generation of static sparks. Electrically isolated sections of systems and equipment must be independently grounded. NFPA 77 provides valuable guidance on this topic. Grounding and bonding should be in accordance with NFPA 70
212	CA		2504.5 Heating. Heating shall be maintained in accordance with Chapter 6 and the applicable building code.	There are no heating device maintenance requirements in the building code. Wherever practical, heat for crop-ripening and coloring rooms should be indirect (steam, hot water or warm air) to eliminate sparks or open-flame ignition hazards.

213	CA		2506.2 Ethylene generator rooms. Portable ethylene generators shall be used in rooms having a volume of not less than 1,000 cubic feet (28 m3). Rooms shall have air circulation to ensure even distribution of ethylene gas and shall be free from sparks, open flames or other ignition sources.	There are no operations or maintenance requirements for portable ethylene generators in the building code. Because ethylene generators are portable, the level of hazard associated with their use in closed rooms can change each time one is moved to a new ripening room. The intent of this section is to reduce the hazard potential by requiring that ethylene generators be used only in ripening rooms having a minimum volume of 1,000 cubic feet (28 m3) [10 feet by 10 feet by 10 feet (3048 mm by 3048 mm by 3048 mm)], that are free from ignition hazards and have air circulation to distribute the ethylene gas evenly throughout the space to avoid the potential for pockets of gas having concentrations approaching or exceeding 25 percent of the LEL.
214	CAAM	2803.1 Open yards. Open yards around structures required by the applicable building code shall be maintained. The space shall be maintained free of obstructions associated with the outdoor storage of the materials regulated by Chapter 28, which could interfere with the function of the open space, especially that of providing fire department access to the building.	2803.1 Open yards. Open yards required by the applicable building code shall be maintained around structures. The space shall be maintained free of obstructions associated with the outdoor storage of the materials regulated by Chapter 28, which could interfere with the function of the open space, especially that of providing fire department access to the building.	There are no maintenance requirements in the building code. The building code requires that certain buildings face an open space on at least one side. The open spaces may be a yard required for the purpose of providing light and ventilation or they may be a public way provided in order to achieve an increase in building area called a “frontage increase”, or to allow a building to be considered an “unlimited area building” . Regardless of the purpose of the open space, this section requires that the space be maintained and be free of obstructions associated with the outdoor storage of the materials regulated by Chapter 28, which could interfere with the function of the open space, especially that of providing fire department access to the building.
215	CAAM	2803.2 Dust control. Equipment or machinery located inside buildings that generates or emits combustible dust shall be maintained in accordable with Chapter 22 and the applicable building code. Equipment or systems that are used to collect, process or convey combustible dusts provided with an approved explosion control system in accordance with the applicable building code shall be maintained in accordance with Chapter 9.	2803.2 Dust control. Equipment or machinery located inside buildings that generates or emits combustible dust shall be provided with an approved dust collection and exhaust system installed in accordance with Chapter 22 and the applicable building code. Equipment or systems that are used to collect, process or convey combustible dusts shall maintain an approved explosion control system installed in accordance with the applicable building code and maintained in accordance with Chapter 9.	There are no maintenance requirements for dust control in the building code. The basic wood-processing activities related to lumber yards and woodworking facilities generate large volumes of wood particles suspended in the air, creating a potentially explosive form of dust. Where such activities are located inside of buildings, this section requires that combustible dust be controlled by an approved dust-collection and exhaust system designed and installed in accordance with IFC Chapter 22, and the building code. There are two basic designs of dust collection systems. One is a single-stage system that consists of a single dust collector in the form of a cyclone separator or a combination cyclone/baghouse unit. The other is a two-stage system that consists of a cyclone separator followed by a bag-type filter house. An approved explosion control system is also required to be maintained for the equipment and systems that collect and convey the combustible dust. Such systems should be maintained in accordance with Section 911.
216	CA		2803.2.1 Explosion venting. Where a dust explosion hazard exists in equipment rooms, buildings or other enclosures, such areas shall be declared an unsafe condition in accordance with Section 110.1 and operations shall not be continued until the hazard is mitigated. Where explosion venting is provided it shall be maintained in accordance with this Chapter 9 and the applicable building code.	The intent of this section is not maintenance of the explosion venting system as indicated in the 2015 VSFPC, but rather identifying unprotected dust explosion hazards. When wood dust is ignited while suspended in air in concentrations above the minimum combustible concentration (MCC), it burns violently, producing a deflagration. This likelihood depends on the concentration of fuel per unit volume. Most of the time, dust-collection systems remove the larger dust particles, allowing the finer particles to pass through the system and reenter the production area. The finer dust can create an explosion and fire hazard unless an approved suppression system is used.

217	CA		2803.3 Waste removal. Sawmills, planing mills and other woodworking plants shall maintain waste removal systems that collect and remove sawdust and shavings. Such systems shall be maintained in accordance with Chapter 22 and comply with the applicable building code. Exception: Manual waste removal when approved.	There are not any maintenance requirements in the building code. Like many other organic materials, sawdust, wood chips and other similar waste materials are susceptible to spontaneous heat. Pilings and debris must be turned over or consumed regularly to minimize the potential for spontaneous combustion. Some waste material is used as fuel and some might go to pulp or particleboard manufacturers. Finer material is removed by air-moving equipment, cyclones or air bags. Chapter 22 and the IMC give the requirements for waste removal systems.
218	CAAM	2803.4 Electrical equipment. Electrical wiring and equipment shall be maintained in accordance with Chapter 6, the applicable building code and the maintenance provisions of NFPA 70.	2803.4 Electrical equipment. Electrical wiring and equipment shall be maintained in accordance with Chapter 6, NFPA 70, and the applicable building code.	There are not any maintenance requirements in the building code. Arcs, sparks and loose connections often supply the ignition source that a vapor or combustible material needs for fire. Electrical equipment must be listed for the use it is installed for and comply with the requirements of NFPA 70.
219	CA		2804.2 Fire alarms. Where provided, fire alarm systems shall be maintained in accordance with Chapter 9.	There are not any fire alarm maintenance requirements in the building code.
220	CA		2804.2.1 Delete	This section is unnecessary since 2804.2 covers fire alarm device maintenance.
221	CA		2804.4 Automatic sprinkler systems. Automatic sprinkler systems shall be maintained in accordance with Chapter 9.	There are not any fire sprinkler maintenance requirements in the building code.
222	CA		2805.2 Dryer protection. Dryers protected by an approved, automatic deluge water-spray suppression system shall be maintained in accordance with Chapter 9. Deluge heads shall be inspected quarterly for pitch buildup. Deluge heads shall be flushed during regular maintenance for functional operation.	There are not any fire sprinkler maintenance requirements in the building code.
223	CA		2807.3 Outdoor pile fire protection. Where conveyor tunnels and combustible enclosures that pass under an outdoor pile, automatic sprinkler protection shall be provided. Automatic sprinkler protection shall be maintained in accordance with Chapter 9.	This requirement addresses outdoor pile processing equipment that is not within a building and believed to be exempt from the building code. Unless found to be regulated by the building code, it would be regulated by the Fire Prevention Code. Automatic sprinklers are needed because of the difficulty of manual fire suppression operations in concealed, enclosed and elevated outdoor areas.
224	CAAM	2808.7 Pile fire protection. Automatic sprinkler protection shall be provided in conveyor tunnels and combustible enclosures that pass under a pile. Combustible conveyor systems and enclosed conveyor systems shall be equipped with an approved automatic sprinkler system. These systems shall be maintained in accordance with Chapter 9. NOTE: Systems regulated by the USBC must comply with the applicable building code.	2808.7 Pile fire protection. Automatic sprinkler protection shall be provided in conveyor tunnels and combustible enclosures that pass under a pile. Combustible conveyor systems and enclosed conveyor systems shall be equipped with an approved automatic sprinkler system. These systems shall be maintained in accordance with Chapter 9.	This requirement addresses outdoor pile processing equipment that is not within a building and believed to be exempt from the building code. Unless found to be regulated by the building code, it would be regulated by the Fire Prevention Code. Automatic sprinklers are needed because of the difficulty of manual fire suppression operations in concealed, enclosed and elevated outdoor areas.

225	CA		2903.1 Building Features. Unless approved by the applicable building code, manufacturing of organic coatings shall be done only in buildings that do not have pits or basements.	The use of organic coating processes are not a specifically approved use group classification in the IBC and therefore it is important to provide context as to where these operations should and should not be conducted. The IBC classifies organic coating processes in Group H-2 or H-3 occupancies, depending on the types and amounts of materials, when the maximum allowable quantity per control area (MAQ) of hazardous materials in Table 307.1(1) of that code is exceeded. Basements, pits or depressed first-floor construction are prohibited because of the tendency for hazardous materials vapors to accumulate in low areas and the difficulty in fighting fires in such areas and occupancies.
226	CA		2903.2 Location. Unless approved by the applicable building code, organic coating manufacturing operations and operations incidental to or connected with organic coating manufacturing shall not be located in buildings having other occupancies.	The use of organic coating processes are not a specifically approved use group classification in the IBC and therefore it is important to provide context as to where these operations should and should not be conducted. The IBC classifies organic coating processes in Group H-2 or H-3 occupancies, depending on the types and amounts of materials, when the maximum allowable quantity per control area (MAQ) of hazardous materials in Table 307.1(1) of that code is exceeded. Incidental occupancies involve operations and activities closely related to the primary occupancy and are necessary for efficient, continuous and safe organic coatings manufacture. Administration, storage, shipping and receiving, as well as other related but not indispensable operations, should be located in separate buildings. Separations must have a fire-resistance rating, separation distance or a combination of the two as required by the IBC.
227	CA		2903.11 Alarm system. Alarm systems shall be maintained in accordance with Chapter 9.	There are no maintenance requirements for fire alarm systems in the building code.
228	CAAM	2904.1 Wiring and equipment. Electrical wiring and equipment shall be maintained in accordance with Chapter 6, the applicable building code and the maintenance provisions of NFPA 70.	2904.1 Wiring and equipment. Electrical wiring and equipment shall be maintained in accordance with this chapter, chapter 6 and NFPA 70.	There are no maintenance requirements in the building code. NFPA 70 and the requirements of this section apply to electrical wiring and equipment to reduce the fire hazard associated with the presence of such equipment in areas where organic coatings are being manufactured..
229	CA		2904.3 Bonding. Equipment including, but not limited to, tanks, machinery and piping, shall not be operated where an ignitable mixture is capable of being present unless bonded and connected to a ground in accordance with the applicable building code.	Bonding and grounding is an operational requirement not construction. This section is nearly identical to the 1978 BOCA and maintains operational language regarding ignitable mixtures being present.
230	CA		2904.3.1 Piping. Electrically isolated sections of metallic piping or equipment shall be maintained grounded or bonded to the other grounded portions of the system in accordance with the applicable building code.	This section does not require maintenance of piping as indicated in the 2015VSFPC but rather bonding and grounding. In order to maintain the continuity of the grounding path for all portions of a tank and piping system that do not form a continuous conductive path, each electrically isolated section of piping must be independently grounded or, alternatively, be bonded to another properly grounded portion of the system.
231	CA		2905.1 Process Location. Process operations shall be conducted in structures approved in accordance with the applicable building code.	The use of organic coating processes are not a specifically approved use group classification in the IBC and therefore it is important to provide context as to where these operations should and should not be conducted. The IBC classifies organic coating processes in occupancy Group H-2 or H-3, depending on the type and amounts of materials, when the MAQ of hazardous materials in Table 307.1(1) of that code is exceeded. IBC Section 418 further regulates these structures as to their physical configuration, location and finished product storage. See the commentary to IBC Sections 418.1 through 418.6 for further information.

232	CA			2905.4 Explosion control. Explosion control shall be maintained in areas subject to potential deflagration hazards as indicated by the applicable building code. Explosion control shall be maintained in accordance with Section 911 and NFPA 35.	This intent of this section is to identify where explosion control would be needed due to the operations present. Explosion control is required where Class I liquids or flammable dusts create a potential deflagration hazard; as defined by NFPA 35. Section 911 and IBC Section 414.5.1 prescribe requirements for explosion control. NFPA 68 also provides guidance on this subject.
233	CA			2905.5 Ventilation. Enclosed structures in which Class I liquids are processed or handled shall be ventilated to a safe location outside of the structure in accordance with the applicable building code.	The proposed section includes clear guidance that ventilation is to be to the atmosphere outside of the enclosure. Ventilation systems must be designed to prevent the accumulation of vapors in the building where Class I flammable liquids are processed. Uncontaminated air, preferably from a source outside the building, should be distributed to dilute and disperse vapors over the entire solid floor area and then discharge them to a safe location outside the building.
234	CA			2906.1 Mills. Mills, operating with close clearances, which process flammable and heat-sensitive materials, such as nitrocellulose, shall maintain operations in a detached building or in a noncombustible structure without other occupancies unless otherwise approved by the applicable building code. The amount of nitrocellulose or other flammable material brought into the area shall not be more than the amount required for a batch.	There are no maintenance requirements in the building code for operating mills. Milling of heat-sensitive materials, such as nitrocellulose, is an extraordinary hazard that must be located in single-purpose buildings, away from other uses and high-hazard operations. Pebble mills pose a special vapor ignition hazard caused by static electricity. Both the grinding material and inner lining of these mills are made of materials with good insulating characteristics. Because static electricity is produced during milling, it has nowhere to go. Generally, the atmosphere inside of this type of mill is made either partially or totally inert using nitrogen or carbon dioxide gas to prevent ignition.
235	CA			2909.4 Nitrocellulose storage. Nitrocellulose storage shall be located on a detached pad or in a separate structure or a room enclosed in accordance with the applicable building code. When nitrocellulose storage is present, the area shall not be utilized for any other use in accordance with the applicable building code. Electrical wiring and equipment in storage areas adjacent to process areas shall be maintained in accordance with Section 2904.2.	There are no maintenance requirements in the building code for nitrocellulose storage operations. Solvent-wet nitrocellulose is the most common type associated with lacquer production. In this case, the solvent is usually an alcohol, which is a Class I flammable liquid. Solvent-wet nitrocellulose possesses the same fire-hazard characteristics as the solvent in which it is stored, with important differences noted. Solvent-wet nitrocellulose becomes increasingly unstable as the temperature rises. Once ignited, nitrocellulose will continue to burn even in the absence of oxygen. Therefore, extra diligence must be used to prevent ignition and fire spread. IBC Section 418.5 contains requirements for the separation of these areas.
236	CAAM		3001.1 Scope. This chapter shall apply to the maintenance and operation of industrial ovens and furnaces. Industrial ovens and furnaces shall comply with the applicable maintenance provisions of NFPA 86, the applicable building code and this chapter. The terms "ovens" and "furnaces" are used interchangeably in this chapter.	3001.1 Scope. This chapter shall apply to the maintenance and operation of industrial ovens and furnaces. Industrial ovens and furnaces shall comply with the applicable provisions of NFPA 86, the applicable building code and this chapter. The terms "ovens" and "furnaces" are used interchangeably in this chapter.	Restores reference to applicable building code in place of the IFGC and IMC.
237	CAAM		3003.1 Ventilation. Ventilation or combustion air for industrial ovens or furnaces shall be maintenaned in accordance with the applicable building code.	3003.1 Ventilation. Enclosed rooms or basements containing industrial ovens or furnaces shall be maintained with combustion air in accordance with the applicable building code, and with ventilation air in accordance with the applicable building code.	Maintenance language, not construction. The proposal restores essential context as to combustion air and ventilation. Placing an oven or furnace below grade presents difficulty in ventilation and offers severe obstacles to proper explosion release. When gas or oil is used, the furnace or oven should be vented separately unless the products of discharge deposit directly into the oven.

238	CA			3003.4 Temperatures. Unless otherwise approved by the applicable building code, roofs and floors of ovens shall maintain insulation and ventilation to prevent temperatures at combustible ceilings and floors from exceeding 160°F (71°C).	Temperature regulation is an operational requirement. This section including the temperature critical goes back until at least the 1978 BOCA. Furnaces and ovens should be maintained to minimize their fire hazard when operating at elevated temperatures. Insulation and ventilation are important in preventing heat transfer from the oven to surrounding combustible products.
239	CA			3004.1 Fuel piping. Fuel piping serving industrial ovens shall be maintained in accordance with this section and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Electrically wired, oil-fired and special-atmosphere furnaces are covered in this section. Fuel-gas piping is covered in the IFGC
240	CA		3004.2 Shutoff valves. Manual fuel shutoff valves for industrial ovens or furnaces shall be maintained in accordance with the applicable building code.	3004.2 Shutoff valves. Manual fuel shutoff valves for industrial ovens or furnaces shall be maintained and remain in accordance with the applicable building code.	Shutoff valves need to be maintained. Individual manual shutoff valves are used for equipment isolation.
241	CAAM		3004.2.1 Fuel supply lines. Valves for fuel supply lines shall be located within 6 feet (1829 mm) of the appliance served. Exception: When a valve located in the same general area as the appliance served has been approved in accordance with the applicable building code.	3004.2.1 Fuel supply lines. Valves for fuel supply lines shall be located within 6 feet (1829 mm) of the appliance served. Exception: When approved and the valve is located in the same general area as the appliance served.	The placement and operation of emergency shutoff valves is and operational challenge. A fuel supply shutoff valve must be maintained in the fuel supply line within 6 feet (1829 mm) of the appliance for easy shutoff of fuel in case of an emergency.
242	CA			3004.3 Valve position. Manual fuel shutoff valves shall be maintained to visually indicate the open or closed position of the valve. Manual fuel shutoff valves shall not be equipped with removable handles or wrenches unless the handle or wrench can only be installed parallel with the fuel line when the valve is in the open position.	Maintenance of valve indication and operation not construction. Manual shutoff valves should have a permanently affixed visual indicator that is easily recognizable, and it should be in the open position. The removable handle requirement prevents fuel supply shutoff for any reason. Accidental shutoff could endanger property and people.
243	CA			3005.1 Shut down. Interlocks shall be maintained for Class A ovens so that conveyors or sources of flammable or combustible materials shall shut down if either the exhaust or recirculation air supply fails	Maintenance of interlocks, not construction. Code language has been consistent since 1978 BOCA. If ventilation or airflow were lost, a safety control circuit would immediately shut down the heating system of the effected section. When necessary, loss of ventilation must shut down the entire system, as well as the conveyor.
244	CA			3006.1 Required protection. Fire extinguishing systems provided for Classes A and B ovens that contain, or are utilized for the processing of, combustible materials shall be maintained in accordance with Chapter 9.	There are no maintenance requirements in the building code. This proposal references Chapter 9 for the maintenance of fire protection systems.
245	CA			3006.2 Fixed fire-extinguishing systems. Fixed fire-extinguishing systems shall be maintained in accordance with Chapter 9 for Class C or D ovens to protect against such hazards as overheating, spillage of molten salts or metals, quench tanks, ignition of hydraulic oil and escape of fuel.	There are no maintenance requirements in the building code. This proposal references Chapter 9 for the maintenance of fire protection systems. It also retains the IFC language to specify the potential hazards present. Class C and D ovens can operate with special processing atmospheres at very high temperatures and can present fire hazards to the areas around them.
246	CAAM		3101.1 Scope. Tents, temporary special event structures, and membrane structures shall comply with this chapter. The provisions of Section 3103 are applicable only to temporary tents and membrane structures. The provisions of Section 3104 are applicable to temporary and permanent tents and membrane structures.	3101.1 Scope. Tents, temporary special event structures, and membrane structures shall comply with this chapter. The provisions of Section 3103 are applicable only to temporary tents and membrane structures. The provisions of Section 3104 are applicable to temporary and permanent tents and membrane structures. Other temporary structures shall comply with the applicable building code.	No content change other than "temporary stage canopy" to "temporary special event structure" to match the 2018 IFC.

247	CA			3103.1 General. All temporary tents and membrane structures shall comply with this section.	This general section only applies to tents and membrane structures used for temporary periods. It is not for other temporary structures and therefore the new language is not needed. See scope 3101.1 for temporary structure guidance.
248	CAAM		Withdrawn	3103.2 Approval required. Tents and membrane structures having an area in excess of 900 square feet (84 m2) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official in accordance with Table 107.2. Exceptions: 1.Tents used exclusively for recreational camping purposes. 2.Tents open on all sides which comply with all of the following: 2.1.Individual tents having a maximum size of 700 square feet (65 m2). 2.2.The aggregate area of multiple tents placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding 700 square feet (65 m2) total. 2.3.A minimum clearance of 12 feet (3658 mm) to all structures and other tents.	
249	CA			3104.4 Certification. An affidavit or affirmation shall be submitted to the fire code official and a copy retained on the premises on which the tent or air-supported structure is located. The affidavit shall attest to the following information relative to the flame propagation performance criteria of the fabric: 1.Names and address of the owners of the tent or air-supported structure. 2.Date the fabric was last treated with flame-retardant solution. 3.Trade name or kind of chemical used in treatment. 4.Name of person or firm treating the material. 5.Name of testing agency and test standard by which the fabric was tested.	The 2015 VSFPC removed the term "fire code official" from this section and leaves it unclear as to whom to submit the certification to for approval. This proposal simply restores the IFC language.
250	CA			3104.13 Fire protection equipment. Fire hose lines, water supplies and other auxiliary fire equipment shall be maintained at the site in such numbers and sizes as required by the fire code official.	The 2015 VSFPC does not specify who approves the fire protection equipment. This proposal simply restores the IFC language to indicate "fire code official"
251	CAAM		3104.14 Occupant load factors. The occupant load allowed in an assembly structure, or portion thereof, erected for a period of 180 days or less shall be determined in accordance with Chapter 10 of the International Fire Code.	3104.14 Occupant load factors. The occupant load allowed in an assembly structure, or portion thereof, shall be determined in accordance with Chapter 10 of the International Fire Code.	Tents are inherently operational (not just maintenance) activities. VCC Section 3103.1 clearly indicates that tents less than 180 days shall comply with the IFC. Therefore it is simply unnecessary and confusing to add the term "or applicable building code". The 2015 VSFPC suggests two standards that could be used to determine occupant load factors but the IFC has always intended that the egress calculations for assembly areas be consistently calculated regardless of the type or duration of the tent. Indicating two options creates unnecessary confusion as to which factors or reference should be used. This is further complicated by the fact that direct reference to any occupant load factors have been deleted in the 2015 VSFPC in Chapter 10 and the VCC defers all requirements for temporary tents directly to the IFC. So even if the "applicable building code" is used, the occupant load factors would come directly from the IFC, not the VCC Chapter 10.

252	CAAM	3104.15.1 Installation. Heating and cooking equipment, tanks, piping, hoses, fittings, valves, tubing and other related components in assembly structures, or portions thereof, erected for 180 days or less shall be operated and maintained in accordance with manufacturer specifications and other provisions of this code.	3104.15.1 Installation. Heating and cooking equipment, tanks, piping, hoses, fittings, valves, tubing and other related components shall be operated in accordance with manufacturer specifications and other provisions of the this code. Such items shall be maintained in accordance with this code.	The language in the 2015 VSFPC makes it unclear as to whom approves the installation or arrangement of this equipment, especially when it is temporary or portable equipment that is not regulated by the building code. This proposal replaces the term "installation" with the "operation" and provides additional guidance for proper operation such as manufacturer specifications.
253	CAAM	Withdrawn	3105.1 General. Temporary special event structures shall comply with Sections 3104, 3105.2 through 3105.9 and ANSI E1.21	This is new language for the 2018 IFC which defines a temporary special event structure as one that is not regulated by the building code.
254	CAAM	3105.2 Approval. Temporary special event structures in excess of 400 square feet (37 m2) shall not be erected for any purpose without first obtaining approval and a permit from the building official.	3105.2 Approval. Temporary special event structures in excess of 400 square feet (37 m2) shall not be erected, operated or maintained for any purpose without first obtaining approval and a permit from the fire official and the building official.	The 2015 VSFPC removes fire official approval authority. This was never the intent of the IFC. This section of the IFC requires that both the fire code official and the building official issue a permit to construct a special event structure where the structure exceeds 400 square feet in area. This provides coordination of the respective expertise of the fire code official and the building official. This encourages teamwork and cooperation. The current VSFPC language does not.
255	CA		3105.3 Permits shall be required as set forth in section 107.2	Sections 105.6 and 105.7 do not exist in the 2015 VSFPC. This proposal, although doesn't add a new permit, provides the correct reference for future use or those localities that add such a permit.
256	CAAM	3105.5 Required documents. Where an operational permit is required, the following documents shall be submitted to the fire official for approval. 1. Designation of responsible party: The owner of the temporary special event structure shall designate in writing a person to have responsibility for the temporary special event structure on the site. The designated person shall have sufficient knowledge of the construction documents, manufacturer's recommendations and operations plan to make judgments regarding the structure's safety and to coordinate with the fire code official. 2. Operations plan: The operations plan shall reflect manufacturer's operational guidelines, procedures for environmental monitoring and actions to be taken under specified conditions consistent with the construction documents. NOTE: Construction documents shall be submitted to the building official where required by the USBC.	3105.5 Required documents. The following documents shall be submitted to the fire official for approval. 1. Designation of responsible party: The owner of the temporary special event structure shall designate in writing a person to have responsibility for the temporary special event structure on the site. The designated person shall have sufficient knowledge of the construction documents, manufacturer's recommendations and operations plan to make judgments regarding the structure's safety and to coordinate with the fire code official. 2. Operations plan: The operations plan shall reflect manufacturer's operational guidelines, procedures for environmental monitoring and actions to be taken under specified conditions consistent with the construction documents. NOTE: Construction documents shall be submitted to the building official where required by the USBC.	The proposed language removes the construction language (originally item 1) and keeps the operational items as indicated in the 2018 IFC. The operations plan must identify the responsible person, designate safe evacuation routes and locations, and evaluate the potential for canceling the show when the weather creates an unsafe condition.

260	CA			3201.3 High-piled storage operational plan. Prior to the use and operation of high-piled storage in new structures or buildings requesting a change of occupancy/use, plans and specifications shall be submitted to the building official for review and approval. Following approval of the plans, a copy of the approved plans shall be maintained on the premises in an approved location. The on-site plans shall include the following applicable items: 1.Floor plan of the building showing locations and dimensions of high-piled storage areas. 2.Usable storage height for each storage area. 3.Number of tiers within each rack, if applicable. 4.Commodity clearance between top of storage and the sprinkler deflector for each storage arrangement. 5.Aisle dimensions between each storage array. 6.Maximum pile volume for each storage array. 7.Location and classification of commodities in accordance with Section 3203 or the applicable building code. 8.Location of commodities which are banded or encapsulated. 9.Location of required fire department access doors. 10.Type of fire suppression and fire detection systems. 11.Location of valves controlling the water supply of ceiling and in-rack sprinklers. 12.Type, location and specifications of smoke removal and curtain board systems. 13.Dimension and location of transverse and longitudinal flue spaces. 14.Additional information regarding required design features, commodities, storage arrangement and fire protection features within the high-piled storage area when required by the fire code official.	Changed the title from "construction documents" to "operational plan" This section still retains direction to submit the list of information to the building official for approval but also indicates that a copy of the plan shall be on site for reference. This operational plan is critical to ensure that the building is being used in the manor in which it was designed and approved. Section 3201.3 contains provisions that are unique to the needs of the fire department. These construction document requirements are in addition to those encountered in the IBC and specifically require detailed information that is essential for the permit review process and for future use when conducting fire inspections, in the development of the fire department's prefire emergency plans and when conducting fire incident management during an emergency. Items 1, 2, 3 and 5 are general requirements that address the general description of work for which the application must be submitted. Item 4 is significant because the height of any storage in relation to the sprinkler heads will determine sprinkler effectiveness. Sprinklers should be designed for the maximum allowable heights of the stored commodities and the minimum amount of unobstructed space below the sprinkler heads. Items 6, 7 and 8 recognize that a storage building can contain multiple classes and groups of commodities. As a result, this section requires that the construction documents illustrate the location, size and classification of the various types of commodities. Items 9, 10, 11 and 12 are important for the development of a prefire emergency plan. Such a plan can be established by the building owner or the tenant in cooperation with the local fire department that will be called to the building during an emergency. Developing and maintaining a prefire emergency plan can help during the incipient stages of a fire by reducing the amount of damage from the fire and containing the fire within a short time. Item 13 requires a detailed description of the locations of transverse and longitudinal flue spaces. The provisions for minimum flue space dimensions are contained in Section 3208.3. Item 14 allows the fire code official to use the enforcement powers of that
261	CA			3204.1 General. The operation and maintenance of high-piled storage areas, and portions of high-piled storage areas intended for storage, shall be maintained in accordance with the approved plan specified in section 3201.3 and the applicable building code.	There are no maintenance requirements in the building code.
262	CA			3206.1 General. Fire protection and life safety features for high-piled storage areas shall be maintained in accordance with Sections 3206.2 through 3206.10	There are no maintenance requirements in the Building Code.
263	CA			3206.3 Separation of high-piled storage areas. High-piled storage areas shall be maintained as separated from other portions of the building where required by the storage plan in section 3201.3 and the applicable building code.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
264	CA			3206.3.1 Separation from other uses. Mixed occupancies shall be maintained as separated in accordance with the storage plan in section 3201.3 and applicable building code.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
265	CA			3206.3.2 Multiple high-piled storage areas. Multiple high-piled storage areas shall be maintained in accordance with the storage plan in section 3201.3 and the applicable building code.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
266	CA			3206.4 Automatic sprinklers. Automatic sprinkler systems shall be maintained in accordance with Chapter 9 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.

267	CA		3206.4.1 Pallets. The requirements based on the presence of pallets shall be maintained in accordance with the storage plan in section 3201.3 and the applicable building code.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
268	CA		3206.5 Fire detection. Fire detection provided for high-piled storage areas shall be maintained in accordance with Chapter 9 and remain in accordance with the approved storage plan in section 3201.3 and the applicable building code.	There are no maintenance requirements in the building code.
269	CAAM	3206.6 Building access. Where building access is required by the applicable building code, fire apparatus access roads shall remain and be maintained in accordance with Section 503.	3206.6 Building access. Where building access is required by the applicable building code, fire apparatus access roads in accordance with Section 503 shall be provided within 150 feet (45 720 mm) of all portions of the exterior walls of buildings used for high-piled storage. Exception: Where fire apparatus access roads cannot be installed because of topography, railways, waterways, non-negotiable grades or other similar conditions, the fire code official is authorized to require additional fire protection.	There are no maintenance requirements in the building code. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
270	CA		3206.6.1 Access doors. Access doors shall be maintained accessible, available at all times and remain in accordance with the approved storage plan in section 3201.3 and the applicable building code.	There are no maintenance requirements in the building code.
271	CA		3206.6.1.1 Number of doors required. The minimum number of doors shall be maintained in accordance with the approved storage plan in section 3201.3 and remain in accordance with the applicable building code..	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
272	CA		3206.6.1.2 Door size and type. Access doors shall be maintained in accordance with the approved storage plan in section 3201.3 and remain in accordance with the applicable building code.. Roll-up doors shall not be used unless approved.	There are no maintenance requirements in the building code. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
273	CA		3206.7 Smoke and heat removal. Where smoke and heat removal systems including draft curtains are required, they shall be maintained in accordance with Chapter 9, the approved storage plan in section 3201.3 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
274	CA		3206.8 Fire department hose connections. Where a standpipe system is provided, it shall be maintained in accordance with Chapter 9 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code.
275	CA		3206.9 Aisles. Aisles separating storage piles or racks shall be maintained unobstructed and remain in accordance with the approved storage plan in section 3201.3 and applicable building code.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
276	CA		3206.9.1 Width. Aisle width shall be maintained to the approved storage plan in section 3201.3 and remain in accordance with the applicable building code. Exceptions: 1.Aisles crossing rack structures or storage piles, which are used only for employee access, shall be a minimum of 24 inches (610 mm) wide. 2.Aisles separating shelves classified as shelf storage shall be a minimum of 30 inches (762 mm) wide.	There are no maintenance requirements in the building code. Exceptions are not requirements but rather options for compliance when present.

279	CA		3206.9.2 Clear height. The required aisle width shall be maintained from the floor to ceiling in accordance with the approved storage plan in Section 3201.3 and applicable building code. Rack structural supports and catwalks are allowed to cross aisles at a minimum height of 6 feet 8 inches (2032 mm) above the finished floor level, provided that such supports do not interfere with fire department hose stream trajectory.	There are no maintenance requirements in the building code. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
280	CA		3206.9.3 Dead ends. Dead-end aisles shall not exceed the approved storage plan in section 3201.3.	Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
282	CA		3207.3 Pile dimension and height limitations. Pile dimensions, the maximum permissible storage height and pile volume shall be maintained in accordance with the approved storage plan in section 3201.3 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction.
283	CA		3207.4 Array. Where an automatic sprinkler system design utilizes protection based on a closed array, array clearances shall be maintained as specified by the standard used and approved storage plan in section 3201.3.	Adds reference to the approved storage plan which should indicate the approved array arrangements.
284	CA		3208.2 Fire protection. Where automatic sprinklers are provided, they shall be maintained in accordance with chapter 9.	There are no maintenance requirements in the building code.
285	CA		3208.2.2 Racks with solid shelving. Racks with solid shelving having an area greater than 20 square feet (1.9 m2), measured between approved flue spaces at all four edges of the shelf, shall be maintained in accordance with this section. Exceptions: 1. Racks with mesh, grated, slatted or similar shelves having uniform openings not more than 6 inches (152 mm) apart, comprising not less than 50% of the overall shelf area, and with approved flue spaces are allowed to be treated as racks without solid shelves. 2. Racks used for the storage of combustible paper records with solid shelving shall be in accordance with the applicable NFPA 13 standard.	The only change is to use "applicable NFPA 13 standard" in place of "applicable building code.
287	CA		3208.3 Flue spaces. Flue spaces shall be maintained in accordance with table 2308.3 or the approved storage plan in section 3201.3 and remain in accordance with the applicable building code.	In high-piled combustible storage racks, flue spaces are an important component of the fire protection design and must be maintained. Flue spaces permit water discharged from a ceiling sprinkler to penetrate into the rack system so it can begin to either control or suppress the fire, depending on the automatic sprinkler system design. When the sprinkler system is designed to control the fire, flue spaces allow the additional sprinkler discharge to prewet the storage commodities, which slows vertical and horizontal fire spread within the rack, thus limiting the number of sprinklers that may operate.
288	CA		3208.4 Column protection. Fire protection for steel building columns shall be maintained in accordance with approved storage plan in section 3201.3, Chapter 9 and remain in accordance with the applicable building code.	It is not uncommon for highpile storage to have additional sprinkler protection for steel-columns. Specifically, NFPA 13 provides steel-column protection criteria in areas used for the rack storage of Class I through IV commodities in Section 16.1.4, for rack storage of plastic and rubber products in Section 17.1.4 and for rack storage of rubber tires in Section 18.2. This required protection is important to specifically reference to ensure that it is maintained.

291	CA		3209.3 Carousel storage. High-piled storage areas having greater than 500 square feet (46 m2) of carousel storage, including automatic shutdown devices, shall be maintained in accordance with the approved storage plan in section 3201.3 and remain in accordance with the applicable building code.	There are no maintenance requirements in the building code. Proper maintenance of storage areas and locations is critical to ensuring that the facility continues to operate within the approved storage plan. This is not construction. Carousel storage is used in large storage operations when the commodity must be protected (security), when the commodity requires strict environmental control or both. In addition, carousel storage is selected because it may provide an economic advantage to an operation or business by having the commodity come directly to the employee rather than the employee stocking and retrieving the commodity. The carousel area is normally not occupied. An exception to this may be when the carousel system is undergoing maintenance or repair or during an annual inspection of the fire protection features. Examples of commodities within carousel storage may include distribution centers that distribute pharmaceutical or refrigerated/frozen foods and beverages. The additional fire safety requirements are precautionary, directly resulting from the limited access to these types of storage areas and addressing the potential of a moving fire via the carousel mechanism. Because the area of the carousel is controlled by a mechanized, generally computer-controlled system, immediate access to the actual storage area is normally limited. These limits serve to protect both personnel and the commodity. This precaution prevents the fire from spreading throughout the entire storage area.
292	CAAM	3209.4 Automated rack storage. High-piled storage areas with automated rack storage shall be maintained in accordance with the approved storage plan in section 3201.3. A manually activated emergency shutdown switch for use by emergency personnel shall be clearly identified and shall be maintained and accessible in accordance with the applicable building code.	3209.4 Automated rack storage. High-piled storage areas with automated rack storage shall be maintained in accordance with the approved storage plan in section 3201.3. A manually activated emergency shutdown switch for use by emergency personnel shall be clearly identified and shall be maintained in a location approved by the fire code official.	There are no maintenance requirements in the building code. Emergency shut down buttons shall be maintained and remain clearly identifiable at all times. This section requires that if an emergency occurs in an automated rack storage facility, the remotely controlled pallet moving equipment be manually shut down. This shutdown accomplishes two objectives. First, the potential to either move additional product into the fire or move burning product through the storage area is removed. Second, it is not safe to place emergency personnel within the automated storage area when the system is still active. Many of these automated devices move much faster than personnel can get out of the way, and there is a physical danger to personnel. This shutdown will eliminate danger to personnel and reduce property damage. Since the shutdown of such systems is a tactical maneuver, the fire chief is required to approve the location for the switch and ensure that it is properly identified. The switch should be in a readily accessible location outside of the boundaries of the automated rack storage area.
293	CA		3210.1 General. Records storage facilities used for the rack or shelf storage of combustible paper records greater than 12 feet (3658 mm) in height shall be maintained in accordance with Section 3206 and 3208, the approved storage plan in section 3201.3 and remain in accordance with the applicable building code. Palletized storage of records shall be maintained in accordance with Section 3207.	There are no maintenance requirements in the building code.

294	CAAM	3314.1 Completion before occupancy. In buildings where an automatic sprinkler system is required by this code or the applicable building code, the building, or portion thereof, shall not be occupied until the automatic sprinkler system has been tested and approved, except where approved by the building official.	3314.1 Completion before occupancy. In buildings where an automatic sprinkler system is required by this code or the applicable building code, it shall be unlawful to occupy any portion of a building or structure until the automatic sprinkler system installation has been tested and approved, except as provided in Section 109.2	Section 109.2 is a better reference for this situation so that building and fire officials coordinate inspections and directions. This section is very clear in that when the sprinkler system is not tested and approved, the building cannot be occupied by the owner or tenants. In other words "no protection; no people" as one fire code official has put it. This is especially important in a building that has been given construction alternatives (i.e., increased travel distances, increased height and area, or reduced fire-resistance ratings) based on the installation of a sprinkler system, because the building is not safe for people when the system is not functional. Since the issuance of a Certificate of Occupancy is regulated by the applicable building code, the administration of this section should be coordinated with the building official.
295	CA		3401.1 Scope. The maintenance and operation of tire rebuilding plants, tire storage, and tire byproduct facilities shall comply with this chapter, other applicable requirements of this code. Tire storage in buildings shall also comply with Chapter 32.	NFPA 13 is not a maintenance standard and is not needed to be referenced.
296	CA		3403.1 Construction. Tire rebuilding plants shall maintain the requirements of the applicable building code, as to construction, separation from other buildings or other portions of the same building, and protection.	The proposed language more closely mirrors the model code language and stays within the scope of maintenance requirements only. This is not construction.
297	CAAM	3403.2 Location. Unless otherwise approved by the applicable building code, buffing operations shall be located in a room separated from the remainder of the building housing the tire rebuilding or tire recapping operations by a fire-resistance rated separation in accordance with the applicable building code.	3403.2 Location. Unless otherwise approved by the applicable building code, buffing operations shall be located in a room separated from the remainder of the building housing the tire rebuilding or tire recapping operations by a fire-resistance rated separation in accordance with the applicable building code. Exception: Where permitted by the applicable building code, buffing operations are not required to be separated where all of the following conditions are met: 1.Buffing operations are equipped with an approved continuous automatic water-spray system directed at the point of cutting action; 2.Buffing machines are connected to particle-collecting systems providing a minimum air movement of 1,500 cubic feet per minute (cfm) (0.71 m3/s) in volume and 4,500 feet per minute (fpm) (23 m/s) in-line velocity; and 3.The collecting system shall discharge the rubber particles to an approved outdoor noncombustible or fire-resistant container, which is emptied at frequent intervals to prevent overflow.	Buffing operations are not a specific occupancy use group or and approved area are not typically noted on occupancy permits. Nevertheless, it is critical that these operations are conducted in an appropriate location. This section specifies that the buffing operation areas must be separated from the other operations by a fire resistance rated separation in accordance with the applicable building code. The intent is identical to the intent regarding construction: to keep the higher hazard operations separate, thereby reducing the potential for a rapidly spreading fire. The exceptions are not requirements but rather options that are available to achieve compliance.
298	CA		3604.2 Standpipes. Marinas and boatyards equipped with standpipe systems shall be maintained in accordance with NFPA 303 and Chapter 9.	There are no maintenance requirements in the applicable building code. Standpipe systems in marinas are basically a horizontal standpipe to reach all parts of the float system, piers and buildings with no more than 150 feet (15 240 mm) of travel distance from a fire hose connection. These systems shall be maintained like other standpipe systems in accordance with Chapter 9.
299	CA		3703.5 Dust collection. Where located within a building, equipment or machinery that generates or emits combustible fibers shall be operated with an approved dust-collecting and exhaust system in accordance with the applicable building code and maintained in accordance with Chapter 22.	There are no maintenance requirements in the building code. The intent of this section is operational not just maintenance. It is to identify where dust collection systems may need to be considered for the operation of equipment or machinery. Dust may create a considerable explosion when displaced from a surface on which it rests, and it may also be ignited by static sparks. For this reason, a dust-collecting hood and exhaust system is often required by the applicable building code.

300	CA		3704.3 Storage of more than 100 cubic feet to 500 cubic feet. Loose combustible fibers in quantities exceeding 100 cubic feet (3 m3) but not exceeding 500 cubic feet (14 m3) shall be stored in rooms in accordance with the applicable building code. NOTE: These rooms are typically required to be fire resistance rated in accordance with the applicable building code.	Moderate quantities of material are often required to be stored in fire-resistance-rated rooms in accordance with the applicable building code. This is an operational storage location requirement, not a construction requirement.
301	CA		3704.4 Storage of more than 500 cubic feet to 1,000 cubic feet. Loose combustible fibers in quantities exceeding 500 cubic feet (14 m3) but not exceeding 1,000 cubic feet (28 m3) shall be stored in rooms in accordance with the applicable building code. NOTE: These rooms are typically required to be fire resistance rated in accordance with the applicable building code.	Large amounts of material require an increased fire-resistance-rated enclosure in accordance with the applicable building code. This is an operational storage location requirement, not a construction requirement.
302	CA		3704.5 Storage of more than 1,000 cubic feet. Loose combustible fibers in quantities exceeding 1,000 cubic feet (28 m3) shall be stored in rooms in accordance with the applicable building code. NOTE: These rooms may be required to be fire resistance rated and fire suppression systems in accordance with the applicable building code.	Very Large amounts of material typically require an increased fire-resistance-rated enclosure and a fire suppression system in accordance with the applicable building code. This is an operational storage location requirement, not a construction requirement.

FP202(1)-18

VFC:

Proponents: Andrew Milliken (amilliken@staffordcountyva.gov)

2015 Virginia Statewide Prevention Fire Code

CORROSIVE. A chemical that causes visible destruction of, or irreversible alterations in, living tissue by chemical action at the point of contact. A chemical shall be considered corrosive if, when tested on the intact skin of albino rabbits by the method described in DOTn 49 CFR 173.137, such chemical destroys or changes irreversibly the structure of the tissue at the point of contact following an exposure period of 4 hours. This term does not refer to action on inanimate surfaces. A substance shall be considered corrosive if it has a pH less than or equal to 2, or a pH greater than or equal to 12.5 on a pH scale of 0-14.

Reason Statement: The definition of corrosive is a complicated criterion that is often difficult to confirm during field inspections or document review. This proposal does not change or remove the current definition but rather adds physical property criteria as defined by the United States Environmental Protection Agency in 40 CFR 261.22 (https://www.govinfo.gov/content/pkg/CFR-2018-title40-vol28/pdf/CFR-2018-title40-vol28-sec261-22.pdf). Using this physical characteristic point of reference will enhance building owner/operators as well as code enforcers understanding of this definition and help to focus compliance questions on the hazards rather than a complicated definition.

Cost Impact Statement: The code change proposal will not increase or decrease the cost of construction
This proposal changes a definition and will not increase or decrease the cost of construction.

Resiliency Impact Statement: This proposal will neither increase nor decrease Resiliency
This proposed change to a definition will neither increase nor decrease Resiliency.

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: Consensus Approval

Workgroup 2 - Proposed Reason: As amended to add ". Or a substance..." Staff to correlate to construction code.

Board Decision

Board Decision: None

Board Reason: N/A

Board Decisions

☐ Approved
☐ Approved with Modifications
☐ Carryover
☐ Disapproved
☐ None

Public Comments for FP202(1)-18

This proposal doesn't have any public comments.

Proposal # 114

FP202(1)-18

FP202(2)-18

VFC:

Proponents: Charles Walker, TNT Fireworks

2015 Virginia Statewide Prevention Fire Code

Revise as follows:

PERMISSIBLE FIREWORKS. Any ~~sparklers, fountains, Pharaoh's serpents, caps for pistols, or pinwheels commonly known as whirligigs or spinning jennies.~~ fountains that do not emit sparks or other burning effects to a distance greater than five meters (16.4 feet); wheels that do not emit a flame radius greater than one meter (39 inches); crackling devices and flashers or strobes that do not emit sparks or other burning effects to a distance greater than two meters (78.74 inches); and sparkling devices or other fireworks devices that (i) do not explode or produce a report, (ii) do not travel horizontally or vertically under their own power, (iii) do not emit or function as a projectile, (iv) do not produce a continuous flame longer than 20 inches, (v) are not capable of being reloaded, and (vi) if designed to be ignited by a fuse, have a fuse that is protected to resist side ignition and a burning time of not less than four seconds and not more than eight seconds.

Reason Statement: VIRGINIA ACTS OF ASSEMBLY -- 2019 SESSION - SB 1625 was signed into law on March 21, 2019 with an effective date of 7/1/2019. It was an an Act to amend and reenact § 27-95 of the Code of Virginia, relating to the Statewide Fire Prevention Code; definition of permissible fireworks. This proposed change is to update the definition of "Permissible Fireworks" in the SFPC to make it consistent with current Code of Virginia statutes.

Cost Impact Statement: The code change proposal will not increase or decrease the cost of construction
This proposal updates a definition and will not increase or decrease the cost of construction.

Resiliency Impact Statement: This proposal will neither increase nor decrease Resiliency
This proposed update to a definition will neither increase nor decrease Resiliency.

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: Consensus Approval

Workgroup 2 - Proposed Reason:

Board Decision

Board Decision: None

Board Reason: N/A

Board Decisions

☐ Approved
☐ Approved with Modifications
☐ Carryover

☐ Disapproved
☐ None

Public Comments for FP202(2)-18

This proposal doesn't have any public comments.

Proposal # 164

FP202(2)-18

FP202(3)-18

VFC:

Proponents: *Glenn Dean (gad.pompier@gmail.com)*

2015 Virginia Statewide Prevention Fire Code

RESTRICTED EXPLOSIVES MANUFACTURING. *When an individual is engaged in the incidental manufacture or production of explosive materials composed of commercially available components that are packaged or marketed for the purpose of producing explosive materials, including reactive targets, at a location not within the definition of unrestricted explosives manufacture; is for immediate use at the site of incidental explosives manufacturing or production without residual storage; and does not involve or include the bulk mixing and delivery vehicles that are within the scope of NFPA 495.*

UNRESTRICTED EXPLOSIVES MANUFACTURING. *When any company, person, or group of persons is engaged in the business of manufacturing or producing explosive materials at a fixed site or facility for the purpose of commercial sale, use, or distribution of explosives.*

Reason Statement: *This proposal is editorial in nature without any attempt to make technical changes to the code. The insertion and placement of the word "is" seems more grammatically correct than how the definitions are currently written.*

Cost Impact Statement:
This proposal will neither increase or decrease the cost of construction.

Resiliency Impact Statement:
This proposal will neither increase or decrease resiliency.

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: *Consensus Approval*

Workgroup 2 - Proposed Reason:

Board Decision

Board Decision: *None*

Board Reason: *N/A*

Board Decisions

☐ *Approved*
☐ *Approved with Modifications*
☐ *Carryover*
☐ *Disapproved*
☐ *None*

Public Comments for FP202(3)-18

This proposal doesn't have any public comments.

Proposal # 257

FP202(3)-18

FP316.6-18

VFC: 316.6, (N) 316.6.1, 316.6.2

Proponents: *Gerry maiatico (gmaiatico@warrencountyfire.com)*

2015 Virginia Statewide Prevention Fire Code

Revise as follows:

316.6 Structures and outdoor storage underneath highvoltage transmission ~~lines.~~ lines, bridges and elevated roadways. *Structures and outdoor storage underneath high-voltage transmission lines, bridges and elevated roadways shall comply with Sections 316.6.1 and 316.6.2, respectively.*

(N) 316.6.1 Structures. *Structures shall not be constructed within the utility easement beneath high-voltage transmission lines or underneath bridges or elevated roadways unless approved.*

316.6.2 Outdoor storage. *Outdoor storage within the utility easement underneath high-voltage transmission lines or underneath bridges or elevated roadways shall be limited to noncombustible material. Storage of hazardous materials including, but not limited to, flammable and combustible liquids is prohibited.*

> ***Exception:*** *Combustible storage, including vehicles and fuel storage for backup power equipment serving public utility equipment, or for the construction, repair or maintenance operations of bridges or elevated roadways is allowed, provided that a plan indicating the storage configuration is submitted and approved.*

Reason Statement: *The storage of combustible materials underneath of bridges and/or elevated roadways presents a significant life safety hazard to firefighters due to the access concerns and operational considerations. The often used structural concrete and steal members utilized in the erection of bridges and elevated roadways are often not designed for intense heat exposure or direct flame impingement. This is most recently supported in a March, 2017 fire incident where an upholstered chair was set fire and spread to high-density polyethylene pipes being stored underneath a section of the I-85 Bridge in Atlanta, GA. The fire burned for approximately 2 hours before a 95 foot section of the bridge collapsed. It took 48 days to repair the bridge at a cost of $15 million.*
As a result of this incident, the Virginia Department of Transportation (VDOT) has issued a letter to all property owners underneath of bridges prohibiting the storage of materials underneath of VDOT operated bridges or elevated roadways. It has been noted that this a violation of "policy" due to the lack of codified language and is often found to be continually violated in many areas. This code proposal would provide such language for immediate corrective action from the fire code official and recourse for continued violations of such and addresses the lack of private bridges and elevated roadways which is not currently addressed in VDOT policy.

Cost Impact Statement: *The code change proposal will not increase or decrease the cost of construction*
No cost impact to construction as it only relates to the storage underneath.

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: *Consensus Approval*

Workgroup 2 - Proposed Reason:

Board Decision

Board Decision: *None*

Board Reason: *N/A*

Board Decisions

☐ *Approved*
☐ *Approved with Modifications*
☐ *Carryover*
☐ *Disapproved*
☐ *None*

Public Comments for FP316.6-18

Public Comment by Linda Hale

Aug 6, 2019 14:54 UTC

Loudoun County has also had permit holders that wished to store explosives under an elevated roadway while blasting along the roadway. This also is a problem.

March 30, 2017 Atlanta Georgia had a huge fire underneath an elevated roadway which lead to the roadway collapsing. Luckily traffic had been turned back before the collapse occurred. But combustibles stored under this roadway would have negatively impacted the roadway much sooner and potentially lead to loss of life.

Proposal # 244

FP316.6-18

FP105-18

IFC®: 105.2 (New)

Proponents: Joe Boisseau

2018 International Fire Code

Revise as follows:

~~1~~ 105.2 ~~New Code Section~~ Delete Exception: ~~A fire official appointed prior to April 1, 1994 continuously employed by the same governing body as the fire official shall comply with the required DHCD training under the Virginia Certification Standards (13VAC5-21)~~

Reason Statement: This is a holdover from the BOCA and is now 25 years or more old. Does this still apply with several new versions of the ICC and moving into 2018 codes?

Cost Impact Statement: The code change proposal will not increase or decrease the cost of construction
Deleting this code does not change construction or training cost.

Resiliency Impact Statement: This proposal will neither increase nor decrease Resiliency
It only resiliency in the updating of the training certification requirements since codes and training have changed over 25 years and we are moving into the 2018 ICC.

Workgroup Recommendation

Workgroup 1 - Proposed Workgroup Recommendation: Consensus Disapproval

Workgroup 1 - Proposed Reason: No support other than proponent.

Board Decision

Board Decision: None

Board Reason: N/A

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

Public Comments for FP105-18

This proposal doesn't have any public comments.

Proposal # 185

FP105-18

FP605.13-18

VFC: 605.13 (New)

Proponents: William Andrews (cyur2b@verizon.net)

2015 Virginia Statewide Prevention Fire Code

Add new text as follows:

605.13 Inspect
Electrical systems over 50 years old in buildings in which people other than only the owner live shall be inspected by a qualified electrician. Exceptions: electrical systems below 50 volts, or when inspection within recent 40 years completed.

If serious hazard found, the electrician shall inform the code official. An inspection report shall be provided to the owner, and copy available to the code official.

Such electrical systems shall be inspected every 40 years after most recent report.

Reason Statement: For 2018 VSFPC, to begin 2021. Seek apply to electrical systems over 50 volts, type fire & shock risk; not low voltage typical of alarm, communication, etc.. A building might be much older, yet electrical system not over 50 years old, so phrase to focus on electrical system's age.
Over 50 years includes aluminum wiring (1966 - '74), older systems increase risk from improper tampering, and deterioration of insulation, connections, components more complex than basic wiring.
Inspection should include examining inside circuit panels, sample outlets & switches, grounding, etc.. If grounding was not required when installed, opportunity to discuss. Not need break holes in walls nor elaborate testing.
Separate proposals for building maintenance and fire codes effort to get in both codes, yet if one fails, maybe other progress enough for support with changes.
Some insurance companies require various inspections before new policy. Many buyers want see inspection report before closing. Codes require

maintenance, so this helps require inspect to learn if electrical system need maintenance.

FEMA, NFPA, etc. data shows electrical problems high in causes of fires, fire fatalities at night; mostly in older residential buildings.

From NFPA: **Electrical failures or malfunctions** were the second leading cause of U.S. home fires in 2012-2016 (behind fires caused by unattended equipment), accounting for 13% of home structure fires.

- Fires involving electrical failures or malfunctions accounted for the highest share of civilian deaths (18%) and direct property damage (20%).
- Nearly two of five fires (39%) involving electrical failure or malfunction occurred in the cold weather months from November through February.
- Arcing was the heat source in approximately three of five home fires involving an electrical failure or malfunction.
- Non-confined home fires involving electrical distribution and lighting equipment most often originated in a bedroom (17% of total), attic or ceiling (12%), or a wall assembly or concealed space (9%).
- Approximately one-quarter (24%) of these fires occurred between midnight and 8 a.m., but these fires accounted for 60% of deaths
- **Electrical distribution and lighting equipment** was the third leading form of equipment involved in fires in U.S. homes in 2012-2016, accounting for 10% of fires (behind cooking equipment and heating equipment).

Cost Impact Statement: The code change proposal will not increase or decrease the cost of construction
Not impact construction, merely improve maintenance of old buildings used as residence beyond owner. Cost to inspect average single family home estimate few hundred dollars, so doing every 40 years small for good maintenance.

Resiliency Impact Statement: This proposal will increase Resiliency
Inspecting old electrical systems helps to maintain old buildings and increase occupancy safety.

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: Consensus Disapproval

Workgroup 2 - Proposed Reason: No support.

Board Decision

Board Decision: None

Board Reason: N/A

Board Decisions

☐ Approved
☐ Approved with Modifications
☐ Carryover
☐ Disapproved
☐ None

Public Comments for FP605.13-18

This proposal doesn't have any public comments.

Proposal # 137

FP605.13-18

FP903.5.1-18

IFC®: 903.5.1 (New), 904.1.1 (New), 906.2.1 (New), 907.8.5.1 (New)

Proponents: Joe Boisseau

2018 International Fire Code

Add new text as follows:

903.5.1 Certification of service personnel for automatic sprinkler systems
Service personnel providing or conducting maintenance or inspection on automatic sprinkler systems shall possess a valid certificate issued by an approved agency or other approved organization for the type of system and work performed.

Revise as follows:

904.1.1 Certification of service personnel for fire-extinguishing equipment
Service personnel providing or conducting maintenance or inspection on automatic fire-extinguishing systems, other than automatic sprinkler systems, shall possess a valid certificate issued by an approved agency or other approved organization for the type of system and work performed.

Add new text as follows:

906.2.1 Certification of service personnel for portable fire extinguishers
Service personnel providing or conducting maintenance or inspection on portable fire extinguishers shall possess a valid certificate issued by an approved agency or other approved organization for the type of system and work performed.

907.8.5.1 Certification of service personnel for fire alarm and detection systems
Service personnel providing or conducting maintenance or inspection on fire alarm and detection systems shall possess a valid certificate issued by an approved agency or other approved organization for the type of system and work performed.

Reason Statement: These code changes only clarify that those conducting inspection be certified by an approving agency. I have had the very issue come up a few times in my career. There are people doing inspection of systems because they are certified as a fire inspector or have been doing the work for a few years. They find issues that need correction and then tell the business to hire another company to fix it, costly the business more money.

Cost Impact Statement: The code change proposal will not increase or decrease the cost of construction
These code changes do not change the cost of construction. These codes deal with the inspection and maintenance. If anything it could decrease cost to the local businesses. The local business could place inspection, maintenance, and service under one contract instead of multiple companies.

Resiliency Impact Statement: This proposal will neither increase nor decrease Resiliency
These code changes improve the inspection and maintenance of these systems. If the system activates and needs immediate service, the local business is not under contract with a certified company to perform the maintenance and repairs, which cost them more money.

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: Consensus Disapproval

Workgroup 2 - Proposed Reason: Mr. Pharr opposes. Mr. Clements brought up issues and disagrees with proposal. Proposal did receive some support. Carry over to give proponent opportunity to work on it.
CD 8/21 meeting

Board Decision

Board Decision: None

Board Reason: N/A

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

Public Comments for FP903.5.1-18

Public Comment by Joe Boisseau
Aug 5, 2019 13:05 UTC

My proposal is only adding the word inspection into the maintenance of fire systems. Currently the wording includes that those preforming of maintenance of these system meet certain qualifications. I would argue that inspection and maintenance go together and that person needs to be qualified.

Under NFPA 25 fire sprinklers system require quarterly inspection. There are several things that are listed. Fire sprinkler systems required flow testing. Is this maintenance or inspection? I had the argument that opening a valve is not maintenance. Then how do you reset a dry system if you are not qualified to conduct maintenance? This is a very issue I came across. The person conducting the inspection could not preform the maintenance. When the business had to have repairs made they had to pay another company to come in do a re-inspection to verify the issues and then conduct the work. This cost the business more time and money.

Most recently I had an inspection of a fire system inside a paint booth. The person conducting the inspection was not certified by the manufacture. They only had basic fire inspector and not Virginia Fire Inspector. How can they properly inspect and test the system for functionality every 6 months? They argued that they were only conducting an inspection, not touching the system. Then how do you complete the internal piping inspection? This does not meet the intent of the code, which is to inspect, test, and maintain the system as installed to make sure that it will function as intended. The person even admitted that if they found something wrong with system then the business would have to hire another fire protection company to make repairs. This would cost the business more money.

This proposal is to include the wording inspection and maintenance together in the same code section. I feel that you cannot do an inspection without doing maintenance. This would not eliminate the AHJ from approving a local business from conducting in house inspection. It just gives the AHJ some authority to ask is the person qualified to conduct the inspection.

Joe Boisseau

Proposal # 184

FP903.5.1-18

FP907.9-18

VFC: (N) 907.9

Proponents: William Andrews (cyur2b@verizon.net)

2015 Virginia Statewide Prevention Fire Code

Revise as follows:

(N) 907.9 Where required in existing buildings and structures. ~~(Section deleted.)~~ At least single station, battery powered smoke alarms shall be installed in rental residences in which older codes did not previously require smoke alarms. The landlord shall certify annually that the smoke alarms have been installed and maintained in good working order. The landlord shall also install a carbon monoxide alarm upon request by a tenant.

Reason Statement: To comply with 2018 General Assembly bill HB 609 & SB 391. Here in fire code easy for officials and customers to reference. Intent to require smoke detectors in rental residences not yet so protected, plus carbon monoxide detectors where appropriate. Bills include "a reasonable accommodation must be made for persons who are deaf or hearing impaired, upon request" so also incorporates requiring such features as need.

Cost Impact Statement: The code change proposal will not increase or decrease the cost of construction
Not impact construction. Single station battery-powered smoke detectors and carbon monoxide detectors to be installed in older rental residences not yet so protected. Typical smoke detectors cost about ten dollars each, and carbon monoxide detectors about $20 each. Alarms for hearing impaired cost about $100 each. Since devices good for several or more years, cost per year small per rental residential unit.

Resiliency Impact Statement: This proposal will increase Resiliency
Helps improve rental residents safety and early warning of fires by requiring smoke detectors where not previously required, plus carbon monoxide detectors and features to alert hearing impaired occupants if need.

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: Consensus Disapproval

Workgroup 2 - Proposed Reason: Carried over 1st meeting. CD 8/21.

Board Decision

Board Decision: None

Board Reason: N/A

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

Public Comments for FP907.9-18

Public Comment by William Andrews
Jul 25, 2019 19:39 UTC

7/24 workshop said need improve wording, so please replace with:

"At least single station, battery powered smoke alarms shall be installed in rental residences in which older codes did not previously require smoke alarms. The landlord shall certify annually that the smoke alarms have been installed and maintained in good working order. The landlord shall also install a carbon monoxide alarm upon request by a tenant."

2018 General Assembly HB 609 + SB 391 changed landlord-tenant act to require smoke alarms in rental residences, plus carbon monoxide alarm upon tenant's request. Appropriate to also include in VSFPC and/or chapter 11 of the Existing Building code. Since older building codes not require smoke alarms, not include "in accordance with applicable building code" here; defaulting so install per manufacture's instructions and national standards.

Public Comment by William Andrews
Jul 25, 2019 19:38 UTC

7/24 workshop said need improve wording, so please replace with:

"At least single station, battery powered smoke alarms shall be installed in rental residences in which older codes did not previously require smoke alarms. The landlord shall certify annually that the smoke alarms have been installed and maintained in good working order. The landlord shall also install a carbon monoxide alarm upon request by a tenant."

2018 General Assembly HB 609 + SB 391 changed landlord-tenant act to require smoke alarms in rental residences, plus carbon monoxide alarm upon tenant's request. Appropriate to also include in VSFPC and/or chapter 11 of the Existing Building code. Since older building codes not require smoke alarms, not include "in

accordance with applicable building code" here; defaulting so install per manufacture's instructions and national standards.

Proposal # 140

FP907.9-18

B108.1-18

VCC: 108.1, 110.1, 110.1.1 (New), 1 (New); IBC®: 1010.1.4.4, 1010.1.4.4.1, 1010.1.9, 1010.1.9.1, 1010.1.9.2, 1010.1.9.4, 1010.1.9.5, 1010.1.9.6, 1010.1.9.8, 1103.2, 1103.2.15 (New); VFC: 1 (New); IFC®: 404.2.3, 404.2.3.1, 404.2.3.2, 406.4.1 (New), 1001.4 (New), [BE] 1010.1.9; VFC: (N) 1010.1.9.3; IFC®: 1031.2, 1031.2.1; VFC: 1031.10 (New)

Proponents: DHCD Staff on behalf of the following stakeholders represented at the School Safety Subworkgroup: Virginia Building & Code Officials Association; Virginia Department of Education; Augusta County Public Schools; American Institute of Architects (AIA) Virginia; Virginia Tech

2015 Virginia Construction Code

108.1 When applications are required. Application for a permit shall be made to the building official and a permit shall be obtained prior to the commencement of any of the following activities, except that applications for emergency *construction*, alterations or *equipment* replacement shall be submitted by the end of the first *working day* that follows the day such work commences. In addition, the building official may authorize work to commence pending the receipt of an application or the issuance of a permit.

1. *Construction* or demolition of a *building* or *structure*. Installations or alterations involving (i) the removal or addition of any wall, partition or portion thereof; (ii) any structural component; (iii) the repair or replacement of any required component of a fire or smoke rated assembly; (iv) the alteration of any required means of egress system including the addition of emergency supplemental hardware; (v) water supply and distribution system, sanitary drainage system or vent system; (vi) electric wiring; (vii) fire protection system, mechanical systems, or fuel supply systems; or (viii) any equipment regulated by the USBC.
2. For change of occupancy, application for a permit shall be made when a new certificate of occupancy is required by the VEBC.
3. Movement of a lot line that increases the hazard to or decreases the level of safety of an existing building or structure in comparison to the building code under which such building or structure was constructed.
4. Removal or disturbing of any asbestos containing materials during the construction or demolition of a building or structure, including additions.

110.1 Approval and issuance of permits. The building official shall examine or cause to be examined all applications for permits or amendments to such applications within a reasonable time after filing. If the applications or amendments do not comply with the provisions of this code or all pertinent laws and ordinances, the permit shall not be issued and the permit applicant shall be notified in writing of the reasons for not issuing the permit. If the application complies with the applicable requirements of this code, a permit shall be issued as soon as practicable. The issuance of permits shall not be delayed in an effort to control the pace of *construction* of new detached one- or two-family dwellings.

Add new text as follows:

110.1.1 Consultation and notification.

Prior to approval of *emergency supplemental hardware*, the building code official shall consult with the local fire code official or state fire code official if no local fire code official exists, and head of the local law enforcement agency. The local fire code official, the state fire code official, and the local fire, EMS and law enforcement first responders shall be notified of such approval, after approval of such *emergency supplemental hardware* by the building code official.

EMERGENCY SUPPLEMENTAL HARDWARE.

Any *approved* hardware used only for emergency events or drills to keep intruders from entering the room during an active shooter or hostile threat event or drill.

2018 International Building Code

1010.1.4.4 Locking arrangements in educational occupancies. In Group E occupancies, except Group E day care facilities, and Group B educational occupancies, ~~egress~~ exit access doors from classrooms, offices and other occupied rooms~~shall~~ , except for exit doors and doors across corridors, shall be permitted to be provided with ~~locking arrangements designed to keep intruders from entering the room~~ emergency supplemental hardware where all of the following conditions are met:

1. The door shall be capable of being ~~unlocked~~ opened from outside the room with a key , proprietary device provided by the manufacturer, or other approved means.
2. The door shall be openable from within the room in accordance with Section 1010.1.9, except emergency supplemental hardware is not required to comply with Chapter 11.

   NOTE: School officials should consult with their legal counsel regarding provisions of the Americans with Disabilities Act and any other applicable requirements.
3. Installation of emergency supplemental hardware on fire door assemblies must comply with Section 716.2. Modifications shall not be made to listed panic hardware, fire door hardware or door closers.
4. The emergency supplemental hardware shall not be capable of being used on other doors not intended to be used and shall at least one component that requires modification to, or is permanently affixed to, the surrounding wall, floor, door and/or frame assembly construction for it to properly function.
5. Employees shall engage in lockdown training procedures on how to deploy and remove the emergency supplemental hardware and its use shall be incorporated in the approved lockdown plan complying with the SFPC.
6. The emergency supplemental hardware and its components shall be maintained in accordance with the SFPC.
7. Approved emergency supplemental hardware shall be of consistent type throughout a building.
   Exception: The building official may approve alternate types

of emergency supplemental hardware in accordance with Section 110.1 when a consistent device cannot be installed.

1010.1.4.4.1 Remote operation of locks. Remote operation of locks complying with Section 1010.1.4.4 shall be permitted.

1010.1.9 Door operations. Except as specifically permitted by this section, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.

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Exception : *Emergency supplemental hardware* provided in accordance with Section 1010.1.4.4.

1010.1.9.1 Hardware. Door handles, pulls, latches, locks and other operating devices on doors required to be *accessible* by Chapter 11 shall not require tight grasping, tight pinching or twisting of the wrist to operate.

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Exception. *Emergency supplemental hardware* provided in accordance with Section 1010.1.4.4.

1010.1.9.2 Hardware height. Door handles, pulls, latches, locks and other operating devices shall be installed 34 inches (864 mm) minimum and 48 inches (1219 mm) maximum above the finished floor. *Emergency supplemental hardware* provided in accordance with Section 1010.1.4.4, shall be installed 48 inches (1219 mm) maximum above the finished floor. Locks used only for security purposes and not used for normal operation are permitted at any height.

> **Exception:** Access doors or gates in barrier walls and fences protecting pools, spas and hot tubs shall be permitted to have operable parts of the latch release on self-latching devices at 54 inches (1370 mm) maximum above the finished floor or ground, provided that the self-latching devices are not also self-locking devices operated by means of a key, electronic opener or integral combination lock.

1010.1.9.4 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exist:

1. Places of detention or restraint.
2. In buildings in occupancy Group A having an *occupant load* of 300 or less, Groups B, F, M and S, and in *places of religious worship*, the main door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
   - 2.1. The locking device is readily distinguishable as locked.
   - 2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background.
   - 2.3. The use of the key-operated locking device is revocable by the *building official* for due cause.

3. Where egress doors are used in pairs, *approved* automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts does not have a doorknob or surface-mounted hardware.
4. Doors from individual *dwelling* or *sleeping units* of Group R occupancies having an *occupant load* of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.
5. *Fire doors* after the minimum elevated temperature has disabled the unlatching mechanism in accordance with *listed fire door* test procedures.
6. Doors serving roofs not intended to be occupied shall be permitted to be locked preventing entry to the building from the roof.
7. Egress doors equipped with *emergency supplemental hardware* complying with Section 1010.1.4.4, from the egress side provided:
    - 7.1. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS HARDWARE SHALL BE USED BY AUTHORIZED PERSONNEL ONLY. The sign shall be in letters 1 inch (25 mm) high on a contrasting background.
    - 7.2. The use of the *emergency supplemental hardware* is revocable by the building official or fire official for due cause.

1010.1.9.5 Bolt locks. Manually operated flush bolts or surface bolts are not permitted.

Exceptions:

1. On doors not required for egress in individual *dwelling units* or *sleeping units*.
2. Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.
3. Where a pair of doors serves an *occupant load* of less than 50 persons in a Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf. The inactive leaf shall not contain doorknobs, *panic* bars or similar operating hardware.
4. Where a pair of doors serves a Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf provided that such inactive leaf is not needed to meet egress capacity requirements and the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1. The inactive leaf shall not contain doorknobs, *panic* bars or similar operating hardware.
5. Where a pair of doors serves patient care rooms in Group I-2 occupancies, self-latching edge- or surface-mounted bolts are permitted on the inactive leaf provided that the inactive leaf is not needed to meet egress capacity requirements and the inactive leaf shall not contain doorknobs, *panic* bars or similar operating hardware.
6. Emergency supplemental hardware provided in accordance with Section 1010.1.4.4.

1010.1.9.6 Unlatching. The unlatching of any door or leaf shall not require more than one operation.

Exceptions:

1. Places of detention or restraint.
2. Where manually operated bolt locks are permitted by Section 1010.1.9.5.
3. Doors with automatic flush bolts as permitted by Section 1010.1.9.4, Item 3.
4. Doors from individual *dwelling units* and *sleeping units* of Group R occupancies as permitted by Section 1010.1.9.4, Item 4.
5. One additional operation shall be permitted for release of *emergency supplemental hardware* provided in accordance with Section 1010.1.4.4.

1010.1.9.8 Delayed egress. Delayed egress locking systems shall be permitted to be installed on doors serving the following occupancies in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved automatic smoke* or *heat detection system* installed in accordance with Section 907.

1. Group B, F, I, M, R, S and U occupancies.
2. Group E classrooms with an *occupant load* of less than 50.

~~Exception~~ Exceptions:

1. Delayed egress locking systems shall be permitted to be installed on exit or *exit access* doors, other than the main exit or *exit access* door, serving a courtroom in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

2. Emergency supplemental hardware shall not be considered a delayed egress locking system.

1103.2 General exceptions. *Sites*, buildings, *structures, facilities*, elements and spaces shall be exempt from this chapter to the extent specified in this section.

Add new text as follows:

1103.2.15 Emergency supplemental hardware.
In Group E occupancies, except Group E day care facilities, and Group B educational occupancies, when *emergency supplemental hardware* is deployed during an active shooter or hostile threat event and provided in accordance with Section 1010.1.4.4.

2015 Virginia Statewide Prevention Fire Code

Add new text as follows:

EMERGENCY SUPPLEMENTAL HARDWARE.

Any *approved* hardware used only for emergency events or drills to keep intruders from entering the room during an active shooter or hostile threat event or drill.

2018 International Fire Code

404.2.3 Lockdown plans. Lockdown plans shall only be permitted where such plans are approved by the *fire code official* and are in compliance with Sections 404.2.3.1 and 404.2.3.2.

404.2.3.1 Lockdown plan contents. Lockdown plans shall include the following:

1. Identification of individuals authorized to issue a lockdown order.
2. Security measures used during normal operations, when the building is occupied, that could adversely affect egress or fire department operations.
3. A description of identified emergency and security threats addressed by the plan, including specific lockdown procedures to be implemented for each threat condition.
4. Means and methods of initiating a lockdown plan for each threat, including:
    - 4.1. The means of notifying occupants of a lockdown event, which shall be distinct from the fire alarm signal.
    - 4.2. Identification of each door or other access point that will be secured.
    - 4.3. A description of the means or methods used to secure doors and other access points.
    - 4.4. A description of how locking means and methods are in compliance with the requirements of the VCC and the applicable provisions of this code for egress and accessibility.
5. Procedures for reporting to the fire department any lockdown condition affecting egress or fire department operations.
6. Procedures for determining and reporting the presence or absence of occupants to emergency response agencies during a lockdown.
7. Means for providing two-way communication between a central location and each area subject to being secured during a lockdown.
8. Identification of the prearranged signal for terminating the lockdown.
9. Identification of individuals authorized to issue a lockdown termination order.
10. Procedures for unlocking doors and verifying that the means of egress has been returned to normal operations upon termination of the lockdown.
11. Training procedures and frequency of lockdown plan drills.

404.2.3.2 Drills. Lockdown plan drills shall be conducted in accordance with the approved plan. Such drills shall not be substituted for fire and evacuation drills required by Section 405.2.

Add new text as follows:

406.4.1 Emergency supplemental hardware training.
Where a facility has installed approved emergency supplemental hardware, employees shall be trained on their assigned duties and procedures for the use of such device. Records of in-service training shall be made available to the fire code official upon request.

1001.4 Unauthorized use of emergency supplemental hardware.
No person shall utilize any *approved emergency supplemental hardware* to prevent the ingress or egress from any occupied space.

Exceptions:

1. Utilized by authorized persons or other persons occupying such space in the event of any actual or perceived hostile threat or active shooter event.

2. Utilized in conjunction with any approved lockdown drill requiring the utilization of the approved *emergency supplemental hardware*.

3. Utilization for the testing, use and training by emergency response personnel.

Where such device is utilized in accordance with the Exceptions 1 through 3 above, the hardware device shall be removed immediately following the conditions of such exceptions.

[BE] 1010.1.9 Door operations. Except as specifically permitted by this section or the applicable building code, egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.

2015 Virginia Statewide Prevention Fire Code

:

(N) 1010.1.9.3 Locks and latches. Where required, a readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting ~~background and shall be*maintained*.~~ background. *Emergency supplemental hardware* provided in accordance with the applicable building code shall be provided a readily visible durable sign posted on the egress side on or adjacent to the door stating: THIS HARDWARE SHALL BE USED BY AUTHORIZED PERSONNEL ONLY. The sign shall be in letters 1 inch (25 mm) high on a contrasting background.

2018 International Fire Code

:

1031.2 Reliability. ~~Required~~ Unless otherwise permitted by the applicable building code, required *exit accesses*, *exits* and *exit discharges* shall be continuously maintained free from obstructions or impediments to full instant use in the case of fire or other emergency where the building area served by the *means of egress* is occupied. An *exit* or *exit passageway* shall not be used for any purpose that interferes with a *means of egress*.

1031.2.1 Security devices and egress locks. Security devices, excluding emergency supplemental hardware, affecting *means of egress* shall be subject to approval of the *fire code official*. Security devices and locking arrangements in the *means of egress* that restrict, control, or delay egress shall be installed and maintained as required by this ~~chapter.~~ chapter or as otherwise permitted under the applicable building code.

2015 Virginia Statewide Prevention Fire Code

Add new text as follows:

1031.10 Maintenance of emergency supplemental hardware.
Emergency supplemental hardware shall be installed in accordance with the applicable building code and shall be maintained in accordance with this code and the manufacturer's instructions. The fire code official shall be authorized to direct the practical application of any such hardware device to ensure the device operates as designed, and is free from any defects, damage, or conditions which may restrict the deployment and removal of such hardware device.

Reason Statement: This proposal allows limited types of barricade door devices in Group E and B educational occupancies only, by "taking over" the current 2018 IBC language and adding exceptions to the various door-related requirements to allow such hardware. A barricade door device would not necessarily need to go through the code modification process in accordance with VCC 106.3, unless it was a type that did not comply with the "openable from outside," limited height above finished floor requirements, and has a fixed component to function, among others.

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: Non-Consensus

Workgroup 2 - Proposed Reason:

Workgroup Recommendation

☐ Consensus Approval
☐ Consensus Disapproval
☐ Carry Over to Next Meeting
☐ Carry over to Final
☐ Non-Consensus
☐ None

Board Decision

Board Decision:

Board Reason: N/A

Board Decisions

☐ Approved
☐ Approved with Modifications
☐ Carryover
☐ Disapproved
☐ None

Public Comments for B108.1-18

Public Comment by Jason Matznick
Aug 20, 2019 19:15 UTC

https://drive.google.com/file/d/1WFZdzUmJ9gKqZsmWva8t6vQEw1JWdnbO/view?usp=sharing

> **Public Comment by Jason Matznick**
> Aug 20, 2019 19:34 UTC
>
> Temporary door barricade devices deliver a second layer of protection during an active threat event. The door and hardware industry is slow to recognize these innovative temporary lockdown devices, while primarily promoting traditional, costly locking solutions which can be compromised. Temporary lockdown devices are widely accepted and used in schools, universities, offices, government buildings, churches and commercial facilities nationwide. While there is on going legislation in several states, many have already passed bills to allow lockdown devices to protect citizens during an active shooter situation.

Proposal # 270

B108.1-18

FP1031.2.1-18

VFC: 1031.2.1

Proponents: Richard Witt (wittr@chesterfield.gov)

2015 Virginia Statewide Prevention Fire Code

Revise as follows:

1031.2.1 Security devices and egress locks. ~~Security devices affecting*means of egress* shall be subject to approval of the*fire code official*~~. Security devices and locking arrangements in the *means of egress* that restrict, control, or delay egress shall be ~~installed and~~maintained as required by this chapter.

Reason Statement: Security devices that affect the means of egress require a building permit per VUSBC Section 108.1 and approval by the Building Official, not the Fire Official. The Fire Official is required to notify the Building Official if such devices are discovered upon inspection.

Cost Impact Statement:
no cost impact

Resiliency Impact Statement:
no impact

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: Non-Consensus

Workgroup 2 - Proposed Reason: Mr. Witt responded that according to the USB section 108.1 “a permit is needed” when you affect the means of egress, this would affect the means of egress and a permit would be required. He also stated that the building official has to make a decision after the permit on security devices.
Mr. Miatico stated that currently the USBC has no enforceable provisions on security devices, only lock and latch systems. There are types of devices that do not require installation. He further questioned does it fall under the lock and latch system and pointed out that a building official would refer to the security device section of the IFC which requires the approval of the fire official. He stated this needs further discussion because the ICC’s interpretation of a security device is more inclusive than just locking type devices. He also feels that to state all security devices is going to be problematic.

Mr. McGraw described some types of devices and stated that there is no construction or alteration to utilize/install them and no permit would be required.

Mr. Revels stated that everything described by Mr. McGraw is an alteration to a means of egress and requires a permit.

Ms. Hale stated that she agreed with Ms. Davis opening suggestion that this be tabled for discussion by the school safety sub-workgroup.

7/24/19- School safety subworkgroup to review.

NC 8/21 meeting

Workgroup Recommendation

☐ Consensus Approval
☐ Consensus Disapproval
☐ Carry Over to Next Meeting
☐ Carry over to Final
☐ Non-Consensus
☐ None

Board Decision

Board Decision: None

Board Reason: N/A

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

Public Comments for FP1031.2.1-18

Public Comment by William Andrews
May 6, 2019 20:02 UTC

Some devices might be change construction, thus not under building code.

Examples:

Chain and padlock

Security bars temporarily positioned onto door opening hardware.

Device hung on doors so alarm when door opens.

Since not need building permit, appropriate for fire official to decide safety affecting occupants escape.

Proposal # 102

FP1031.2.1-18

BO101.1-18

VCC: Appendix O (New), Section O101 (New), Section O102 (New), Section O201 (New), Section O301 (New), Section O401 (New), 101.2; IFC®: 404.2.3.1; VFC: SECTION 202, 406.1.1 (New), 1031.2, 1031.2.1, 1031.2.2 (New), 1031.2.3 (New)

Proponents: Virginia Fire Prevention Association; Linda Hale (linda.hale@loudoun.gov); Steven Sites (steven.sites@vdfp.virginia.gov)

2015 Virginia Construction Code

Add new text as follows:

Appendix O
Emergency Supplemental Hardware

Section O101 General

O101.1 Scope . The provisions of this appendix shall control the requirements for the installation of *emergency supplemental hardware* as defined herein.

O101.2 Precedence . The provisions of this appendix supersede any applicable provisions of the USBC or SFPC that address the same subject matter and impose differing requirements.

Section O102 Local Enforcement

O102.1 Local enforcement . In accordance with section 101.2 of this code, this appendix may be adopted by official action by a governing body of a jursidiction and shall be enforcable by the local building code official. Those localities wishing to allow the installation of emergency supplemental hardware must adopt this appendix in its entirety.

O102.2 Consultation . Prior to approval of such emergency supplemental hardware, the building code official shall consult with the local fire code official or state fire code official if no local fire code official exists, and head of the local law enforcement agency.

O102.3 Notification. After approval of such emergency supplemental hardware by the building code official, the local fire code official, the state fire code official, and the local fire, EMS and law enforcement first responders shall be notified of such approval.

Section O201 Definition

EMERGENCY SUPPLEMENTAL HARDWARE . Any *approved* hardware used only for emergency events or drills to keep intruders from entering the room during an active shooter or hostile threat event or drill.

Section O301 Locality Permit and Approvals

O301.1 When applications are required. Application for a permit shall be made to the building official and a permit shall be obtained prior to the commencement of the installation of any emergency supplemental hardware.

O301.2 Approval and issuance of permits. The building official shall examine or cause to be examined all applications for permits or amendments to such applications within a reasonable time after filing. If the applications or amendments do not comply with the provisions of this code or all pertinent laws and ordinances, the permit shall not be issued and the permit applicant shall be notified in writing of the reasons for not issuing the permit. If the application complies with the applicable requirements of this code, a permit shall be issued as soon as practicable. The issuance of permits shall not be delayed in an effort to control the pace of construction of new detached one- or two-family dwellings.

Section O401 Locking Arrangements

O401.1 Locking arrangements in educational occupancies. In Group E occupancies, except Group E day care facilities, and Group B educational occupancies, exit access doors from classrooms, offices and other occupied rooms, except for *exit* doors and doors across corridors, shall be permitted to be provided with *emergency supplemental hardware* where all of the following conditions are met:

1. The door shall be capable of being opened from outside the room with a key, proprietary device provided by the manufacturer, or other approved means.

2. The door shall be openable from within the room in accordance with Section 1010.1.9, except *emergency supplemental hardware* is not required to comply with Chapter 11.

NOTE: School officials should consult with their legal counsel regarding provisions of the Americans with Disabilities Act and any other applicable requirements.

3. Installation of emergency supplemental hardware on fire door assemblies must comply with Section 716.2. Modifications shall not be made to listed panic hardware, fire door hardware or door closers.

4. The *emergency supplemental hardware* shall not be capable of being used on other doors not intended to be used and shall at least one component that requires modification to, or is permanently affixed to, the surrounding wall, floor, door and/or frame assembly construction for it to properly function.

5. Employees shall engage in lockdown training procedures on how to deploy and remove the *emergency supplemental hardware* and its use shall be incorporated in the approved lockdown plan complying with the SFPC.

6. The *emergency supplemental hardware* and its components shall be maintained in accordance with the SFPC.

7. Approved emergency supplemental hardware shall be of a consistent type throughout a building.

Exception: The building official may approve alternate types of emergency supplemental hardware in accordance with Section O102.2 when a consistent device cannot be installed.

O401.2 Door operations . Egress doors, where *emergency supplemental hardware* has been deployed and complies with Section O401.1, shall not be required to be readily openable from the egress side and may require the use of a key or special knowledge or effort.

O401.2.1 Hardware . *Emergency supplemental hardware* shall not be required to comply with Chapter 11 of the VCC.

O401.2.2 Hardware height . *Emergency supplemental hardware* shall be installed 48 inches (1219 mm) maximum above the finished floor.

O401.2.3 Sign . *Emergency supplemental hardware* shall be permitted to prevent operation of doors where a readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS HARDWARE SHALL BE USED BY AUTHORIZED PERSONNEL ONLY. The sign shall be in letters 1 inch (25 mm) high on a contrasting background. The use of the *emergency supplemental hardware* is revocable by the building official or fire official for due cause.

O401.2.4 Bolt locks . For the purposes of this appendix, *emergency supplemental hardware* is not considered manually operated flush bolts or surface bolts.

O401.2.5 Unlatching . The unlatching of any door or leaf shall not require more than one operation, except when *emergency supplemental hardware* has been deployed. One additional operation shall be permitted for release of *emergency supplemental hardware* provided in accordance with Section O401.1.

O401.2.6 Delayed egress . *Emergency supplemental hardware* shall not be considered a delayed egress locking system.

Revise as follows:

101.2 Incorporation by reference. Chapters 2–35 of the 2015 International Building Code, published by the International Code Council, Inc., are adopted and incorporated by reference to be an enforceable part of the USBC. The term “IBC” means the 2015 International Building Code , published by the International Code Council, Inc. Any codes and standards referenced in the IBC are also considered to be part of the incorporation by reference, except that such codes and standards are used only to the prescribed extent of each such reference. In addition, any provisions of the appendices of the IBC specifically identified to be part of the USBC are also considered to be part of the incorporation by ~~reference.~~ reference. Appendix O may be adopted by official action of a jurisdictions governing body. Upon adoption by official action of the AHJ, appendix O shall become enforceable by the local building code official.

Note 1: The IBC references other International Codes and standards including the following major codes:

2015 International Plumbing Code (IPC)

2015 International Mechanical Code (IMC)

2014 NFPA 70

2015 International Fuel Gas Code (IFGC)

2015 International Energy Conservation Code (IECC)

2015 International Residential Code (IRC)

Note 2: The IRC is applicable to the *construction* of detached one-family and two-family dwellings and townhouses as set out in Section 310.

2018 International Fire Code

Revise as follows:

404.2.3.1 Lockdown plan contents. Lockdown plans shall include the following:

1. Identification of individuals authorized to issue a lockdown order.
2. Security measures used during normal operations, when the building is occupied, that could adversely affect egress or fire department operations.
3. A description of identified emergency and security threats addressed by the plan, including specific lockdown procedures to be implemented for each threat condition.
4. Means and methods of initiating a lockdown plan for each threat, including:
    4.1. The means of notifying occupants of a lockdown event, which shall be distinct from the fire alarm signal.
    4.2. Identification of each door or other access point that will be secured.
    4.3. A description of the means or methods used to secure doors and other access points.
    4.4. A description of how locking means and methods are in compliance with the requirements of this code for egress and accessibility and appendix O of the VCC if adopted by official action of the jurisdiction.
5. Procedures for reporting to the fire department any lockdown condition affecting egress or fire department operations.
6. Procedures for determining and reporting the presence or absence of occupants to emergency response agencies during a lockdown.
7. Means for providing two-way communication between a central location and each area subject to being secured during a lockdown.

8. Identification of the prearranged signal for terminating the lockdown.
9. Identification of individuals authorized to issue a lockdown termination order.
10. Procedures for unlocking doors and verifying that the means of egress has been returned to normal operations upon termination of the lockdown.
11. Training procedures and frequency of lockdown plan drills.

2015 Virginia Statewide Prevention Fire Code

Add new text as follows:

SECTION 202 GENERAL DEFINITIONS

EMERGENCY SUPPLEMENTAL HARDWARE . Any *approved* hardware used only for emergency events or drills to keep intruders from entering the room during an active shooter or hostile threat event or drill.

406.1.1 Emergency Supplemental hardware training
Where a facility has installed approved emergency supplemental hardware, employees shall be trained on their assigned duties and procedures for the use of such device. Records of in-service training shall be made available to the fire code official upon request.

Revise as follows:

1031.2 Reliability. ~~Required~~ Unless otherwise permitted by the applicable building code, required *exit accesses*, *exits* and *exit discharges* shall be continuously maintained free from obstructions or impediments to full instant use in the case of fire or other emergency where the building area served by the *means of egress* is occupied. An *exit* or *exit passageway* shall not be used for any purpose that interferes with a *means of egress*.

1031.2.1 Security devices and egress locks. Security devices~~affecting~~ , excluding approved emergency supplemental hardware, affecting *means of egress* shall be subject to approval of the *fire code official*. Security devices and locking arrangements in the *means of egress* that restrict, control, or delay egress shall be installed and maintained as required by this ~~chapter.~~ chapter or as otherwise permitted under the applicable building code.

Add new text as follows:

1031.2.2 Maintenance of emergency supplemental hardware
Where approved, *Emergency supplemental hardware* shall be installed in accordance with the applicable building code and shall be maintained in accordance with this code and the manufacturer's instructions. The fire code official shall be authorized to direct the practical application of any such hardware device to ensure the device operates as designed, and is free from any defects, damage, or conditions which may restrict the deployment and removal of such hardware device.

1031.2.3 Unauthorized Use

No person shall utilize any *approved emergency supplemental hardware* to prevent the ingress or egress from any occupied space.

Exceptions:

1. Utilized by authorized persons or other persons occupying such space in the event of any actual or perceived hostile threat or active shooter event.

2. Utilized in conjunction with any approved lockdown drill requiring the utilization of the approved *emergency supplemental hardware*.

3. Utilization for the testing, use and training by emergency response personnel.

Where such device is utilized in accordance with the Exceptions 1 through 3 above, the hardware device shall be removed immediately following the conditions of such exceptions.

Reason Statement: The provisions of this appendix proposal were generated following the impaneling of a workgroup in April, 2019 to address the concerns associated with Virginia Senate Bill 1755 with regards to the development of proposals for changes to each such code for submission to the Board of Housing and Community Development. Such proposals shall have the goal of assisting in the provision of safety and security measures for the Commonwealth's public or private elementary and secondary schools and public or private institutions of higher education for active shooter or hostile threats. The school safety and security workgroup's leadership ultimately focused on item (ii) of SB 1755 which tasked the examination of barricade devices.

Such devices are perceived to protect school children from the dangers and threats associated with active shooter and hostile event situations. In formulating any proposed code language, the workgroup was tasked with evaluating reliable data from model code organizations, historical events, and other state actions in code development processes addressing these complex issues. Several items remained clear throughout the process; 1) it is a matter of personal opinion as for the need for such devices in addition to or in lieu of current code compliant door locking hardware, 2) a lack of supporting data for the justification of these devices could be found by reviewing historical active shooter and/or hostile events and model code organizations, 3) there is a desire to allow localities to address their perceived threats based on their demographics, abilities, resources, and assets.

During the workgroup process, four options were generated by the workgroup. One option which was presented and received the highest level of discussion and compromise by all representatives on the workgroup was the option of an appendix proposal.

By placing such language in an appendix, the decision for the individual communities or localities need for the adoption of such code language rest on the officials who were elected to represent the citizens of the respective community. This decision making process will involve the elected officials, local building code official, fire code official, school representatives, community law enforcement, fire and EMS responders and stakeholders of the community. This process may consider many factors that affect the community's preparedness for active shooter or hostile event to include: law enforcement staffing levels, availability of school security or law enforcement resource officers, teacher staffing levels, fire and EMS response times, construction and design of school buildings, etc. This allows the community to determine what is right or wrong for the protection of their children and school personnel. While conversely, it does not direct or negatively influence jurisdictions and their communities to accept hazards merely because a building applicant is uninformed to the risks.

Unfortunately, during the last official meeting of the workgroup on August 12, 2019, it was conveyed by DHCD Staff that direction from "their boss" and "high above" has decided that an appendix option was not a viable option and would not be proposed to the Board of Housing and Community Development for consideration from the workgroug. To the dismay of many in the room, this was not only frustrating, it was received as outside the scope of the charging language in SB 1755, and an unlawful direction. Upon mandating this direction it was determined by DHCD Staff that the workgroup would work solely on an option that allowed limited types of barricade devices and present the respective to the Board of Housing with a list of who supported and who did not support such language. Upon conclusion of this meeting, it was noted that a non-consensus was reached on the proposed language. Many in opposition of the proposed language indicated they would support such language in an appendix format that provided the option for local adoption should it be deemed appropriate by representatives of the individual community. DHCD staff advised that those members in support of a proposal for an appendix may submit a code proposal via CDPVa, on their own, but that DHCD staff would not allow such a proposal to be submitted via the workgroup.

As such, we have provided the respective language, as generated by the workgroup which failed to meet consensus approval, and provided such language in an appendix format for consideration. There has been no alternation to the workgroups final product outside of the scoping language required to establish an appendix. This is the consensus document which the BHCD directed the workgroup to try and find, and is the middle ground allowing jurisdictions the ability to conduct an all hazards approach when determining if temporary barricade devices are warranted in their educational facilities (K-12 and higher) for both public and private schools.

It was cited by DHCD staff that the direction provide from "their boss", was that there must be a uniform code applied to all of the Commonwealth. By removing the local adoption option allowed in an appendix and forcing the allowance into the Uniform Statewide Building and Statewide Fire Prevention Codes, it moves a perceived threat for one jurisdiction to an actual threat in many others. This is created when the elected officials, public safety and the communities are excluded and the building owner is the sole decision maker for each facility. Although a proposal outside of an appendix is touted as providing uniformity, its adoption and inclusion will have the opposite effect. It will make the problem worse as this sets up a significant lack of uniformity within a single jurisdiction as each building owner establishes conclusions for their own building and occupants without regard for the overall jurisdictional need. If there is lack of uniformity within a single jurisdiction, there will be greater diversity and confusion throughout the Commonwealth, not less.

It has been noted that the model code organizations have either not allowed such device(s) or developed an Ad Hoc Committee for School Safety. It has been explained by DHCD Staff who also serves on the ICC Executive Board of Directors that this Ad Hoc Committee may take several years to develop recommendations to meet the nation's code development and implementation needs. One should ask, if it will take the model code organization several years to evaluate this complex issue and develop code proposals, why should the Commonwealth rush the process and complete it in less than five months? The answer could be considered that this process cannot be treated as a "one size fits all" solution based on the many factors listed above. The appendix option is the best possible solution for the adoption of code language to meet a communities needs while considering a communities response capabilities, level of protections, etc.

Cost Impact Statement: The code change proposal will not increase or decrease the cost of construction
as noted

Resiliency Impact Statement: This proposal will neither increase nor decrease Resiliency
As noted:

Workgroup Recommendation

Workgroup 2 - Proposed Workgroup Recommendation: Non-Consensus

Workgroup 2 - Proposed Reason:

Workgroup Recommendation

☐ Consensus Approval
☐ Consensus Disapproval
☐ Carry Over to Next Meeting
☐ Carry over to Final
☐ Non-Consensus
☐ None

Board Decision

Board Decision: None

Board Reason: N/A

Board Decisions

- ☐ Approved
- ☐ Approved with Modifications
- ☐ Carryover
- ☐ Disapproved
- ☐ None

Public Comments for BO101.1-18

Public Comment by Linda Hale

Aug 13, 2019 20:36 UTC

I agree with what is written. Press send when you are comfortable

Proposal # 264

BO101.1-18

Workgroup 1 and 2 Meeting
Chesterfield Community Development Building
April 10, 2019
Summary Notes

Cindy Davis, Deputy Director of Building and Fire Regulations at the VA Department of Housing and Community Development (DHCD) welcomed everyone and had the attendees introduce themselves. She then introduced DHCD staff.

Ms. Davis gave an overview of the online code development process CdpVa and showed everyone how to access proposals. She also explained how to view the future meetings and provided a brief outline on what to expect for the meetings.

Review of the code proposals began.

A103.2
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: Some people have been confused as to whether Section 103.2 which provides a one year period before mandating the new code edition, applies to EXISTING construction or only NEW construction. By deleting the word 'new' it should eliminate the confusion - thus applying to all construction. Even though it will be changed in the future updating the year to 2018 was changed as well.

Comments:
Mr. Payne provided an overview of his proposal.

Mr. McGraw. questioned if it should read building department instead of local building department because it could create a conflict with the fact that the State DGS building department issues memos of when options of codes are to take effect.

Ms. Davis confirmed that it is existing language and there is a whole section 103.7 that is specific to state buildings.

Ms. Davis suggested submitting another code change, if it is felt that it is necessary to include the DGS language in this section.

Consensus for Approval

A108.4
Proponent: DHCD Staff, sbco@dhcd.virginia.gov

Reason: Discussion on the reason statement indicated that it was to comply with legislation, not DPOR regulations.

Comments:

Ms. Davis provided an overview of proposal.

The changes are necessary to correlate with the law that came out of the General Assembly. The law eliminated the requirements for an affidavit.

Consensus for Approval

A110.8
Proponent: Richard Witt, wittr@chesterfield.gov

Reason: This change clarifies that an issued permit can be revoked should it have been issued in noncompliance with pertinent laws and ordinances.

Comments:
Mr. Witt provided an overview of proposal.

Mr. Witt stated that this will provide clarification that the building official has the right to revoke the permit.

Mr. Gordon suggested using the word applicable instead of pertinent because pertinent is broader and more subjective.

Mr. Witt stated that he used the word pertinent because it is already used throughout the codes but he will talk it over with Mr. Pharr.

Consensus for Approval

A115.2 (1)
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: Notices of violation should not be used as the first means of notifying individuals that their building or structure is unsafe. Clearly, the intent of the VCC is that a "different" means must be used when declaring something to be unsafe - thus the purpose of Section 118 and 118.4 specifically - where you issue a report in lieu of just a notice. The methods of issuing such notice have been reformatted for easier reading (lists should be considered when multiple methods and commas are used).

Comments (VCC Section 115.2):
Mr. Payne provided an overview of the proposal.

Mr. Payne explained there have been times when the notice of violation has been used to advise that the building needed to be demoed, but from his understanding they need to have a report not notice of violation.

He further indicated that there have been times when jurisdictions send mail out but there is no indication when it’s received.

Mr. Payne pointed out that the methods of how the notices are issued should be listed instead of in a paragraph format.

Mr. Clements has an issue with the delivery of mail being registered or certified. He would rather it go through regular mail or first class.

Mr. Beahm has concerns with the relevance of pulling unsafe buildings into a separate category. He also questioned why there is delineation between when they issue a notice of violation between the unsafe as well as any notices being issued.

Comments (VCC Section 115:3):
Mr. Payne provided an overview of proposal.

Mr. Payne felt that the added language of reasonable time period is important because there was a time when a 15 day remedy period was given and then legal proceeding was filed the next day.

Mr. Clements stated that the reasonable time period is unnecessary because if they are complying with the notice then that would be included in the time period. It redundant language.

Tabled

A115.2 (2)
Proponent: Michael Redifer, redifermd@nnva.gov

Reason: The revisions establish responsibility for work as being that of the permit holder in cases where permits are obtained. It relieves local building departments of the requirement to spend ever-decreasing resources on investigations which in some cases find the individuals who actually performed the work are well out of reach prior to any violations being discovered.

Comments:
Mr. Redifer was not in attendance.

Mr. Clements shared that the VBCOA Admin committee discussed with Michael their concerns with the language. Michael informed them that he's working to modify the proposal.

Mr. Witt has an issue with changing the responsible party to the permit holder.

Mr. Beahm requested that there be a definition of permit holder.

Ms. Davis reiterated that Mr. Payne and Mr. Redifer will collaborate and come back with one proposal instead of two.

Tabled

A116.4
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: There are many buildings and structures out there today that were post-USBC that do not have certificates. Why limit 116.4 to pre-USBC buildings? As proposed, this provision would still apply to pre-USBC, but would also capture those post-USBC buildings that do not have COs, or had them but they cannot be found. With the heading and new language, the exception would no longer be an exception.

Comments:
Mr. Payne provided an overview of proposal.

Mr. Clements stated that VBCOA supports the proposal and added that there was a change to the State Fire Prevention Code in 2015, where if an owner doesn't have a CO they can request from the building official and it's not limited to pre- USBC. This change would make it more consistent with the current State Fire Prevention Code.

Consensus for Approval

A119.5
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason (VCC Section 119.5): Adding "decisions arising under" is the same language used in Section 36-114 of the Code of Virginia (refer below - emphasis added). Also, by adding the term "decisions" in the first sentence, every reference to the word "decisions" when used throughout the rest of 119.5 would apply to decisions arising under the application of the USBC. Otherwise, without context, what does "building official's decision" mean when it is NOT referenced in the first sentence? Finally, not everything that is appealed may be made by the building official, but may come from the "local building department." "The Review Board shall have the power and duty to hear all appeals from decisions arising under application of the Building Code . . ." "Approved application" is what is really required - not just "written request" which could be crayon on a napkin. The word "approved" is a defined word and avoids someone from submitting just any "application" that would not have been approved by the locality or LBBCA.

Comments:
Mr. Payne provided an overview of proposal.

The desired outcome is to use consistent terms and be specific on approved application instead of a "written request". Currently that language is too vague. There was a situation where an email was sent and then an application was not received until 2 to 3 weeks later.

Mr. Clements opposes the "approved application" because he (VBOCA) doesn't want to get into approving applications. He feels this is a solution looking for a problem.

Reason (VCC Section 119:8): "Approved" application is what is really required - not just any "application" which may not be in the form approved by the TRB. The word "approved" is a defined word. "Certified mail" is added because that is the method of notice identified in 119.7. "Determination" is substituted because that is the term used in the first sentence. The appeal is actually of the LBBCA's determination (which arises from the local building department's application of the USBC - and not just the building official's decision.

Comments:
Mr. Payne provided an overview of proposal.

Mr. Witt agreed to consistency, however, he opposes the language as far as "approved" and feels Mr. Payne can loosen it up to make it easier to appeal. He feels it shouldn't be tied to the application.

Mr. McGraw doesn't agree that it's a difficult process. He stated that it doesn't need a simplified quasi-judicial process but it needs some structure. His issue is with the word "approved" application, it brings up questions if the governing body or local appeal board approves the application form or the application once it is submitted. He suggested changing the language "approved" to "the application or form prescribed by the body".

Mr. Revels stated an issue with the language and suggested changing "appeal determination" to "appeal decision" because the appellants are already confused as they think it's based on the record of the local appeal as opposed to opening it up for a de novo hearing.

Withdrawn

B202
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: We revised the definition of "work area" to basically involve "walls" because "wall" was/is a defined term. However, for 2015, ICC added "(for Chapter 21)" in the definition header (it did not exist prior to 2015). The concern is that some might say that particular definition is for Chapter 21 only and does NOT apply to the VEBC. Thus, they might say system's furniture is a "wall" even though they do not "enclose space." If the proposed language was deleted and we went back to the definition as it was for many years prior, it can still serve its purpose regarding Chapter 21, while also serving its intended purpose for the VEBC's definition for "work area."

Comments:
Mr. Payne provided an overview of proposal.

Consensus for Approval

B401.1.1
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: (VCC 401.1.1): As currently written, requiring such signage for existing buildings is a retrofit requirement that is not triggered by any work. If this is the case, then the reference to existing buildings should be in VEBC Chapter 11. If it is not intended to be a retrofit requirement, then the existing building reference should be deleted. While I admit I am not excited about where I am proposing to relocate the provision, I do believe that locating this requirement in VCC Chapter 6 is not a good location - which deals with heights and area - not a place for applicants to look for building address requirements. This proposes to locate it in Chapter 4 - still not the best but better than Chapter 6 - since the address requirement could be classified as a "special use." The last sentence was deleted because the VCC is not a maintenance code and such requirements should be in the VMC and/or SFPC.

Comments:
Mr. Payne provided an overview of the proposals.

Mr. McGraw stated that the signage requirements are ordered by the fire code and doesn't feel the language is broken.

Mr. Witt agrees with the language change but pointed out it should be in the original code 501.2.

Reason: VEBC (301.3): If there is a desire to provide such address signage for existing buildings, it belongs in the VEBC. It also should not be triggered by a repair, Level 1 alteration (which might mean just replacing carpet and ceiling tile, or a partial change of occupancy (might be just one or two rooms in a larger building. However, those classifications of work listed appear reasonable to require such signage. It is proposed to be located in Chapter 3 as it is the chapter that is home to "special details" and "general provisions" and for "where can I put this" type of provisions.

Comments:
Mr. Payne provided an overview of proposal.

Mr. Clements suggested striking from the first sentence "undergoing a Level 3 alteration, complete change of occupancy, and addition, or being moved" and keeping the rest and moving it to Chapter 11 as a retrofit provisions for building codes.

Consensus for Approval with amendments
Amendments

- **VCC 401.1.1: no amendments**
- **VEBC 301.3: Delete "undergoing a Level 3 alteration, complete change of occupancy, and addition, or being moved" from first sentence. The rest to remain the same. Move this section to Chapter 11 (retrofit 1101.18)**

B703.3
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: Existing reference was to Chapter 1 of the IBC. Since Virginia deleted Chapter 1 of the IBC, the section number should be updated to the equivalent reference in Chapter 1 of the VCC.

Comments:
Mr. Payne provided an overview of proposal.

Ms. Boykins pointed out that there is no definition for the word "approved" in the code book.

Mr. Brown agreed that it's not there and that it had been inadvertently deleted in the last code cycle but will be added back in the 2018 USBC base document.

Consensus for Approval

B907.5.2.3
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: Existing building requirements belong in the VEBC, not the VCC. Also, alterations come in three flavors (Level 1, 2, and 3) and such alarms would not necessarily be required in a Level 1 alteration. If left in the VCC, it could produce a potential conflict with the requirements of the VEBC - which are supposed to govern all construction in existing buildings (per VCC 103.1.1). Alarms in alterations are addressed in VEBC 603.5.4.

Comments:

Mr. Payne provided an overview of the proposal.

Consensus for Approval

B912.2.2
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: The provision is in SFPC Section 912.2.2, where it belongs. It does not belong in the "new" construction code since it deals with "existing" buildings.

Comments:
Mr. Payne provided an overview of proposal.

Consensus for Approval

B1010.1.9.3
Proponent: Natalia Larrimer, nlarrimer@outlook.com

Reason: Many child care facilities are located in urban areas in close proximity to parking lots, roads and other hazards. Although, many facilities undertake these types of preventative measures not all do.

Comments:
Ms. Larrimer was not in attendance.

Ms. Davis and Mr. Payne suggested that they wait for the school safety workgroup meeting to address.

Mr. Brown contacted the proponent and she agreed to allow this issue to be vetted by the School Safety sub-workgroup.

Tabled

B1011.5.2

Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: When the VEBC was reformatted for 2015, this code section reference should have been revised as well - as it currently pointed you to "Additions" under "Accessibility" (which is currently VEBC 403.1). This code proposal provides the equivalent reference in the VEBC. Also, if we did not change IEBC to VEBC, one would be looking at repairs of fire protection in the IEBC.

Comments:
Mr. Payne provided an overview of the proposal.

Mr. Clements pointed out that section 4 should be deleted all together because that exception will not be reached.

Consensus for Approval with Amendments
Amendments:

- **Delete #4 all together and #5 becomes #4.**

B1030.4
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: Existing building requirements belong in the VEBC, not the VCC (per VCC 103.1.1). VEBC 304.3 provides requirements for EERO. While the entire IBC Section 1030.4 was included in the 2018 IEBC (Section 505.4), only the last portion of this provision is required for existing buildings - since any "new" elements must already comply with the VCC/IBC. We need to know how to treat existing and/or replacement EERO windows and what we would need to do if we add anything (e.g., bars, grates, etc.) over them.

Comments:
Mr. Payne gave an overview of proposals.

Consensus for Approval

B3302.1
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: Existing building requirements belong in the VEBC, not the VCC (per VCC 103.1.1). VEBC 1201.3 already has the exact same language; so, rather than delete this provision in its entirety without substitution, a reference to the VEBC has been provided.

Comments:
Mr. Payne provided an overview of the proposal.

Suggestion to just delete the entire section. Mr. Payne agreed

Consensus for Approval with Amendments
Amendment:

- **Delete section 3302.1 entirely without substitution.**

B3303.1
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: Existing building requirements belong in the VEBC, not the VCC (per VCC 103.1.1. So, the entire section is proposed to be relocated to VEBC Chapter 12 leaving only a reference to the VEBC in the VCC.

Comments:
Mr. Payne provided an overview of proposals.

Mr. Revels questioned leaving the words "comply with section 1210 of the VEBC". He suggested deleting the whole thing entirely.

Mr. Clements suggested that it needs to get people to the right code and should be under existing building codes and if any cleanup/issues are needed, he will do it under the unsafe provisions.

Consensus for Approval with Amendment
Amendments:

- **Delete VCC section 3303.1 entirely**
- **VEBC 1210.1-1210.7 (new sections): approved without amendment.**

B3310.1
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: The deleted provisions are already covered in VEBC 1205.1 and 1205.2 and the VCC does not govern existing buildings per VCC 103.1.1.

Comments:
Mr. Payne provided an overview of proposals.

Consensus for Approval

EB103.5
Proponents: Ronald Clements Jr., clementsro@chesterfield.gov

Reason: VEBC section 103.5 is not necessary and misleading. VEBC 103.5 as written applies to all occupancy classifications but the section referenced, VCC 113.3.1, is only applicable to group R-5. All inspection requirements of the VCC, including VCC 113.3.1 as applicable to group R-5, are applicable to VEBC enforcement per VEBC 103.1 (first sentence); therefore, VEBC 103.5 is not necessary.

Comments:
Mr. Clements provided an overview of proposal.

Consensus for Approval

EB103.10
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: Per the first sentence of this section, the work is to be classified, not identified. Since 'alterations' is considered 'work' the alterations should also be classified. Just trying to be consistent with the terms within this section and exception.

Comments:
Mr. Payne provided an overview of proposal.

Consensus for Approval

EB304.3
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: If there is no reference to another code, said reference(s) are to the code in which the language is written. Therefore, it would mean those sections are referencing the VEBC. If so, those VEBC sections have nothing to do with said windows, because the sections are actually in the VCC. So, this references the proper code which is the VCC.

Comments:
Mr. Payne provided an overview of proposal.

Consensus for Approval

EB305.1
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: Virginia uses the term "moved" buildings in lieu of "relocated" buildings, which are governed by the Industrialized Building Code. Also, since we deleted the compliance methods in the 2015 VEBC the last portion of the last sentence should have been deleted also.

Comments:
Mr. Payne provided an overview of proposal.

Consensus for Approval with Amendment
Amendment:

- **Strike the word "the" before added word moving (under 305.1)**

EB307.8 (1) and EB307.8 (2)
Proponent: Justin Koscher, jkoscher@pima.org**; Jeff Mang** jeff.mang@hoganlovells.com**;**
Eric Lacey eric@reca-codes.com

Reason(s):
307.8 (1) This proposal clarifies that roof replacements must comply with the energy conservation requirements of the International Energy Conservation Code (IECC). This proposal incorporates the language of Section C503.3.1 of the IECC in order to provide users and code officials with specific information on the requirements for roof replacements. Chapter 5 of the IECC was developed to place the energy code requirements for existing buildings in one convenient location. Virginia adopted this IECC language as part of the 2015 code update process. This proposal is necessary because the Virginia Existing Building Code (VEBC) regulates reroofing and roof repair under Section 307. The International Existing Building Code (IEBC) requirements for energy conservation were inadvertently lost when the requirements for reroofing and roof repair were moved to a separate section. This proposal corrects this oversight and clarifies the intent of the VEBC that roof replacements comply with the requirements of the IECC. Additionally, this proposal matches the format used for describing other energy conservation requirements in the VEBC. This familiar format will make the code easy to use and understand for both users and code officials. Importantly, this proposal does not create any new requirements for reroofing, including roof recovers or roof repairs.

307.8 (2) This proposal clarifies that roof replacements must comply with the energy conservation requirements of Chapter 5 of the International Energy Conservation Code (IECC). This proposal cites Section C503 of the IECC, which Virginia adopted as part of the 2015 code development process. This proposal is similar to another proposal submitted by the proponents in terms of intent and impact. However, this proposal includes a more general reference to the roof replacement requirements in Chapter 5 of the IECC. The proponents want to offer two options for the workgroup’s consideration. This proposal is necessary because the Virginia Existing Building Code (VEBC) regulates reroofing and roof repair under Section 307. The International Existing Building Code (IEBC) requirements for energy conservation were inadvertently lost when the requirements for reroofing and roof repair were moved to a separate section. This proposal corrects this oversight and clarifies the intent of the VEBC that roof replacements comply with the requirements of the IECC. Additionally, this proposal matches the format used for describing other energy conservation requirements in the VEBC. This familiar format will make the code easy to use and understand for both users and code officials. Importantly, this proposal does not create any new requirements for reroofing, including roof recovers or roof repairs. This clarification is important because roof replacements provide a cost-effective means for increasing the energy efficiency of existing buildings. Replacing a typical existing roof with an energy code-compliant roof reduces whole building energy use by an average of 5.7% (https://www.polyiso.org/resource/resmgr/report/bayer_report.pdf). The energy efficiency requirements for roof replacements have been part of the IECC and IEBC for many cycles. This proposal will clarify existing VEBC requirements for roof replacements and help promote a greater level of compliance. This proposal will increase Resiliency

Comments:
Mr. Mang provided an overview of their proposals.

Mr. Gordon cannot support moving this proposal forward as consensus at this time because they are still polling membership, it is not our recollection that these provisions were inadvertently lost in the 2015 VEBC.

Mr. Clark agreed with Mr. Gordon’s concerns.

Mr. Payne pointed out that Virginia added exceptions specifically for roofing. He would oppose how the proposal is written because now there are chapters in the ICC dealing with existing buildings. He suggested that they meet with the energy advocates to resolve.

Ms. Davis questioned if the energy subgroup meeting can help resolve this.

Mr. Witt pointed out that the individuals needed might not be in attendance of that meeting. He stated that the intent of the existing building codes is to rehabilitate, not bring up to existing building codes and this proposal contradicts that.

Ms. Davis agrees with Mr. Witt and stated that Virginia has to decide what the intent of the existing building codes.

Mr. Payne has an issue with the partial repairs because roof replacement is a final term.

Mr. Mang stated there will be increased cost to bring up to code level.

Mr. Lacey stated that there is already language like that in the energy conservation code and suggested bringing the energy conservation code and existing building code together.

Mr. Clements pointed out the purpose of the code is to lower the bar because it cost too much so we can’t raise the bar. Virginia has already decided that what is altered is okay.

Mr. Beahm suggested having a separate subcommittee that consist of existing building, energy, and patrons against it.

Mr. Mang stated that further discussion on boundaries is needed and this is an energy issue.

Mr. Clements pointed out two issues, what does the code require/where will it go and what’s the technical stuff.

Tabled (both proposals)

EB501.1

Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: The language in the first sentence reflected the 2012 definition of "repair." When the definition of "repair" changed in 2015, this language should have been deleted. Chapters 7 (change of occupancy) and 8 (addition) have no bearing on repairs and should have only referenced Chapter 6 (alterations) which would have been consistent with the old 2012 VRC language that referenced just alterations - and not a change of occupancy or addition.

Exception: This chapter deals with "repairs" not "alterations;" so the alteration language is being proposed to be deleted. The deleted language remains for alterations under VEBC 601.1, Exception 4.

Comments:
Mr. Payne provided an overview of proposal.

Consensus for Approval

EB601.1
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: General: The proposed language mimics the same language that was used in the 2012 VRC and should have been used for the 2015 VEBC as well. Also, all of Chapter 9 (historic buildings) applies, not just one section in Chapter 9. **Exception 4:** Chapter 6 and the exception deals with alterations - not repairs. VEBC Section 501.1, Exception already deals with repairs. Thus, "repairs" should be deleted here. **602.1:** The proposed revision to 601.1 above would already address alterations to historic buildings, thus making the need to repeat that information unnecessary under 602.1.

Comments:
Mr. Payne provided an overview of proposal.

Consensus for Approval

EB601.4
Proponent: Eric Lacey, eric@reca-codes.com

Reason: The purpose of this proposal is to clarify the applicability of the energy code requirements to existing buildings in the context of an alteration. This will eliminate a conflict between the Virginia Existing Building Code (VEBC) and the Virginia Uniform Code, simplifying compliance and enforcement. It will also reduce energy costs for building owners and improve energy efficiency and resiliency in existing buildings. This proposal makes two key changes. First, it eliminates a Virginia-specific exception to the energy conservation requirements of Chapter 13 of the Virginia Construction Code (VCC) for certain building envelope alterations. This exception can be misinterpreted to cover a broad range of alterations, and conflicts with the energy code's specific efficiency requirements for existing building alterations. Second, the proposal adds references to the IECC's provisions for existing residential (R503) and commercial (C503) building efficiency. It also clarifies that unaltered portions of the building need not comply with the current energy code requirements.

Comments:
Mr. Lacey provided an overview of proposal.

Mr. Payne disagrees with proposal and doesn’t see where it states the thickness of the windows in Chapter 5.

Mr. Lacey responded that the information is in exception #2.

Mr. Payne disagrees with that response

Mr. Gordon disagrees with proposal and suggest that it is rolled over to the other discussion. He states that the code has been to encourage rehabilitate at a low bar and this will counter that.

Tabled

EB603.4.5
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: When we purged provisions that read "where approved by the _____ official" from the 2012 VRC to create the 2015 VEBC, we missed this one. In Virginia, because of our "Uniform Statewide" building code, everyone is allowed to utilize all exceptions and exemptions unless specifically granted such authority to the LAHJ by Chapter 1 of the VCC/VEBC or by state amendment.

Comments:
Mr. Payne provided an overview of proposal.

Consensus for Approval

EB904.10.1
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: In historic structures, unless the guard(s) itself is being altered, the existing guard(s) should be deemed acceptable. This approach is consistent with allowing other existing elements to remain as is and still be deemed acceptable: 904.3, 904.5, 904.9, and 904.10.2. As currently written, it may be interpreted that one can leave the guards "as is" as long as it involves a repair. How would this be interpreted if alterations were involved? Since there was no reference to 602.2, we must have meant to remove the existing guards and provide new guards that fully comply with the VCC. I do not believe this is the intent - especially given all of the other components that are allowed to remain - including means of egress, stairway railings, and guard openings.

Comments:
Mr. Payne provided an overview of proposal.

Consensus for Approval

EB1401.6.1
Proponent: Kenney Payne, kpayne@moseleyarchitects.com

Reason: When we do a state amendment, we consistently try to change references to the "I-Codes" to the "Virginia" codes; otherwise, it may be interpreted that we meant to send them to the IBC and not the VCC (that might include state amendments). This proposal simply tries to maintain that consistency.

Comments:

Mr. Payne provided an overview of proposal.

Consensus for Approval

PM302.5
Proponent: Gregory Revels, Greg.Revels@henrico.us

Reason: The proposed changes are recommended to bring the Virginia Maintenance Code in agreement with the Code of Virginia, Federal Housing standards and Virginia Department of Health regulations. Section 36-99(A) of the Code of Virginia specifically requires that the Virginia Uniform Statewide Building include provisions necessary to prevent overcrowding, rodent or insect infestation, and garbage accumulation. Federal housing standards administered by the Department of Housing and Urban Development prohibit insect and rodent infestations in low- and moderate-income housing that is federally subsidized. The Virginia Department of Health further prohibits infestations in hotel and motel properties as a condition of issuing annual lodging permits. The proposed language extends protection from infestations to non-subsidized and short term rental properties on all other rental and long term housing occupancies. The last 2 sentences added at 302.5 are proposed to be consistent with 309.1.

Comments:
Mr. Revels provided an overview of proposal.

Mr. Gordon has issues with specific language, “adjacent premises” because it might not adversely affect the property. He would like to review this further with proponent.

Tabled

PM304.1
Proponents: Teresa Gerber, gerbert@chesterfield.gov; **Ronald Clements Jr** clementsro@chesterfield.gov

Reason: This proposal deletes "health, safety, or welfare" as this is addressed in Section 102.1. It also deletes "sanitary" based on the commentaries of the IPMC, which use sanitary as a reference to rubbish and garbage on the exterior of a structure.

Comments:
Ms. Gerber provided an overview of proposal.

Consensus for Approval

PM603.7
Proponents: Teresa Gerber, gerbert@chesterfield.gov; **Ronald Clements Jr** clementsro@chesterfield.gov

Reason: This adds the ability to address fuel oil and propane tanks, including the delivery system from the tank to the equipment or appliance.

Comments:
Ms. Gerber provided an overview of proposal.

Mr. O'Connor has an issue with this addition because it causes unintended consequences, for example, who is going to maintain compliance.

Mr. Gordon has an issue with this addition because it's already addressed in the fire code. He stated that someone could contact the Fire Marshalls office if they have a tank maintenance issue.

Mr. Witt stated that the fire codes doesn't reference single family dwellings and suggested that maybe the proponent can work with individuals that have concerns with the language about who is responsible and clean up the language to cite the person that is in responsible charge, be it the homeowner or whoever is responsible for building.

Ms. Hale disagrees with the comment about single family homes being referenced in the fire codes.

Mr. Clements pointed out that the maintenance code states that the owner is responsible for maintaining the entire building and every system in it. He's not sure what unintended consequences would arise.

Tabled

FP1031.2.1
Proponent: Richard Witt, wittr@chesterfield.gov
Reason: Security devices that affect the means of egress require a building permit per VUSBC Section 108.1 and approval by the Building Official, not the Fire Official. The Fire Official is required to notify the Building Official if such devices are discovered upon inspection.

Comments:
Mr. Witt provided an overview of proposal.

Mr. Witt pointed out that USBC requires a permit if you alter the means of egress in an existing building.

Mr. Miatico stated he is not able to find how a building official would get to a security device and asked Mr. Witt if he would walk through how a building official gets to a security device.

Mr. Witt responded that according to the USB section 108.1 "a permit is needed" when you affect the means of egress, this would affect the means of egress and a permit would be required. He also stated that the building official has to make a decision after the permit on security devices.

Mr. Miatico stated that currently the USBC has no enforceable provisions on security devices, only lock and latch systems. There are types of devices that do not require installation. He further questioned does it fall under the lock and latch system and pointed out that a building official would refer to the security device section of the IFC which requires the approval of the fire official. He stated this needs further discussion because the ICC's interpretation of a security device is more inclusive than just locking type devices. He also feels that to state all security devices is going to be problematic.

Mr. McGraw described some types of devices and stated that there is no construction or alteration to utilize/install them and no permit would be required.

Mr. Revels stated that everything described by Mr. McGraw is an alteration to a means of egress and requires a permit.

Ms. Hale stated that she agreed with Ms. Davis opening suggestion that this be tabled for discussion by the school safety sub-workgroup.

Tabled

IB420
Proponent: DHCD Staff, sbco@dhcd.virginia.gov

Reason: Ensure that a path exists for approval of intermodal freight containers as building components in industrialized buildings.

Comments:
Ms. Davis provided an overview of proposal.

Mr. Grumbine questioned if it states what an accredited 3rd party service evaluation is.

Ms. Davis explained that ICCS, NTS or ones that have testing laboratories where they visit sites and against the certain evaluation criteria. Whoever is able to provide accreditation against their criteria.

Ms. Davis questioned if a definition is needed for "accredited 3rd party evaluation service".

Tabled

IB260
Proponent: DHCD Staff, sbco@dhcd.virginia.gov

Reason: To ensure that panelized construction is not excluded from the regulations and allow for reasonable application of registration seal fees.

Comments:
Ms. Davis provided an overview of proposal.

Mr. Payne questioned if there is a reason to use “finished floor area” instead of just “floor area”.

Mr. Reynolds suggested deleting the word “finished”.

Ms. Davis informed attendees that DHCD is considering proposing an increase in the cost of industrialized building seals (section D). Will bring back as a separate change at a later date.

Consensus for Approval with Amendments
Amendments

- **Strike the word “finished”**

MH10
Proponent: DHCD Staff, sbco@dhcd.virginia.gov

Reason: This will ensure the installation is in compliance with the federal installation standards.

Comments:
Ms. Davis provided an overview of proposal.

Mr. Grumbine suggested that certificate or form number be a mandatory referral.

Ms. Davis stated it’s not a requirement of law yet and requiring a specific form could become problematic any time the form is updated.

Mr. Linderman observed that all acronyms are spelled out at first use or defined.

Consensus for Approval with Amendments
Amendments:

- **Spell out or define all acronyms (DPOR, MHC)**

MH60
Proponent: DHCD Staff, sbco@dhcd.virginia.gov

Reason: This will ensure the installation is in compliance with federal installation standards.

Comment:
Ms. Davis provided an overview of proposal.

Mr. Witt has an issue because it will hold up occupancy waiting on paperwork. He suggested to provide a copy to owner and maintain a copy, to eliminate waiting to get into a home.

Mr. Brown pointed out that that specialty licensed manufactured home installers must be used for all installations according to HUD regulations. This change would make sure an appropriate person was identified up front to eliminate issues with improper installations.

Mr. Witt is comfortable with installer instead of building officials, building officials do not want that responsibility of certificate.

Mr. Beahm pointed out that it's a destroyable document and will become a nuisance.

Mr. Brown suggested adding "and" so someone gets a copy and it's not mandated. This is to protect the home owners that are doing it on their own.

Mr. Beahm suggested dealer's office of who sold the home is where it should be kept.

Mr. Brown suggested amending to require an installer to provide a copy of the certificate to the owner prior to issuance of a CO and to the building official when requested. This would give localities the option of requiring prior to CO but require the owner is getting it at minimum.

Tabled

Additional Issues Discussed:

1. Accessible parking requirements, VCC section 1106.2 and table 1106.1
    - Conflicting or duplicated requirements for "R"
2. Swimming pool
    - International Swimming Pool and Spa code used to have definition for swimming pool in Chapter 2 that only included pools designed for use with circulation pumps, eliminating smaller kiddie pools.
    - 2015 code description of a swimming pool was moved to Chapter 1 in ISPSC
    - No limitations now in USBC
3. Fire service access lobby elevators
    - The USBC deleted the general elevator lobby section
    - The FSA elevator lobby section references the deleted general section for construction requirements.

COMBINED WORKGROUP 1 & 2
July 24, 2019
VIRGINIA HOUSING CENTER

VIRGINIA CONSTRUCTION CODE

A105.2.1-18
Proponent: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: The ability to attract new technical assistance from the construction industry is becoming harder. We now have the High School Technical Training program in Virginia as well as numerous engineering, construction technology and architectural programs that are producing people with the core knowledge and skills necessary to begin a career in code enforcement. This proposal makes it clear that such education is equivalent to the 3 years of construction experience.

Comments:
Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

A106.3.1-18
Proponent: DHCD Staff
Reason Statement: This proposal would allow the use of nationally recognized guidelines under the modification or alternative methods and materials Sections of Chapter 1. Guidelines such as CC G5-2019 "Guideline for the Safe Use of ISO Intermodal Shipping Containers Repurposed as Buildings and Building Components", could be useful tools in substantiating a
modification an alternative method or material where the code is silent.

Comments:
Ms. Davis gave an overview of proposal

Mr. Grace pointed out that “guidelines” might not be an appropriate term.

Ms. Davis stated that ICC uses that word.

CONSENSUS APPROVED

A109.1.1-18
Proponent: Debra McMahon (debra.mcmahon@fairfaxcounty.gov)
Reason Statement: Under Section 108.3, the Building Official (BO) may accept applications electronically provided the required information is obtained. This needs to go a step further and propose an addition to Section 109 (Construction Documents) to cover electronic plan submissions.
Comments:
Mr. Grace spoke on Debra’s behalf

Mr. Witt pointed out that this is not necessary a lot of localities are already doing this and it’s meaningless.

Mr. Redifer stated that 108.3 already takes care of this, the construction documents are listed as part of the application

CONSENSUS FOR DISAPPROVAL

A110.5-18
Proponent: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: Very few building officials still physically sign a permit. Most jurisdictions print out permits from computer systems and fulfill the signature requirement with a computer affixed electronic copy of the signature. All this requirement does is add one more thing that needs to be configured into the computer system. The signature provides no value.

Comments:
Mr. Clements provided an overview of proposal

CONSENSUS APPROVED

A113.7 (1)-18
Proponent: Michael Redifer (redifermd@nnva.gov)
Reason Statement: In support of uniformity for the most widely-used form of third party inspection. Elevator inspections are unique in that they involve the witnessing of tests which may only be performed by mechanics holding a valid DPOR certification.

Comments:
Mr. Redifer stated that he would like to withdraw this in favor of the commencement.

Mr. Redifer stated that he wants to expand the requirements because some jurisdictions requires a 3rd party inspections on installation and didn't want to limit that to the mechanic certification.

WITHDRAWN

A113.7(2)18
Proponent: Michael Redifer (redifermd@nnva.gov)
Reason Statement: In support of uniformity for the most widely-used form of third party inspection. Elevator inspections are somewhat unique in that they involve the witnessing of tests which may only be performed by mechanics holding a valid DPOR certification. This option is intended to expand and further clarify the original 113.7 proposal for inclusion of the elevator mechanic required certification for operation and testing.

CONSENSUS APPROVED
A113.8-18
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: 113.8- Current code requires a final inspection at completion of a building, not permitted work. Though the definition of building includes "parts thereof," the final inspection should be a requirement of completion of the work for which the permit was issued. Alterations to buildings do not necessitate a new CO or a final inspection to count as a CO. The final inspection should simply document the permitted work is code compliant and complete. Occupancy should drive a CO, which this change accomplishes by referencing to the CO section prior to occupancy or after a change of occupancy. Additionally if a new CO is needed, the final inspection ticket should not serve that purpose. Per Section 116 specific information must be printed on the CO and that information should be updated.

116.1- A certificate of occupancy should not be issued for completion of work; that is the purpose of the final inspection. The certificate of occupancy should be issued for "occupancy" or change of "occupancy." This code change corrects that current glitch with Section 116. Additionally, Section 116.1 does not require approval of the final inspection only completion. A failed inspection is a complete inspection, so this proposal corrects that as well and states that the final inspection must be approved as a condition of CO issuance. Current section 113.8 allows a final inspection ticket to count as the CO for a 100,000 s.f. addition to a school. Additions should require issuance of a new CO. The exceptions to issuance of a CO are retained for single family dwelling accessory structures and additions. There is no need for 5 days to issue a CO.

Comments:
Mr. Clements gave an overview of proposal

Mr. Milliken suggested deleting the word “after” after occupancy.

Mr. Beahm suggested adding “5 working days” back in.

CONSENSUS APPROVED WITH AMENDMENTS:

- **113.8 Prior to occupancy or change of a building or structure, a certificate of occupancy shall be issued in accordance with Section 116.**
- **116.1 Prior to occupancy or change of a building or structure, a certificate of occupancy shall be issued in accordance with Section. The building official shall, however, issue a certificate of occupancy within 5 working days…**

A115.2(1)
Proponent: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: Regarding 115.2: Notices of violation should not be used as the first means of notifying individuals that their building or structure is unsafe. Clearly, the intent of the VCC is that a "different" means must be used when declaring something to be unsafe - thus the purpose of Section 118 and 118.4 specifically - where you issue a REPORT in lieu of just a NOTICE. The methods of issuing such notice have been reformatted for easier reading (lists should be considered when multiple methods and commas are used). The portion concerning "not the responsible party" has been relocated to follow immediately behind the notice issuance without being "separated" by the right to appeal. Thus, the entire provision flows
better now.
115.3: The added language allows compliance with 115.2 *before* one can initiate legal proceedings. This avoids using a NOV as the notification of legal proceedings, or filing legal proceedings *during* the time period allowed under 115.2.

Comment:
Mr. Payne wanted to withdraw proposal. Thought he did it already

WITHDRAWN

A115.2(2)
Proponent: Michael Redifer (redifermd@nnva.gov)
Reason Statement: The revisions establish responsibility for work as being that of the permit holder in cases where permits are obtained. It relieves local building departments of the requirement to spend ever-decreasing resources on investigations which in some cases find the individuals who actually performed the work are well out of reach prior to any

violations being discovered. It supports long-standing pubic information efforts by the Department of Professional and Occupational Regulation which discourages the general public from obtaining permits on the advice of the contractors they hire. It also follows the General Assembly's assumption that the permit applicant is responsible for the work by requiring
building officials, under threat of criminal conviction, to either verify the applicant is licensed to be responsible for the work or claim exemption for licensing while remaining responsible for the work.

Comments:
Mr. Redifer explained that this proposal failed to get approval from the administrative committee VBCOA because concerns it did not provide for the citing or holding responsible for someone other than the permit holder. Mr. Redifer re worded it and failed to carry it through the cycle.

Mr. Pharr the VA residential landlord tenant act and the Landlord tenant act both say that a lease can confer responsibility for tenants (NOV's), wants to make sure there is no conflict there.

CARRYOVER TO AUGUST

A118.1
Proponent: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: This section creates a second, VCC, version of "unsafe building or structure", which causes confusion with regards to unsafe building or structure in the VMC. This section also provides a group of provisions for vacating a VCC unsafe structure, though these structures have not received a certificate of occupancy. Any building, unsafe or not, that is
occupied without a CO is in violation of VCC 116.1 and such unlawful occupancy can be addressed through issuing and NOV for the 116.1 violation. The Section 118 provisions for vacating the incomplete structure are not needed. This code change is an attempt to get rid of the third flavor of unsafe structures that is redundant and confusing so the VCC definition is
proposed to be deleted since it is not necessary with the proposed format.
Section 118.1 establishes that a structure, which becomes a threat to public safety during construction, is a violation of the VCC. Proposed 118.1 sets the condition as a violation and does away with the need for another unsafe structure definition.
Section 118.2 addresses the emergency provision in existing section 118.7 and references the VMC provisions in VMC 106.9 so that the same provisions do not need to be copied into VCC section 118. Section 118.3 addresses the initial notification required with use of a correction notice. Section 118.4 addresses issuing an NOV and uses existing VCC Section 115 for that
purpose.

Comments:
Mr. Clements gave an overview of proposal

Mr. Milliken suggested that we need to consider that VMC is not adopted everywhere so it needs to stand on its own and not reference back to VMC to take care of the issues. Then once the problem is determined then what? What do we do about the problem itself, what kind of actions can we take to mitigate those options.

Mr. Catlett pointed out that the property maintenance code is not enforced in the jurisdiction if it is referenced in the new construction code then it becomes a reference of the new construction code and becomes applicable.

Mr. Clements explained that having language consistent with another code, it's better to reference it than to have to maintain in two separate places.

Should be tweaked and it is a good proposal.

CARRYOVER TO AUGUST

A119.6
Proponent: David Beahm (dbeahm@warrencountyva.net); VBCOA Admin Committee
Reason Statement: In today's world the use of formal written communication through the postal service to the residence (address) is slow, unverifiable and unreliable at times. The use of electronic communication has taken place of this older method for almost all forms of notices. This change does not remove the option of using the postal service, but provides another means to notify the parties.
Comments:
Mr. Beahm gave overview of proposal

Mr. Pharr mentioned that a written notice should be able to be requested as well so it's the party and not the board calling the shots.

Mr. Beahm pointed out that there is not guarantee that they will receive it by mail either and have been contested in the past that they haven't receive it. An email or electronic means affirms receipt.

Mr. Catlett mentioned that the electronic option will get the appeal faster and can utilize return receipt. If we could come up with language that "unless the party request mail notification" that would be the concept.

Mr. Milliken pointed out that electronic means could be a robo call to a telephone message.

Ms. Mcgreal stated if someone request to have it mailed they should be able to do so. Some people don't read they're email.

CARRYOVER TO AUGUST

B202(2)
Proponent: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: This definition was inadvertently deleted in the 2015 VCC and is still shown as being deleted in the 2018 USBC "Base Document." This change proposes to add it back as it read in the 2012 VCC.

Comments:
Mr. Payne gave an overview of proposal

Mr. Witt questioned where would there be an "or authority having jurisdiction" in the state of VA code.

A statement was made that this is an NFPA term and it was in the 2012.

Mr. Witt pointed out that the law says you have to have a building official or utilized someone's building official in the locality with the agreement...not sure why we would have that language at the end.

Mr. Catlett stated that the term is coined by the NFPA and we try to stay away from that language in the past because the building official is the authority having jurisdiction. He further pointed out that the each jurisdiction has to designate a building official.

Mr. Payne pointed out that it is already in the base document.

WITHDRAWN

B302.18
Proponents: Residential Use Subworkgroup (dhcdresidentialuse@gmail.com)
Reason Statement: This proposal is not intended to make any significant changes to the requirements or classifications of SRCFs, but to simplify application of the existing requirements (exceptions) by putting all use group classification requirements for SRCFs together in Chapter 4. This proposal is not completed, but is intended to give an idea of the 18 concept that is being utilized to complete this cleanup effort. The Residential Uses Subworkgroup plans to continue
working on this proposal by identifying any other licensed facilities that may also need to be included in the new section and deleting any existing state amendments throughout VCC Chapter 3 that are covered in the new Section 432.

Comments:
Ms. Davis gave an overview of proposal and mentioned that this is the first time that this group has put together and the residential group was able to see and anticipated that it will be carried over but wanted to put it in the agenda. Wanted to list every state regulated care facility.

Mr. Milliken stated that he support the chapter 4 elements but does not agree with the 302.1 adding an item 11 SRCF is not a use group and can be confusing, feels it should be deleted and add back as a note.

Mr. Catlett pointed out the easiest way to do it was to take create own section in chapter 4.

Mr. Milliken pointed out that this is a classified list and will not be approved to adding new items.

Mr. Brown suggested taking out the #11 and just stating "State Regulated Care Facilities (see section 432)".

Mr. Beahm pointed out to add "or more" to 432.2.2 to 17 or more persons.

CARRYOVER TO AUGUST

B310.1
Proponent: Residential Use Subworkgroup
Reason Statement: This proposal is intended to clarify the residential use group classifications by deleting the laundry lists of examples under each group and simplifying the descriptions of each group based on the number of occupants, if the occupants are transient or not, and if the use includes sleeping and/or dwelling units.

Comments:
Greg Revels was not in attendance for explanation of proposal

B310.3 (1)
Proponent: Daniel Willham (Daniel.Willham@fairfaxcounty.gov)

Reason Statement: There appears to be a gap in the code for hotels (transient) that provide dwelling units. As currently written, neither the R-1 nor the R-2 descriptions provide clear direction on the classification of hotels (transient) that provide dwelling units. The commentary clarifies that R-1 occupancies can contain either sleeping units, dwelling units, or both, but the code as written does not explicitly address transient residential occupancies that contain (more than two) dwelling units. The key characteristic of group R-1 occupancies is the transient nature of the occupants and not the absence of dwelling units. This proposal simply adds language for dwelling units that mirrors that used in the description of R-2 non-transient occupancies. With this clarification, the difference between R-1 and R-2 occupancies will be clearly defined to depend only on the transient or non-transient nature of the occupants, respectively.

Comments:
Mr. Willham gave an overview of proposal

Mr. Catlett mentioned that he doesn't think this is necessary because there is nothing prohibiting from having a dwelling unit in R1 already, it's just giving you the characteristic in the sleeping unit and hasn't been a conflict in the past.

Mr. Catlett and Mr. Witt pointed out that this marries the previous proposal and should be discussed with Greg Revels.

Ms. Davis pointed out that this was discussed on the national level because adding dwelling units an Air bnb could be considered a hotel and this could be a mess.

CARRYOVER TO AUGUST

B310.3(2)
Proponents: Daniel Willham (Daniel.Willham@fairfaxcounty.gov)
Reason Statement:
There appears to be a gap in the code for hotels (transient) that provide dwelling units. As currently written, neither the R-1 nor the R-2 descriptions provide clear direction on the classification of hotels (transient) that provide dwelling units. The commentary clarifies that R-1 occupancies can contain either sleeping units, dwelling units, or both, but the code as written does not explicitly address transient residential occupancies that contain (more than two) dwelling units. The key characteristic of group R-1 occupancies is the transient nature of the occupants and not the absence of dwelling units. This proposal simply removes language regarding the type of units, which results in the wording used in pre-2006 code. With this clarification, the difference between R-1 and R-2 occupancies will be clearly defined to depend only on the transient or non-transient nature of the occupants, respectively.

Comments:
Ms. Davis pointed out that the concern is the confusing issues in licensed facilities by various state agencies being all over the place in the code, put them all in one place and try to clean up the general use in the code and then come back with a cleaned up versions. She also pointed out that Mr. Willhams changes are in relation to the definitions of R1 and wants to add more than one dwelling units or strike out "sleeping units" in the definition in R1.

Waiting for Greg Revels to discuss with previous proposal

CARRYOVER TO AUGUST

B310.8.2
Proponents: Residential Use Subworkgroup
Reason Statement: Provides an affordable housing option. Originally brought forward by Arlington County to allow part of existing dwelling units to be occupied by both transient lodgers or long-term renters that desire a degree of independence and privacy from an owner-occupied dwelling.

Comments:
Ms. Davis gave an overview of proposal

Mr. Hines questioned if anyone has discussed issues of ventilation systems, HVAC equipment, and electrical and dwelling unit single meters.

Mr. Davis pointed out by coming up with this definition it eliminates those requirement you will not have to have separate requirements for ventilation systems.

Mr. Catlett mentioned that in Northern VA there are zoning ordinances that would allowed this. The code does not prohibit multiple kitchens, bathrooms etc. The group had a problem with multiple units it's creating R2 and could not occur unless owner occupied.

Ms. Eggerton agrees with this because we allow it, and clarifies that you can do one additional unit and doesn't have to get into the details, feels this is a solution that is already happening.

Mr. Beahm pointed out that this is a zoning issue more than anything else and we can't fix that with the building code.

Mr. Payne suggested to move it to the subworkgroup or nonconsensus.

NONCONSENSUS

B408.2.1
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: This section was renumbered from 429 in the 2015 VCC to 431 in the 2018 VCC Base Document. This proposal fixes the reference in 408.2.1.

Comments:
Mr. Payne gave an overview of proposal

Ms. Davis mentioned that is just an editorial change.

EDITORIAL CHANGE

B428
Proponent: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: Regarding IBC edits: Rather than begin with the 2015 Virginia amendment and edit it to include relevant 2018 IBC provisions, this proposal starts with the 2018 IBC version and adds the relevant Virginia amendments. Deletions to the IBC and VCC floor construction and exceptions were done to avoid conflicting with the referenced tables.

Comments:

Ms. Davis pointed out that this is under construction and will be carried over

CARRY OVER TO AUGUST

B501.2
Proponent: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: As currently written, requiring such signage for existing buildings is a *retrofit* requirement that is not triggered by any work. Since this is the case, the reference to existing buildings should be in VEBC Chapter 11. The language is identical to that of the IFC, so, it should not be duplicated in either the VCC or VEBC and should have just a "pointer."

Comments:
Mr. Payne gave an overview of proposal and it was discussed at the last workgroup.

Mr. Witt questioned when this is applicable. Some work has to be done before it gets to the building code.

Mr. Payne responded that it's at any time and it's in the retrofit chapter. Does it need a path to get to it?

Ms. Davis pointed out that there is language already in the code.

Mr. Milliken supports what Mr. Payne is doing with this proposal. The application is up to how the jurisdiction wants to do it and he doesn't think that they should wait until the General Assembly to direct us to enforce an address posting requirement.

Mr. Witt disagreed with Mr. Milliken and mentioned that this is a fire official issue and not a building code because of emergency issue and fire response.

Mr. Catlett stated that this is a good place to address it in the existing building code because if they are coming in and don't have an address it's a minor cost to make a fix on and several provisions in the property maintenance code that say that you have the ability to back and require some to get an address on an existing property…it might slightly be considered a retrofit.

Mr. Tomberlin stated that it should be in the existing building code because if they are going out to make an inspection on site and there is no address you can go back and state that an address is needed so if a fire official needs to go out for an emergency there they will have an address.

Mr. Pharr agrees with Mr. Witt if it's in the existing building code it needs to be a triggering event.

Mr. Davis questioned if you only require a retrofit of an address when a permit is applied for. The maintenance code requires that addresses if they are provided or were required be maintained it does not require a retrofit to display an address sign if you never had one, this would. Then she also questioned is there even authority to require it retroactively without General Assembly actions is a question for attorney general's office if you're not seeking a permit.

Mr. Payne pointed out that even if a permit isn't required you still have comply with the code, the code says in 501.2 that existing building has to have an address.

WITHDRAWN

B706.5 (option 1)
Proponent: Ronald Clements Jr, Chesterfield County (clementsro@chesterfield.gov)
Reason Statement: The fire wall horizontal termination provisions are set up with section 706.5 providing the termination methods for firewall terminations where the exterior walls on either side are at an angle of 180 degrees or greater and section 706.5.1 providing the termination methods for fire wall termination where the exterior walls on either side are at an angle less than 180. 706.5.1 is an additional requirement, when the angle is less than 180, to the base requirement in 706.5. This does not work in practice. If a fire wall terminates at the vertex of a 90 degree angle between the two exterior walls.
Section 706.5.2 addresses the firewall termination where the exterior walls on either side are at an angle less than 180 degrees. The first exception was removed because it makes no sense to allow this method when it would not be allowed if the buildings were separated by an inch. If two adjacent buildings are separated and joined by a fire wall and they have exterior walls that are exposed to each other at angles less than 180 degrees they should be treated as separate
buildings for exposure purposes just as any two separate buildings would be treated. Current exception 1 gives you a less restrictive method when the building are touching; that makes no sense. The imaginary line exception is now a single requirement. The section was also cleaned up so it is clear how to apply the imaginary line.

Comments:
Mr. Clements gave an overview of proposal. He didn't want to get rid of a lot of the text but cdpVA wasn't cooperating. Mr. Clements submitted this at the national level there was no opposition and the committee had one amendment and turned it down...not sure why.

Option 5 is where the concern is.

Mr. Milliken stated that he needs more time to read through this.

CARRYOVER TO AUGUST

B706.5 (option 2)
Proponent: Ronald Clements Jr, Chesterfield County (clementsro@chesterfield.gov)
Reason Statement: The fire wall horizontal termination provisions are set up with section 706.5 providing the termination methods for firewall terminations where the exterior walls on either side are at an angle of 180 degrees or greater and section 706.5.1 providing the termination methods for fire wall termination where the exterior walls on either side are at an angle less than 180. 706.5.1 is an additional requirement, when the angle is less than 180, to the base
requirement in 706.5. This does not work in practice.
Section 706.5.1 addresses the firewall termination where the exterior walls on either side are at an angle equal to or greater than 180 degrees. The requirement for the 18" extension was never in BOCA. The extension was brought into the draft of the IBC from ICBO. Since use of the extension is very rare the various complicated and inconsistent exceptions were provided.
Section 706.5.2 addresses the firewall termination where the exterior walls on either side are at an angle less than 180 degrees. The first exception was removed because it makes no sense to allow this method when it would not be allowed
if the buildings were separated by an inch. If two adjacent buildings are separated and joined by a fire wall and they have exterior walls that are exposed to each other at angles less than 180 degrees they should be treated as separate buildings for exposure purposes just as any two separate buildings would be treated.

Comments:
Mr. Clements gave an overview of proposal. He copied out of the 99 BOCA. He prefers option 2 and didn't see any technical data to support the way we were doing it in BOCA was a problem and it makes it a whole lot simpler. If there is reluctance then option 1 clears that up.

Mr. Payne supports this option.

Ms. Kim opposes this because if it catches fire it will quickly spread, how do we address that concern?

It was pointed out that two building on the same lot are separated by 1/16th of an inch there is no requirement to protect the two either building wing wall or to protect the perpendicular walls, the code is already inconsistent and is already recognized that it isn't a big hazard.

Mr. Milliken stated that he needs more time to read through this.

CARRYOVER TO AUGUST

B901.5.1
Proponents: Andrew Milliken (amilliken@staffordcountyva.gov)
Reason Statement: This new section is identical to language that has been in the International Fire Code for decades. It clarifies and emphasizes that an installing contractor shall furnish completion documentation prior to requesting final approval of fire protection systems. This section was removed from the Virginia Statewide Fire Prevention Code edit and is more appropriately located here in the VCC. These compliance documents are already required by many of the reference standards (NFPA 13, 20, 24, 72, etc.) however this section highlights and consolidates the requirement for code officials and installers.

Comments:
Mr. Milliken gave an overview of proposal.

Mr. Witt has issues with this. It inserts the fire official into the new construction process and it's an administrative provisions and it's not applicable you have to go back to Chapter 1 of the ICC, doesn't feel this is necessary.

Mr. Tomberlin pointed out you don't leave it up to the locality. Either you require it or you don't.

Mr. Catlett pointed out that it's already in the standard and already a requirement.

CARRYOVER TO AUGUST

B905.3.1
Proponents: Andrew Milliken (amilliken@staffordcountyva.gov)
Reason Statement: This proposal incorporates the current language from the 2018 International Building Code to clarify that any buildings with four or more stories above or below grade plane require a standpipe system. All other exceptions remain unchanged from the current Virginia amendment. This clarification provides consistency for first responders as
well as the construction industry to know when buildings are expected to be equipped with a standpipe system.

Comments:

Mr. Milliken gave an overview of proposal.

CONSENSUS APPROVED

B906.1

Proponents: Dwayne Garriss (Dwayne501@comcast.net)

Reason Statement: VA is in the severe minority of states which have added an exception for the removal of portable fire extinguishers in sprinkler buildings. The added language is the actual language from a nationally recognized and adopted consensus standard. A report of the U.S. Consumer Products Safety Commission published in 2009, only 5-10 percent of fires are reported to fire departments in the U.S. According to this 234 page report, people use portable extinguishers on 371,000 residential fires in the U.S. annually. In this same report, the agency stated that extinguishers were effective in 80 percent of the cases where they were used. Extinguishers are the appropriate tool and designed for use on incipient fires. Some of these fires are extinguished using fire extinguishers; others are being extinguished with makeshift means. Since people are, in fact, extinguishing small fires in their incipient stage on a very regular basis, the code should provide for the proper tools to do so - by maintaining the requirements for portable extinguishers. Providing portable fire extinguishers in facilities greatly enhances safety, including the safety of those who choose to extinguish a fire in its incipient phase; extinguishers should be available in all buildings. The entire report can be found at: https://www.cpsc.gov/PageFiles/105297/UnreportedResidentialFires.pdf

Comments:

Mr. Garriss gave an overview of proposal.

Mr. Catlett pointed out that they are not properly trained and cause further issues. We've address in the code because you have to put supervision on those. He does not want to see someone put out a fire with a fire extinguisher that isn't trained. He thinks that what we have in Virginia works and it goes along with the national codes. The people need to get out of the building and not stay to try and put a fire out.

Mr. Pharr mentioned that the data is not persuasive here. There are plenty of reason why we don't ask people to put themselves in danger to put out recipient fires. This is what insurance is for and would rather deal with an aftermath of a sprinkler system then a death of an individual. He would like this to be consensus for disapproval.

Mr. Maiatico mentioned that we teach individuals fight or flight and is personal preference to use fire extinguisher. He understands the value of having someone trained. It's not a mandated thing. The fire services stress the use and design of the fire extinguisher which is to extinguish an excipient fire before it develops. The fire services did not say don't use fire extinguishers, it's not an accurate statement. He is in support of this proposal.

Mr. Witt mentioned that he is in opposition of this. The cost is significant not in just installation but the maintenance of them. We professed for years to put sprinkler systems in so that will protect people and get people out of the buildings and thinks the board has seen this several codes cycles that it's not for Virginia.

Mr. Catlett pointed out that it's up to the jurisdiction to fight or flight. They want you to leave the building and not fight the fire.

NONCONSENUS

B916.1
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: Many localities do not have the funding to provide the communication equipment required to operate in building communication systems. In such localities installation of radiating cable that will not be used makes little sense. Additionally, even if equipment will be provide some time in the future it is not possible to design the system
to operate properly without knowing the equipment specifications at the time of building design. Furthermore, the requirement for the locality to provide the equipment puts localities in a position of violating the code when funding is not allocated to purchase the equipment.

Comments:
Mr. Clements gave an overview of proposal.

Mr. Milliken pointed out that the locality doesn't know the building is coming and has concerns when that decision is made and stuck with. But to give an out to individuals ahead of time when the locality doesn't have funding doesn't make sense and this should be deleted all together.

Mr. Catlett mentioned that we have the ability to put a connection on which is very cheap and the cable is important to the equipment but not necessarily installed.

NONCONSENSUS

B1010.1.9.3(1)
Proponents: Natalia Larrimer
Reason Statement: In child care facilities the allowable ratio of staff to children in VA are 5 toddlers/adults, 8 2yo per adult and 10/3yo per adult. The ratios make it almost impossible for the teacher to act immediately if a child accidentally exists the facility. It is expected that the adult responsible will have all the children with him/her and keep them safe as s/he is trying to address the situation.

Comments:
This was discussed by the School Safety subworkgroup and was recommended to disapproval

CONSENSUS FOR DISAPPROVAL

B1010.1.9.3(2)
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: All three hardware changes is to get the VCC to be the same as the IBC.

Comments:
Mr. Payne gave an overview of proposal.

We need to look at the language in chapter 4 (special locking arrangements) and 1010.1.9.7 #6 (clinical staff shall have keys, access to) and #7 (unlocking switch behind the nursing station, if you can't see the switch how are you going to unlock it) and the exception where it talks about the unlocking of the doors shall not apply occupied by persons because of clinical needs, what about dementia and safe and security measures.

CARRYOVER TO AUGUST

B1010.1.9.3(3)
Proponents: Keith Ruby (keith.ruby@fairfaxcounty.gov)
Reason Statement: This type of locking has been used for years at self-storage facilities but is not compliant with any of the locking provisions currently in the code. This code change would make the code more consistent with accepted industry practice.

Comments:
An overview was given about proposal.

Storage units are not occupied and no one is in there.

CONSENSUS FOR DISAPPROVAL

B1010.1.10
Proponents: Daniel Willham (Daniel.Willham@fairfaxcounty.gov)
Reason Statement: Section 1010.1.9.9 of the code recognizes that motion sensors are not reliable when it comes to life-safety since a wall mounted push-button release is required adjacent to the door for use when the motion detector fails to release the door. This is not functionally equivalent to the reliability of listed panic hardware and should not be allowed as a substitute.

Comments:
Mr. Willham gave an overview of proposal

CONSENSUS FOR APPROVAL

B1026.2
Proponents: Jane Kim (jane.kim2@fairfaxcounty.gov)
Reason Statement: The change will clarify and ensure protection is provided for increased number of occupants in refuge compartment at each story served by horizontal exit. Current text of Section 1026.2 is unclear in addressing unprotected floor opening or unclosed exit access stairways and ramps communicating not more than two stories as permitted in Section 712.1.9 item 1 and 1019.3 item 1.

Comments:
Ms. Kim gave an overview of proposal

Mr. Milliken mentioned that the language is unclear, can interrupt as just the floor of the level you have the horizontal exits

Use the same terminology as Section 711 to be consistent.

CONSENSUS FOR APPROVAL WITH AMENDMENTS:
- **Change term “opening in the floor assemblies” to horizontal assemblies” and clean up grammar of changes.**

B1103.2.8
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: This proposal is a "blend" of the 2018 IBC and 2015 VCC text. IBC has "or portions or areas" and "primarily" - both seem to be reasonable since there may be only a "portion" of a raised or lowered

area that must be addressed. The term "exclusively" is overly broad since such spaces may be used for other purposes.

Comments:
Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

B3002.4
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: This proposal tries to get the VCC closer to the IBC in language.

Comments:
Mr. Payne gave an overview of proposal.

CONSENSUS APPROVED

B3007.6
Proponents: Daniel Willham (Daniel.Willham@fairfaxcounty.gov)
Reason Statement: Section 3006.3 is deleted in the Virginia Construction Code. If the exception is to be available for use, it needs to reference a section that actually exists - the same section in the IBC.

Comments:
Mr. Willham gave an overview of proposal.

CONSENSUS APPROVED

B3113
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: Virginia addresses "relocatable" buildings in the manufactured housing standards and regulations; thus, they should not be included in the "building" code. "Moved" buildings are addressed in the VEBC.

Comments:
Mr. Payne gave an overview of proposal

CONSENSUS TO DELETE

BU101
Proponents: John Catlett (catlettcodeconsulting@gmail.com)
Reason Statement:
These proposals bring in the code provisions approved by the IBC General Committee by a 13 to 1 vote for the main body of the 2021 ICC building code (not an appendix) and subsequent approvals by all other ICC Code Committees that had Group A and Group B code responsibilities related to Tall Wood buildings, also referred to as Mass Timber. Although there were intense efforts by industries that would potentially be negatively affected by approval of these proposals, Tall Wood building provisions gained approval at the ICC Public Comment Hearings held in Richmond during October of 2018 by nearly a unanimous floor vote. These proposals were approved through online voting in cdpAccess by a nearly the same margin.

Comments:
Mr. Catlett gave an overview of proposal. Wants to oppose as an appendix. Jurisdiction can choose to use it. It's a choice for the designer.

Mr. Witt suggested to get the 2021 language that was approved and insert that into the main body of the code.

CARRYOVER TO AUGUST

FP101
Proponents: John Catlett (catlettcodeconsulting@gmail.com)
Reason Statement: This proposal brings in the companion code provisions that are required for the maintenance of tall wood buildings for continued protection from fire once constructed. A VCC proposal (BU101-18) has been submitted to create an appendix in the 2018 VCC with the 2021 Tall Wood building code package approved by the IBC General Committee by a 13 to 1 vote. It is to be included in the main body of the 2021 ICC building code (not an appendix). Subsequent approvals by all other ICC Code Committees that had Group A and Group B code responsibilities related to Tall Wood buildings, also referred to as Mass Timber. Although there were intense efforts by industries that would potentially be negatively affected by approval of these proposals, Tall Wood building provisions gained approval at the ICC Public Comment Hearings held in Richmond during October of 2018 by nearly a unanimous floor vote. These proposals were approved through online voting in cdpAccess by a nearly the same margin.

Comments:
Mr. Catlett gave an overview of proposal.

This will be carried over with previous proposal for further discussion before meeting.

CARRYOVER TO AUGUST

E402.4
Proponents: Energy Subworkgroup; Eric Lacey, Responsible Energy Codes Alliance (eric@reca-codes.com)
Reason Statement: This proposal improves the efficiency of commercial buildings by implementing a moderate improvement in fenestration SHGC that was adopted into the 2018 IECC and ASHRAE Standard 90.1-2016. Low SHGC fenestration is important for all buildings, but is particularly important for commercial buildings, which tend to have higher internal loads and higher cooling needs during the peak daylight hours.

Comments:
Mr. Lacey gave an overview of proposal

CONSENSUS APPROVED

E403.2.8
Proponents: Richard Grace, VPMIA/VBCOA (richard.grace@fairfaxcounty.gov); Energy Subworkgroup
Reason Statement: Clarity note first - delete entire section and Table without substitution (cdpVA editor didn't appear to delete Table contents) this code section conflicts with the minimum life safety requirements outlined in the International Mechanical Code. The
minimum exhaust flow rates provided in the IMC are there to capture and contain airborne grease particles produced by cooking operations from specific cooking appliances. These rates, along with many other

significant changes associated with hood design and performance, were incorporated into the IMC (starting with the 2003 IMC) and were the result of extensive testing by a specialized group of experts, many committee members of ASHRAE 154. This IECC section and Table provides for **maximum** exhaust flow rates. These rates are much less than those prescribed by the IMC for nonfactory- built hoods. Factory-built hoods are required to be tested to UL 710. In many cases, the IECC maximum rates are less than those prescribed by UL 710 as well. When the committee disapproved this change, they indicated that “the proposal needs better coordination with the International Mechanical Code. Instead of doing this, the public comment that Steve submitted provided less coordination. Another problem with this proposal was that Steve was attempting to align this requirement up with the language contained in AHSRAE 90.1-10 without bringing forth all other pertinent information contained in 90.1.

Comments:
Mr. Grace gave an overview of proposal

CONSENSUS APPROVED

RE401.2
Proponents: Energy Subworkgroup (dhcdenergy@gmail.com); Eric Lacey, Responsible Energy Codes Alliance (eric@recacodes.com)
Reason Statement: This proposal does two things: First, it updates the reference to U.S. DOE’s REScheck from the 2015 IECC to the 2018 IECC, consistent with the intent to base the Uniform Code on the 2018 IECC; Second, it eliminates a modification to the Uniform Code’s REScheck compliance option that will be unnecessary if Virginia adopts the 2018 IECC with no weakening amendments. When Virginia adopted the 2012 and 2015 editions of the IECC, several weakening amendments were incorporated which caused conflicts between the code and the U.S. Department of Energy’s free compliance software, REScheck. This software was developed to provide homebuilders with a very easy means of using the IECC’s trade-off capabilities, while still maintaining the overall efficiency of the code. It is specifically called out as a compliance option in many states.

Comments:
Mr. Lacey gave an overview of proposal

Ms. Eggerton expressed concerned about the workaround that was created because it hasn’t been updated to match whatever changes happen and Steve Churchin isn’t here to update that workaround. People will just want to use REScheck.

Mr. Milliken mentioned that the next couple of proposal the Energy group would like to discuss the financial impact in other jurisdictions.

Ms. Eggerton pointed out that this section doesn’t have a cost impact. Those that don’t use a computer software would not apply to this. The REScheck option is to be consistent with the 2018 code.

There will be another subworkgroup meeting to discuss

CARRYOVER TO AUGUST

RE401.3
Proponents: Energy Subworkgroup; Eric Lacey, Responsible Energy Codes Alliance (eric@reca-codes.com)

Reason Statement: The purpose of this proposal is to restore the IECC's requirement that a certificate listing key building efficiency information be posted in a permanent location. This requirement has been in the IECC for several editions, and it provides useful information to current and future owners of residential buildings. The information included in the certificate is readily available at construction, and can be recorded on a certificate for no additional cost. In fact, compliance programs such as U.S. DOE's REScheck can automatically generate a certificate with much of this information already recorded. However, this type of information would be difficult or impossible to re-create several years into the building's useful life.

An overview of proposal

CONSENSUS APPROVED

RE402.1.2
Proponents: Eric Lacey, Responsible Energy Codes Alliance (eric@reca-codes.com)
Reason Statement: The purpose of this proposal is to improve energy savings and increase homeowner comfort by adopting the ceiling and wall insulation requirements of the 2018 IECC. Improving ceiling insulation from R-38 to R-49 and wall insulation from R-15 or 13+1 to R-20 or 13+5 will make Virginia's energy code consistent with insulation requirements that have been part of the 2012, 2015, and 2018 IECC.

Discussed with RE401.2 to be carried over

CARRYOVER TO AUGUST

RE402.4.1.2
Proponents: Eric Lacey, Responsible Energy Codes Alliance (eric@reca-codes.com)
Reason Statement: The purpose of this proposal is to restore the 2018 IECC requirement that all new homes be tested for air leakage with an air leakage rate no higher than 3 ACH50. This will also eliminate Virginia's "visual inspection" option, which is not a reliable or safe means of testing the air leakage or air quality of a building. The IECC has required each new home to be objectively tested for air leakage since the 2012 edition. A strong majority of states now require all new homes to be tested to a low level of air leakage, providing both long-term energy savings and an important safety disclosure for homeowners, for a relatively low cost.

Discussed with RE401.2 to be carried over

CARRYOVER TO AUGUST

RE403.3.1
Proponents: Richard Grace (richard.grace@fairfaxcounty.gov); Energy Subworkgroup
Reason Statement: "Supply and return ducts" excludes exhaust ducts. Exhaust ducts must be insulated as well when outside the thermal envelope.

Comments:
Mr. Grace gave an overview of proposal

CONSENSUS APPROVED

RE403.3.5
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)

Reason Statement: This is a code correlation issue. The problem is that IRC N1103.3.5 (IECC R303.3.5) prohibits all framing cavities from being used as air ducts or plenums in residential construction, but five chapters later in M1601.1.1 #7 the IRC permits cavities to be used as air plenums under five conditions. This is a direct conflict within the IRC. IECC C403.11.2 states that ductwork shall be constructed and erected in accordance with the IMC. So there is no conflict in commercial as the IMC has the same language as the IRC, permitting the use of framing cavities as air ducts or plenums per the same five conditions. So, three out of four code sections permit limited use of framing cavities as air plenums and one does not. This code change proposal eliminates the one out of four that is inconsistent so we can be consistent in Virginia.
Comments:
Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

RE503.1.1.1
Proponents: Energy Subworkgroup; Eric Lacey, Responsible Energy Codes Alliance (eric@reca-codes.com)
Reason Statement: This proposal improves efficiency by clarifying that replacement fenestration must meet the same level of efficiency as fenestration used in new construction. This code requirement has been in the IECC for over a decade, and for good reason – about 3/4 of all windows installed in buildings every year are replacement windows in existing buildings. This is a rare opportunity to impact the efficiency of existing buildings – which represent 98-99% of buildings in any given year – by a substantial amount. Code-compliant fenestration is widely available and clearly cost effective, and there is no reason why Virginia homeowners should not have all the benefits of efficient replacement windows and doors.
The 2018 IECC adds a new level of flexibility by allowing replacement fenestration U-factors and SHGCs to be area weighted averaged, permitting trade-offs among various fenestration types. We expect that this will provide more options for builders and homeowners to meet the code requirement.

Comments:
Ms. Davis questioned if this should be a part of the Existing Building Code section

Mr. Lacey pointed out that there is an Existing Building section in the ICC

This is already a level one so it has to comply anyways. It would not apply in replacing residential windows but doing something in a commercial building that would require a permit and your getting a permit for a residential building then it would apply.

CARRYOVER TO AUGUST

VIRGINIA EXISTING BUILDING CODE

EB302.1
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: Section 302.1 is an IEBC retrofit requirement not related to any construction and should be deleted.

Comments:
Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

EB303

Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)

Reason Statement: Section 303 is a combination of the 2012 fire escape provisions in prescriptive method section 405 and work area method 805.3.1.2.1. Combining the two methods created a conflict between 2015 sections 303.1.2 and 303.6. 303.1.2 prohibits use of window access and ladders and 303.6 allows their use in limited occupancies. The VBCOA

VEBC committee decided to go with the work area method so the last sentence of 303.1.2 is proposed for deletion and 303.6 was retained. In addition the provisions of section 303.1.3 and 303.1.4 are proposed to be incorporated into sections 303.1 and 303.1.2 eliminating the need for the two separate sections. Lastly the phrase "for existing buildings" is proposed for deletion as it is redundant since the scope of the VEBC is existing buildings.

Comments:

Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

EB304.1

Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)

Reason Statement: The provision of 304 (and 102.2.2 #5) is overly wordy. The provision provides the same requirement written two different ways depending on if the building is pre or post USBC. There is no need for the distinction since the requirement is the same. All replacement glass must meet current VCC material requirements regardless of when the building was constructed. A specific reference back to VCC Chapter 24 Glass and Glazing (or R308 for VRC dwellings) was added to clarify this is a material and quality requirement. The provision for replacement glass was in the retrofit chapter in the 2012 edition. A code change was submitted to move the provision to chapter 3 since the provision is not retrofit, that is the provision is not a requirement when no related construction is proposed. The requirement only applies when glass is being installed or replaced. The provision was

copied into chapter 3 but it still remains in the retrofit chapter. The second part of the code change deletes it from the retrofit chapter as was intended in the 2015 cycle.

Comments:

Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

EB304.3(2)

Proponents: Kenney Payne (kpayne@moseleyarchitects.com)

Reason Statement: Since the VEBC itself does not "require" EEROs, references to the VCC and VRC (Virginia Residential Code) are necessary. Also, since the VEBC is an option for R-5 occupancies, such references to the VRC should be included. Those references came from the 2018 IEBC.

Comments:

Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

EB307.1
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: Under the 2012 VRC, reroofing was considered at least a Level 1 alteration (706.2), and as such, Section 707 Energy Conservation would also have applied to all alterations. When reroofing was moved to Chapter 3 of the 2015 VEBC, the connection to the way the existing building code dealt with energy conservation was lost. 2015 VEBC
601.4, Exception was originally intended to address reroofing as well as all alterations. But because reroofing was put in Chapter 3 and as such is not governed by Chapter 6, we need to recapture that original intent.

Comments:
Mr. Payne gave an overview of proposal

Mr. Mang pointed out that a low slope roof has to comply with the code is when thickness is added to it. The energy code needs to be in compliance with this proposal and requirements. The language is broad.

Mr. Witt mentioned that making the roof meet the new code goes against the principles existing building code in VA.

Mr. Payne pointed out that current code requires the means of energy and moving it here broke that code and VA intentions was always to have this exception apply even to roofing.

NONCONSENSUS

EB307.3.1
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: Exceptions should allow something the code section does not permit. The exception to 307.3.1 is essentially and exception to an exception. The reformatting of the exception into section 307.3.1 does not change the requirement it just formats it properly.

Comments:
Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

EB307.8(1)
Proponents: Justin Koscher, Polyisocyanurate Insulation Manufacturers Association (jkoscher@pima.org); Jeff mang (jeff.mang@hoganlovells.com); Eric Lacey (eric@reca-codes.com)
Reason Statement: This proposal clarifies that roof replacements must comply with the energy conservation requirements of the International Energy Conservation Code (IECC). This proposal incorporates the language of Section C503.3.1 of the IECC in order to provide users and code officials with specific information on the requirements for roof replacements. Chapter 5 of the IECC was developed to place the energy code requirements for existing buildings in one
convenient location. Virginia adopted this IECC language as part of the 2015 code update process.
Comments:
Mr. Mang gave an overview of proposal

Mr. Payne pointed out that when repairing 49% of the roof to bring it up could come with cutting corners and perimeters. The definition of roof replacement can be repairs.

NONCONSENSUS

EB307.8(2)

Proponents: Justin Koscher, Polyisocyanurate Insulation Manufacturers Association (jkoscher@pima.org); Jeff mang (jeff.mang@hoganlovells.com); Eric Lacey (eric@reca-codes.com)

Reason Statement: This proposal clarifies that roof replacements must comply with the energy conservation requirements of Chapter 13 of the Virginia Construction Code (VCC). The current VCC adopts, with amendments, the International Energy Conservation Code (IECC). The VCC's adoption of the IECC includes adoption of Chapter 5, which describes the energy conservation requirements for building alterations such as roof alterations.

This proposal is necessary because the Virginia Existing Building Code (VEBC) regulates reroofing and roof repair under Section 307. The International Existing Building Code (IEBC) requirements for energy conservation were inadvertently lost when the requirements for reroofing and roof repair were moved to a separate section. This proposal corrects this
oversight and clarifies the intent of the VEBC that roof replacements comply with the energy conservation requirements of the Chapter 13 of the VCC (i.e., the IECC as amended by the VCC).

This proposal goes with the previous one

NONCONSENSUS

EB402.1

Proponents: Kenney Payne (kpayne@moseleyarchitects.com)

Reason Statement: This should have been revised for the 2015 VEBC when at the national level, they changed from "aggregate area of the building" to "building area" when describing the levels of alterations. The revised text is consistent with that used in VEBC 601.2.2 and 601.2.3. Interestingly, the 2018 IEBC exceptions still use the "old" text.

Comments:

Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

EB403.1

Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)

Reason Statement: Section 410.7 was the 2012 edition number. The correct number is now 404.3.

Comments:

Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

EB404.4.4

Proponents: Kenney Payne (kpayne@moseleyarchitects.com)

Reason Statement: This is in the "Alterations" section, so references to change of occupancy and additions do not belong. Also, if an elevator or escalator is "added" to an addition, it would need to comply with the VCC anyway. If added as part of a change of occupancy, it is still the "alteration" itself (i.e., adding of walls, cabs, etc.) that would trigger the accessibility requirement, not the actual change of occupancy.

Comments:
Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

EB404.4.10
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: Both the 2018 IBC (Section 2902.1.2) and 2018 IPC (Section 403.1.2) added the new term "single user toilet facility and bathing room fixtures." This change maintains consistency between code books (VEBC and VCC). The intent of this proposal is to clarify the code and coordinate with the terminology in the IPC. Historically, this requirement originally said ‘unisex’ toilet rooms were permitted but was revised many cycles ago to use the term 'family or assisted use' for consistency. The IPC now requires all single-occupant toilet rooms to be gender neutral. It is arguable if a family or assisted use toilet room is for a single user or not. Family or assisted use toilet rooms can include a urinal and a toilet, or both adult and child fixtures. Most of the time, an accessible family or assisted use and accessible single user toilet rooms are technically exactly the same. The current language has caused questions about if this option in the code is only allowed where family assisted use toilet rooms are required in the IBC (Groups A and M), and/or allowed to meet the fixture counts.

Comments:
Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

EB501.1(1)
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: Scope: The language in the first sentence reflected the 2012 definition of "repair." When the definition of "repair" changed in 2015, this language should have been deleted. Chapters 7 (change of occupancy) and 8 (addition) have no baring on repairs and should have only referenced Chapter 6 (alterations) which would have been consistent with the old 2012 VRC language that referenced just alterations - and not a change of occupancy or addition.
Exception: This chapter deals with "repairs" not "alterations;" so the alteration language is being proposed to be deleted. The deleted language remains for alterations under VEBC 601.1, Exception 4.

Comments:
Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

EB501.1(2)
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: The exception to 501.1 allowing use of the code under which the building was constructed was copied from the same exception for alterations. After further review it has been determined that the exception is not needed for repair because the base requirement for repair allows for use of like materials. Section 302.2 allows use of like materials for repairs and there is no general requirement for repairs to comply with current code. Section 501.2 goes
further and states performance requirements for repair work. The structural provisions are addressed in section 502.

Comments:

Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

EB601.1(2)
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: The text proposed for deletion can be interpreted to prohibit use of the exception based on substantial structural alteration. This is not needed as the last sentence of the exception still requires new structural elements to meet the current VCC.

Comments:
Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

EB601.2 (Option A)
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: Flash back to 2009 - the 2009 VCC 103.5, Item 2 said, "Parts of the building or structure not being reconstructed, altered or repaired shall not be required to comply with the requirements of this code applicable to newly constructed buildings or structures."
That all changed when Virginia went to the 2012 Virginia Rehabilitation Code and 2015 Virginia Existing Building Code - which requires work to be done OUTSIDE of those areas where work is intended through "supplemental requirements" (where the work area exceeds 50% of the floor area) and Level 3 alterations (when the work area exceeds 50% of the building area).

Comments:
Mr. Payne gave an overview of proposal

Mr. Clements mentioned that these are retrofit provisions and even if it’s nonconsensus then it would still go in front of the board.

Prefers options B

WITHDRAWN

EB103.10 (Option B)
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: Flash back to 2009 - the 2009 VCC 103.5, Item 2 said, "Parts of the building or structure not being reconstructed, altered or repaired shall not be required to comply with the requirements of this code applicable to newly constructed buildings or structures."
That all changed when Virginia went to the 2012 Virginia Rehabilitation Code and 2015 Virginia Existing Building Code – which requires work to be done OUTSIDE of those areas where work is intended through "supplemental requirements" (where the work area exceeds 50% of the floor area) and Level 3 alterations (when the work area exceeds 50% of the building area) -
that might otherwise be considered RETROFIT requirements.

Comments:
Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

EB601.2.1
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: The levels of alteration do not address removal of elements without replacement or installation of new elements other than equipment. Removal of materials, elements or fixtures has been added to level 1 and installation of new materials, elements or fixtures has been added to level 2.

Comments:
Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

EB601.4
Proponents: Eric Lacey, Responsible Energy Codes Alliance (eric@reca-codes.com)
Reason Statement: The purpose of this proposal is to clarify the applicability of the energy code requirements to existing buildings in the context of an alteration. This will eliminate a conflict between the Virginia Existing Building Code (VEBC) and the Virginia Uniform Code, simplifying compliance and enforcement. It will also reduce energy costs for building owners and improve energy efficiency and resiliency in existing buildings. This proposal makes two key changes. First, it eliminates a Virginia-specific exception to the energy conservation requirements of Chapter 13 of the Virginia Construction Code (VCC) for certain building envelope alterations. This exception can be misinterpreted to cover a broad range of alterations, and conflicts with the energy code's specific efficiency requirements for existing building alterations. Second, the proposal adds references to the IECC's provisions for existing residential (R503) and commercial (C503) building efficiency. It also clarifies that unaltered portions of the building need not comply with the current energy code requirements.
Comments:
Mr. Lacey gave an overview of proposal

Mr. Payne pointed out that he doesn’t support the deletion in the exception.

Ms. Eggerton mentioned that the exception contradicts what the details and the other parts of the code. This code is confusing because it doesn’t specify whether adding isolation means thickening the wall.

CARRYOVER TO AUGUST

EB603.4.3
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: This proposal is similar to EB79-19 and EB112-19 submitted at ICC for the 2021 IEBC. They have not been approved; however, they seem like good code changes worth considering for the 2018 VEBC now. Rather than have a vague reference to "interior finish requirements" why not provide clarity by referencing the actual "Table" in the VCC that addresses the "requirements?" If it truly meant "ratings" (e.g., 1-hour or 2-hour ratings), the
reference would have been to VCC Chapters 7 and/or 10. So, "fire performance" is the more appropriate term.

Comments:
Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

EB603.5.2.1
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: Section 603.5.2.1 and section 603.5.2.2 both limit the requirement to sprinkler based on sprinkler supply pipe being already installed to the work area floor but both sections state it differently. Section 603.5.2.1 states it in a clearer manner so this proposal changes the exception in 603.5.2.2 to match the same language and makes the exception clearer with respect to exactly how it is to be applied. Section 603.5.2.1 is not proposed for any changes but is included to show the existing text used in the amendment to the 603.5.2.2 exception.

Comments:
Mr. Clements gave an overview of proposal

WITHDRAWN

EB603.5.4.1
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: This section has a confusing reference to the IFC chapter 11, which are retrofit requirements. The reference has been removed so the section is not consistent with section 603.5.2.2 for sprinkler coverage.

Comments:
Mr. Clements gave an overview of proposal

Proposal was withdrawn based on EB603.5.2.1

WITHDRAWN

EB603.6.3.4
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: This proposal is similar to EB89-19 submitted at ICC for the 2021 IEBC. It has not been approved, but seemed to be a good code change worth including in the 2018 VEBC.

Comments:
Mr. Payne gave an overview of proposal

Proposal was withdrawn based on EB603.5.2.1

WITHDRAWN

EB802.2
Proponents: Kenney Payne (kpayne@moseleyarchitects.com)
Reason Statement: A quick read of the existing language could be interpreted a couple of ways: (1) Only infilling or existing openings are allowed (such as for stairways and elevator shafts); or (2) You can infill such shafts and add a stairway, elevator, or any other nonoccupiable "appendage" to the existing building without contributing to the allowable SF per the VCC.

Comments:
Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

EB904.10.1

Proponents: Kenney Payne (kpayne@moseleyarchitects.com)

Reason Statement: In historic structures, unless the guard(s) itself is being altered, the existing guard(s) should be deemed acceptable. This approach is consistent with allowing other existing elements to remain as is and still be deemed acceptable: 904.3, 904.5, 904.9, and 904.10.2. As currently written, it may be interpreted that one can leave the guards "as is" as long as it involves a *repair*. How would this be interpreted if *alterations* were involved? Since there was
no reference to 602.2, we must have meant to remove the existing guards and provide new guards that fully comply with the VCC. I do not believe this is the intent - especially given all of the other components that are allowed to remain - including means of egress, stairway railings, and guard openings.

Comments:

Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

EB1401.6.3

Proponents: Kenney Payne (kpayne@moseleyarchitects.com)

Reason Statement: This proposal is similar to EB121-19 submitted at ICC for the 2021 IEBC. It has not been approved; however, it seemed like a good code change worth including in the 2018 VEBC now. Rather than use a footnote approach per EB121, this proposal just added the text to the end of the charging paragraph 1401.6.3. Of those building officials I have spoken with where this issue came up, they allowed interpolation.

Comments:

Mr. Payne gave an overview of proposal

CONSENSUS APPROVED

VIRGINIA MAINTENANCE CODE

PM106

Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)

Reason Statement: The overall intent of this code change is to simplify the unsafe building provisions of the VMC and get rid of the two version of unsafe and unfit and combine them into one definition and process. Unsafe Structure and Structure Unfit for Human Occupancy definitions- The two definitions are a distinction without a difference. Both definitions are defining structures that are "determined by the code official to be dangerous to the
Health, safety, and welfare of the occupants of the structure or the public" That is the base definition in both definitions. They are the same. Where they differ is in what constitutes the quoted phrase above in each definition. Why does it matter? Dangerous is dangerous. To correct this both definitions have been combined into the definition of “unsafe structure” and Structure Unfit for Human occupancy has been deleted. The new list in the unsafe structure definition is a combination of both lists from both definitions. With the deletion of the Unfit for Human Occupancy definition, the term has been deleted throughout the code sections.

Comments:

Mr. Clements gave an overview of proposal, received some comments that need to be worked on.

CARRYOVER TO AUGUST

PM106.3
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: These provisions grant authority to the code official to require any level of retrofit to a building that they deem to be dangerous. There is no statute addressing this concept in title 36. The retrofit provisions in chapter 11 of the VEBC are very specific and set out by the legislature. These VMC provisions are not maintenance provisions, they are code official determined retrofit provisions. The fact that 106.3 states "cause other than improper maintenance" as the bases of the code provision should alone be justification to delete this provision from the "Maintenance" code.

Comments:
Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

PM302.5
Proponents: Gregory Revels (Greg.Revels@henrico.us)
Reason Statement: The proposed changes are recommended to bring the Virginia Maintenance Code in agreement with the Code of Virginia, Federal Housing standards and Virginia Department of Health regulations. Section 36-99(A) of the Code of Virginia specifically requires that the Virginia Uniform Statewide Building include provisions necessary to prevent
overcrowding, rodent or insect infestation, and garbage accumulation. Federal housing standards administered by the Department of Housing and Urban Development prohibit insect and rodent infestations in low- and moderate-income housing that is federally subsidized. The Virginia Department of Health further prohibits infestations in hotel and motel properties as a condition of issuing annual lodging permits. The proposed language extends protection from infestations to non-subsidized and short term rental properties on all other rental and long term housing occupancies. The last 2 sentences added at 302.5 are proposed to be consistent with 309.1.

Comments:
Mr. Revels left, this will be carried over.

CARRYOVER TO AUGUST

PM301.18
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: These are a few sections that reference the VCC, which should reference the VEBC with all work on existing buildings addressed in the VEBC. In 304.18 there is not need to reference a code.

Comments:
Mr. Clements gave an overview of proposal

CONSENSUS APPROVED

PM312
Proponents: Andrew Millikens (cyur2b@verizon.net)

Reason Statement: Add to 2018 Virginia Maintenance Code, to start 2021. Older buildings often develop concerns. Code officials lack resources to inspect most. Private inspections often when building sold, financed, or new insurance. Rental residences focus on life safety of people (families, maybe self-escape challenged) with little control over conditions. Buildings over 50 years old starts with those built before statewide building codes based on modern national codes. Requiring again inspect every 40 years helps record later conditions. Inspector need quickly report serious hazards to AHJ, which may get copy of report if ask.

Comments:
Mr. Mr. Millikens gave an overview of proposal

Mr. Pharr pointed out that the code of VA wouldn't allow this to be done 36-105.1.1, authorizes localities to adopt a real inspections program only after meeting a number of criteria and making a number of specific findings and they have to designate specific real inspection districts. It's a statutory obstacle to do this.

CONSENSUS FOR DISAPPROVAL

PM603.7
Proponents: Teresa Gerber, Chesterfield County (gerbert@chesterfield.gov); Ronald Clements Jr. (clementsro@chesterfield.gov)
Reason Statement: This adds the ability to address fuel oil and propane tanks, including the delivery system from the tank to the equipment or appliance.
Comments:
Ms. Gerber gave an overview of proposal

Mr. O'Connor pointed out that these issues are cover largely in the Fire Code NFPA 58.

NONCONSENSUS

PM604.3.1.1
Proponents: Haywood Kines (hkines@pwcgov.org)
Reason Statement: The protective components are critical to the electrical systems to maintain safe operation of all electrical equipment. Their ability to protect the electrical system is adversely affected by exposure to water and to the minerals, contaminants that may be present in the water. Equipment such as molded case circuit breakers, switches, Busway, signaling and communication systems can be subject to corrosion and damaged from exposure to these
conditions.

Comments:
Mr. Kines gave an overview of proposal

Ms. Davis pointed out that this was just added during the last cycle.

Mr. Pharr stated that he is opposed to deletion in the prohibiting the licensure or certified electrician to make the determination or make the appropriate contacts to find out what they need to.

Mr. Catlett pointed out that the best way to handle this is to put it under the 3rd party inspection requirement because it's mandated by the code to have those.

Mr. Beahm questioned what the 3rd party is in this proposal.

NONCONSENSUS

PM702.1
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)
Reason Statement: This section has a reference to the IFC that is vague and incorrect in Virginia, and reads like a new construction provision or retrofit provision. This proposal corrects the section so it is a maintenance provision.

Comments:
Mr. Clements gave an overview of proposal

Mr. Milliken pointed out this is changing the intent of the inspection.

The violation is of the maintenance code.

CARRYOVER TO AUGUST

VIRGINIA STATEWIDE FIRE PREVENTION CODE

FP105
Proponents: Joe Boisseau
Reason Statement: This is a holdover from the BOCA and is now 25 years or more old. Does this still apply with several new versions of the ICC and moving into 2018 codes?

Comments:
No one to speak on it

CONSENSUS FOR DISAPPROVAL

FP202(1)
Proponents: Andrew Milliken (amilliken@staffordcountyva.gov)
Reason Statement: The definition of corrosive is a complicated criterion that is often difficult to confirm during field inspections or document review. This proposal does not change or remove the current definition but rather adds physical property criteria as defined by the United States Environmental Protection Agency in 40 CFR 261.22 https://www.govinfo.gov/content/pkg/CFR-2018-title40-vol28/pdf/CFR-2018-title40-vol28-sec261-22.pdf). Using this physical characteristic point of reference will enhance building owner/operators as well as code enforcers understanding of this definition and help to focus compliance questions on the hazards rather than a complicated definition.

Comments:
Mr. Milliken gave an overview of proposal

CONSENSUS APPROVED WITH AMENDMENTS

- **Add “or” , reads: “ or a substance”**
- **Correlate the definition corrosive with the construction code**

FP202 (2)
Proponents: Charles Walker, TNT Fireworks

Reason Statement: VIRGINIA ACTS OF ASSEMBLY -- 2019 SESSION - SB 1625 was signed into law on March 21, 2019 with an effective date of 7/1/2019. It was an an Act to amend and reenact § 27-95 of the Code of Virginia, relating to the Statewide Fire Prevention Code; definition of permissible fireworks. This proposed change is to update the definition of "Permissible Fireworks" in the SFPC to make it consistent with current Code of Virginia statutes.

Comments:
It's an act of the General Assembly

CONSENSUS APPROVED

FP605.13
Proponents: Andrew Millikens (cyur2b@verizon.net)
Reason Statement: For 2018 VSFPC, to begin 2021. Seek apply to electrical systems over 50 volts, type fire & shock risk; not low voltage typical of alarm, communication, etc.. A building might be much older, yet electrical system not over 50 years old, so phrase to focus on electrical system's age. Over 50 years includes aluminum wiring (1966 - '74), older systems increase risk from improper tampering, and deterioration of insulation, connections, components more complex than basic wiring. Inspection should include examining inside circuit panels, sample outlets & switches, grounding, etc… If grounding was not required when installed, opportunity to discuss. Not need break holes in walls nor elaborate testing.
Separate proposals for building maintenance and fire codes effort to get in both codes, yet if one fails, maybe other progress enough for support with changes.
Some insurance companies require various inspections before new policy. Many buyers want see inspection report before closing. Codes require maintenance, so this helps require inspect to learn if electrical system need maintenance. FEMA, NFPA, etc. data shows electrical problems high in causes of fires, fire fatalities at night; mostly in older residential buildings.
Comments:
The same thing as the fire inspection

CONSENSUS FOR DISAPPROVAL

FP903.5.1
Proponents: Joe Boisseau
Reason Statement: These code changes only clarify that those conducting inspection be certified by an approving agency. I have had the very issue come up a few times in my career. There are people doing inspection of systems because they are certified as a fire inspector or have been doing the work for a few years. They find issues that need correction and then tell the business to hire another company to fix it, costly the business more money.

Comments:
Mr. Pharr stated that he opposes it because it is vague and doesn't see how it's address the problem that's alleged in the reason statement.

Mr. Clements pointed out that this is a regulation of DPOR not building code. This is beyond inspection and is now maintenance.

Mr. Milliken pointed out that this is something that needs to be addressed.

CARRYOVER TO AUGUST

FP907.9
Proponents: Andrew Millikens (cyur2b@verizon.net)
Reason Statement: To comply with 2018 General Assembly bill HB 609 & SB 391. Here in fire code easy for officials and customers to reference. Intent to require smoke detectors in rental residences not yet so protected, plus carbon monoxide detectors where appropriate. Bills include "a reasonable accommodation must be made for persons who are deaf or hearing impaired, upon request" so also incorporates requiring such features as need.

Comments:
This is already in state law (tenant landlord law)

Mr. Pharr pointed out that it doesn't really precisely track the statutory language

CARRYOVER TO AUGUST/ BRING BACK WITH STATE LAW

FP907.10
Proponents: Andrew Millikens (cyur2b@verizon.net)
Reason Statement: Help comply with Virginia code 35-99.5, from which most wording copied. Having here in fire code easier for fire official and customer to reference instead of searching to find elsewhere in state code.

Comments:
Mr. Mr. Millikens wants to withdraw

WITHDRAWN

FP1031.2.1
Proponents: Richard Witt (wittr@chesterfield.gov)
Reason Statement: Security devices that affect the means of egress require a building permit per VUSBC Section 108.1 and approval by the Building Official, not the Fire Official. The Fire Official is required to notify the Building Official if such devices are discovered upon inspection.

Comments:
Mr. Witt has left, will carryover.

CARRYOVER TO AUGUST

VIRGINIA AMUSEMENT DEVICE REGULATIONS

AD30
Proponents: ADTAC Committee
Reason Statement: During the 2019 legislative session Senator Adam Ebbin submitted Senate bill SB1229, which directed the BHCD to consider regulating trampoline courts under the Virginia Amusement Device Regulations. The bill did not did not make it to the Governor's desk but his bill did raise the issue and initiate a conversation about the safety of commercial trampoline courts. Senator Ebbin submitted the bill in response to what he learned of the risks and injuries associated with trampoline courts based on a severe injury suffered by one of his constituents. The amusement device regulations do not currently have specific provisions to address trampoline courts. ASTM has developed and published the standard F2970 − 17:

Standard Practice for Design, Manufacture, Installation, Operation, Maintenance, Inspection and Major Modification of Trampoline Courts. The F2970-17 standard is referenced in this code change and it is part of the amusement device package of standards bundled by ASTM. Trampoline court injuries are becoming more prevalent and the focus of recent national news stories. It is time for inclusion of trampoline courts into the amusement device regulations. The proposed definitions of "Institutional trampoline" and "Trampoline court" are from the ASTM F2970-17 standard.

Comments:
Mr. Gentilini gave an overview of proposal. This was brought forward by the General Assembly.

CONSENSUS APPROVED

AD40
Proponents: ADTAC Committee
Reason Statement: ASTM F2461 covers the manufacture, construction, operations and maintenance of aquatic play equipment and provides safety performance standards for various types of public aquatic play components and aquatic play composite structures. The Amusement Device Technical Advisory Committee, at their April 26th meeting, recommended that the ASTM F2461 standard be incorporated in the VADR.

Comments:
Mr. Gentilini gave an overview of proposal.

CONSENSUS APPROVED

AD75
Proponents: ADTAC Committee (dhcdadtac@gmail.com); Michael Redifer (redifermd@nnva.gov)
Reason Statement: Generally, this involves editing to clarify requirements but also it establishes the submission of location, operator, event duration, device details and proof of insurance three-day in advance of operation. As currently written, the operator is required to notify the local building department at least three days prior to operation but places no
such advance submission of the details and insurance which must be provided but can be before or after the fact.

Comments:
Mr. Gentilini gave an overview of proposal.

CONSENSUS APPROVED

VIRGINIA INDUSTRIALIZED BUILDING CODE

IB20
Proponents: DHCD Staff (sbco@dhcd.virginia.gov)
Reason Statement: Ensure that a path exists for approval of intermodal freight containers as building components in industrialized buildings.

Comments:
Ms. Davis gave an overview of proposal
CONSENSUS APPROVED

VIRGINIA MANUFACTURED HOUSING SAFETY REGULATIONS

MH60
Proponents: DHCD Staff (sbco@dhcd.virginia.gov)
Reason Statement: This will ensure the installation is in compliance with federal installation standards.

Comments:
Ms. Davis gave an overview of proposal

CONSENSUS APPROVED

Workgroup Meeting 1 & 2
VHC at VHDA
4224 Cox Road, Glen Allen VA
July 24, 2019
SIGN IN SHEET

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Greg Revels	Henrico County	
& Linda Hale	Loudoun	
Gerry Maiatico	Warren	

DRAFT SUMMARY
DHCD COMBINED WORKGROUP (WG 1, 2, 3 AND 4) MEETING
2018 Code Change Cycle

August 21, 2019 at 9:30 a.m.
VIRGINIA HOUSING CENTER
4224 Cox Road
Glen Allen, VA

Workgroup 3

Virginia Construction Code

RB310.11 Requiring sprinkler coverage in residential construction
Proponent: Glenn Dean (gad.pompier@gmail.com)

Comments: Mr. Clark speaks in opposition for homebuilders association. Currently, anyone can choose to install sprinklers if they want to. Proposal adds to cost of housing**.**

Results: Non-Consensus

RB311.3.2 Increase to 8 ¼ in. the floor elevation height for exterior doors
Proponent: Andrew Clark (aclark@hbav.com)

Comments: Rest on reason statement.

Results: Consensus Approval

RB332 Add Appendix Q: Tiny Houses
Proponent: Thom Stanton, Residential Uses Subworkgroup

Comments: Rest on reason statement

Results: Consensus Approval

BAQ104.1.2 Edit the IRC Appendix Q to include provisions from the 2021 Appendix Q
Proponent: Residential Uses Subworkgroup

Comments: Ms. Davis summarizes that this brings in 2021 language to Appendix Q for Tiny Homes

Results: Consensus Approval

RB401.3 Reduce to 1% the grade for impervious surfaces near building foundations
Proponents: Andrew Clark (aclark@hbav.com)

Comments: Proponent summarizes their proposal.

Results: Consensus Approval

RE401.2 Updates reference for REScheck to 2018 and removed the NOTE related to the REScheck modification.
Proponents: Energy Subworkgroup; Eric Lacey (eric@reca-codes.com)

Comments: Ms. Davis summarizes the proposal.

Results: Consensus Approval

RE401.3 Adds a mandatory certificate for building efficiency information
Proponents: Energy Subworkgroup; Eric Lacey (eric@reca-codes.com)

Comments: None

Results: Consensus Approval

RE402.1.2 Improves energy savings by increasing R-values
Proponents: Energy Subworkgroup; Eric Lacey (eric@reca-codes.com)

Comments: Proponent summarizes and explains that this proposal was not included in the consensus items brought forth by the energy subworkgroup. However, there is an agreement by HBAV and energy advocates to convene meetings for continued discussion during the final phase.

Results: Carryover to Final Phase.

RE402.4.1.2 Blower door air testing increase to 3 air changes
Proponents: Eric Lacey (eric@reca-codes.com)

Comments: Ms. Davis summarizes and brings in some last-minute amendments from the energy Subworkgroup to include raising the number of air changes from 3 to 5 and adding language to allow testing to be conducted by a Virginia licensed HVAC contractor, a Virginia licensed Home Inspector, a Virginia licensed design professional, a certified BPI Envelope Professional, or a certified HERS rater, or a certified Duct and Envelope Tightness rater as long as they are trained on the testing equipment. Mr. Lacey summarizes some changes and Mr. Clark speaks in support of this item.

Results: Consensus for Approval as Amended

RE403.3.1 Duct insulation in attics and other portions of the building
Proponents: Richard Grace (richard.grace@fairfaxcounty.gov); Energy Subworkgroup

Comments: Mr. Grace summarizes his proposal and the need to insulate. Mr. Ainsley questions about data to support the need for ductwork insulation and opposes this for rise in housing cost reasons. Ms. Eggerton speaks in favor of the need to insulate to prevent water accumulation in ducts. Several others support that they have witnessed damage due to water accumulation in uninsulated ducts. Mr. Grace requested that this proposal be withdrawn after doing additional research on the proposal at the national level.

Results: Withdrawn

RE403.3.5 Delete 'building cavities shall not be used as ducts or plenums'
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)

Comments: Proponent summarizes.

Results: Consensus for Approval

RE503.1.1.1 Replacement fenestration with new fenestration product
Proponents: Energy Subworkgroup; Eric Lacey (eric@reca-codes.com)

Comments: Mr. Lacey summarizes.

Results: Carryover to Final Phase to discuss with other existing building language

RTE3401.1 Delete NEC language from VRC and instead reference the NEC
Proponents: Bryan Holland (Bryan.Holland@NEMA.org)

Comments: None

Results: Non-Consensus

RTE3902.16(1) Arc-fault circuit interrupter protection requirement
Proponents: Haywood Kines (hkines@pwcgov.org)

Comments: Mr. Clark speaks in opposition to this due to cost and insufficient data verifying their effectiveness. Some speak to the statistics that require AFCI in homes as a life-saving equipment. Mr. Ainsley spoke to nuisance tripping that occurs as a worry for requiring these in single-family homes. Mr. Haywood spoke to improvements in AFCI technology that have greatly reduced costs and risks associated with AFCI. Mr. Clark requests additional data for direct evidence to the life-saving factor of these devices. Mr. Iverson speaks in favor of instituting this protection in homes doesn't have direct life-saving aspects.

Results: Non-Consensus

RTE3902.16(2) Arc-fault circuit interrupter protection requirement
Proponents: Allen Turner (allen.turner@jamescitycountyva.gov)

Comments: Proponent summarizes. This is an alternative to the other AFCI proposal, to garner consensus by adding an exemption for GFCI protected circuits in bathrooms, garages, kitchens, etc. Mr. Clark disapproves due to cost and insufficient data verifying their effectiveness.

Results: Non-Consensus

RTP2717.3 Dishwashing machine pan requirement
Proponents: MATTHEW GUNN

Comments: Ms. Davis summarizes in absence of the proponent. Mr. Clark speaks in opposition and several others also oppose.

Results: Consensus for Disapproval

TP1303.1 Adds CSA B805/ICC standard
Proponents: Richard Grace (richard.grace@fairfaxcounty.gov)

Comments: Proponent summarizes that this is simply an alternative compliance path for rainwater harvesting.

Results: Consensus for Approval

Workgroup 4

Virginia Construction Code

TP202 Adds service sink definition
Proponents: Lee Craft, VPMIA (lee.craft@fairfaxcounty.gov); Richard Grace (richard.grace@fairfaxcounty.gov)

Comments: Proponent summarizes. Mr. Payne recommends striking the word "utility" from the new definition.

Results: Consensus for Approval as Amended (striking the word "utility")

T2701.1.1 Feeder equipment grounding conductor
Proponents: James Erler (jim@erlerdesign.com); John Lane (redcloudjl@aol.com); Neil Harrington, Smith Mountain Lake Marine Volunteer Fire Rescue (neil.r.harrington@gmail.com)

Comments: Mr. Harrington speaks to what prompted this proposal. Mr. Erler summarized his proposal. Mr. Kines and several others spoke in opposition of this proposal and recommended taking this through the national process and suggested that the 2020 NEC adequately addresses the issue and a possible solution would be to bring in the 2020 NEC requirements. Mr. Witt recommended carrying this over and bring in subject matter experts to address this issue. Mr. Erler suggested that the national recommendations in the 2020 NEC would not resolve the issue in Smith Mountain Lake. Mr. Kines defended the NFPA process. Delegate Byron asked about the order of the process and supported the proposal. Consensus from proponents to carryover in order to convene a subworkgroup in the final phase to study the issue.

Results: Carryover to Final Phase

TM505.6 Other than Group R (hoods for domestic cooking appliances)
Proponents: Kenney Payne, AIA-VA (kpayne@moseleyarchitects.com)

Comments: Proponent summarizes that current code language mandates a domestic hood. He is attempting to clarify that it is optional.

Results: Consensus for Approval

TM510.7.1.1 Shaft penetrations that penetrate fire-resistance-rated shafts
Proponents: Richard Grace, VPMIA/VBCOA (richard.grace@fairfaxcounty.gov)

Comments: Proponent summarizes that the intent of this proposal is to clarify that firestop systems cannot take the place of required fire dampers.

Results: Consensus for Approval.

TP403.1 Increase number of required water closets in passenger terminals and transportation facilities
Proponents: Cornelia Weiss (koislmeier@yahoo.com)

Comments: Ms. Weiss summarized her proposal. Mr. Payne spoke to the requirements imposed by the language and suggested edits, including consideration of increasing the required number of lavatories as well. A comment was made that this change could affect other transportation facilities and should be vetted at the national level. Mr. Moldovan suggested some changes as well. Some commenters offered to work with the proponent to clean up the proposal to address some of the concerns that had been raised. Mr. Witt recommended carryover to continue edits.

Results: Carryover to Final Phase

TP410.4 Substitution (drinking fountains and water dispensers)
Proponents: Richard Grace (richard.grace@fairfaxcounty.gov)

Comments: Proponent summarized the proposal and the changes made since last time it was discussed. Mr. Clements suggested a change to the language to further clarify the requirement for two fountains, one high and one low. Ms. Eggerton suggested removing “notwithstanding” and that it may be beneficial to carry over this proposal to find language that isn’t confusing. Mr. Grace suggests an edit from the 2021 IPC “Where more than two drinking fountains are required… water dispensers shall be permitted to be substituted for not more than half….” The group agreed to use the 2021 IPC language.

Results: Consensus for Approval as Amended

Workgroup 1

Virginia Construction Code

A108.3 Applicant information, processing with online option
Proponents: Allison Cook (ICC@Allison-Cook.com)

Comments: Ms. Cook summarized her proposal. Mr. Witt supports giving all options available to the customer. Mr. Clark spoke to the reliability or lack thereof to online submittals. Mr. Pharr spoke to the broadband issues in the commonwealth and argued for having online submittals as an option. Ms. Eggerton supported the proposal as an option, even the preferred option. Mr. Lederman (VDEQ) spoke to this being an issue for them as well.

Results: Non-Consensus

A113.8 Final inspection requiring energizing the structure
Proponents: Haywood Kines

Comments: Proponent summarizes his proposal. Mr. Witt gave some history on when power companies could be limited in their ability to support this. Mr. Cornwall asked how alternative power sources would be applicable to this change. Ms. Cook asked if this was a problem that has occurred where building offices were required to conduct final inspections on unpowered structures. Mr. Clements spoke in opposition. A comment was made that the existing provision in the USBC was added to allow a building official to require power when it was appropriate and mandating it for all final inspections would require it even when it is not feasible or appropriate. Mr. Redifer opposed this on the grounds that building offices should have the option to make the decision.

Results: Non-Consensus

A115.2(3) Notice of violation to those other than the permit holder for related work
Proponents: Michael Redifer (redifermd@nnva.gov)

Comments: Proponent summarizes proposal.

Results: Consensus Approval

A115.2(2) Notice of violation to those other than the permit holder for related work
Proponents: Michael Redifer (redifermd@nnva.gov)

Comments: Proponent summarizes proposal.

Results: Withdrawn

A118.1 Creates a VCC section for unsafe buildings
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)

Comments: Proponent asks for proposals to be carried over.

Results: Carryover to Final Phase

A119.6 Meetings and postponements by electronic means
Proponents: David Beahm (dbeahm@warrencountyva.net); VBCOA Admin Committee

Comments: Proponent summarized his proposal. Remove comma before "if requested".

Results: Consensus Approval

Virginia Maintenance Code

PM103.2.3 Responsibility for maintenance to tenants and owners of leased buildings
Proponents: W Shaun Pharr (spharr@aoba-metro.org)

Comments: Rests on reason statement. Mr. Pharr defends proposal that this does not supersede or interfere with the Landlord Tenant Act. Mr. Payne spoke to TRB cases about this topic. Mr. Clark spoke to General Assembly implications of this proposal. Theresa asked how they were supposed to get ahold of the owner of a property to determine if it's a failure of the owner or the tenant. Mr. Clements states that the language of this change gives the building official the ability to request information pursuant to a deficiency. Ms. Hale asked about the scope of this change and Mr. Witt clarified for her. Mr. Pharr suggested that he could remove reference to the Residential Landlord Tenant Act and preserve the second part in 103.2.3.1. Ms. Davis summarized to this point. Mr. Witt requested to make 103.2.3 to a Note and reference the Code of Virginia.

> *"Note: Where an owner states that a tenant is responsible for performing any of the owner's duties under this code, the code official may request information needed to verify the owner's statement, as allowed by Section 55-1-1209A.5 of the Code of Virginia."*

Results: Consensus Approval as Amended

PM104.5.3.2 Record of inspection should carry name and certifications of elevator mechanic
Proponents: DHCD Staff

Comments: Ms. Davis summarizes the proposal as a correlation change in the VMC to duplicate the change made in the VCC for elevator inspections.

Results: Consensus Approval

PM105.2 Adds 'tenant' to those who can be named by code official for violations
Proponents: W Shaun Pharr (spharr@aoba-metro.org)

Comments: Mr. Pharr summarizes his proposal and references his prior statements related to the Tenant Landlord Act.

Results: Consensus Approval

PM105.4 Adds ‘tenant’ to owner or other person responsible for Notice of violations
Proponents: W Shaun Pharr (spharr@aoba-metro.org)

Comments: Rest on reason statement and references his prior statements related to the Tenant Landlord Act.

Results: Consensus Approval

PM106 Simply language of unsafe structure
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)

Comments: Mr. Clements speaks to the need for more time for his proposal and requests to carry over to continue discussions.

Results: Carryover to Final Phase.

Virginia Certification Standards

CS41 Editorial change for certification requirements
Proponents: Building Code Academy Advisory Committee (BCAAC)

Comments: No comments.

Results: Consensus Approval.

Workgroup 2

Virginia Construction Code

B108.1 Emergency supplemental hardware per SB1755
Proponents: DHCD Staff on behalf of the following stakeholders represented at the School Safety Subworkgroup: Virginia Building & Code Officials Association; Virginia Department of Education; Augusta County Public Schools; American Institute of Architects (AIA) Virginia; Virginia Tech

Comments: Ms. Davis recaps both of the two proposals brought forth from Senate Bill 1755 and the review of the use of barricade devices and locks during active shooter and emergency situaltions. She explained that the two proposals were the same except this proposal put the clarifying language in the body of the code and the alternate proposal puts the language in an appendix that would make it optional for jurisdictions to choose to use them. The concern with the appendix is that one school district would be able to use an approved device as outlined in the appendix and the school in the next county would receive a notice of violation for using the exact same device. She opened the floor for other committee members to discuss relevant proposals. Ms. Frye stated that she has concerns that the proposal as written does not prohibit barricade devices from being installed on doors with required panic hardware. Mr. Witt stated that there had been four meetings with over twenty hours of discussion. He saw no benefit in rehashing the arguments at this meeting and suggested that both simply be moved forward as non consensus.

Results: Non-Consensus

BO108.1 Appendix O option per SB1755
Proponents: Linda Hale on behalf of VFPA and Steven Sites, Acting State Fire Marshal
Comments: See above. Ms. Davis asked Ms. Hale if the language in the appendix was identical to the other proposal. Ms. Hale stated that it was identical as she simply used the copy and paste to submit her proposal and that it was her intent that it be exactly the same. Mr. Milliken recommends moving the changes in VSFPC section 1010.1.9.3 to 1031. Mr. Payne indicated VA AIA would support the appendix option as well.

Results: Non-Consensus

B202(3) 'Permit holder' definition
Proponents: Michael Redifer (redifermd@nnva.gov)

Comments: Stand on the reason statement. Mr. Witt asked what we would gain from this definition. Ms. Cook clarified how this would help. Mr. Pharr spoke in support. Mr. Beahm indicated how holder could be a distinct term.

Results: Carryover to Final Phase

B307.1(1) Eliminate Permissible fireworks MAQ tables
Proponents: Glenn Dean (gad.pompier@gmail.com)

Comments: Mr. Dean spoke to both his proposals and asked for withdraw on this item and carryover on the next.

Results: Carryover to Final Phase

B307.1(2) Eliminate Consumer fireworks in the MAQ tables
Proponents: Glenn Dean (gad.pompier@gmail.com)

Comments: Mr. Dean spoke to both his proposals. Ms. Davis asked if it was his intent to allow the doubling of quantities in a sprinklered building for consumer fireworks as that is what this proposal would do. Mr. Dean and asked to withdraw this proposal and would focus on the Permissable proposal for the final phase.

Results: Withdrawn

B310.1 Residential Group R (Residential use subworkgroup)
Proponents: Residential Use Subworkgroup

Comments: Ms. Davis summarized how multiple residential uses were consolidated to this proposal and how it may have caused unintended consequences with the new definition of R-1 as it might be interpreted to include vacation rentals Mr. Brown summarized some of the good work accomplished by this language. Mr. Willham asked a question about transient occupancy and comparing this to IRC language. Mr. Milliken suggests that any change to hospice be reflected in the VSFPC for drills. Mr. Brown indicated this was already done. Ms. Cook asked about transient language in R-uses impacting multi-unit apartments being utilized by AirBNB. Mr. Clements spoke to the work accomplished by the group and that "primarily transient" was the best defining term for limiting the scope of these use groups. Mr. Gerber asked how occupant load definition could be enforced. Mr. Willham recommends adding "more than one dwelling unit" to "ten or more occupants" to further clarify.

Results: Carryover to Final Phase

B310.3(1) Residential Group R-1 for transient occupants
Proponents: Daniel Willham (Daniel.Willham@fairfaxcounty.gov)

Comments: This proposal should be correlated with B310.1.

Results: Carryover to Final Phase

B310.3(2) Residential Group R-1 for transient occupants
Proponents: Daniel Willham (Daniel.Willham@fairfaxcounty.gov)

Comments: This proposal should be correlated with B310.1.

Results: Carryover to Final Phase

B310.8.2 Accessory dwelling unit
Proponents: Residential Use Subworkgroup

Comments: Ms. Davis summarized that the request to visit ADU originated in Northern VA due to the lack of affordable living arrangements. Mr. Clark supports this. Mr. Moldovan speaks to the difficulty in enforcing the provision that the structure must be owner occupied. Mr. Kines indicates that he thinks this is a way to circumvent the requirements of a duplex. Ms. Cook reiterated the need and support for this in northern Virginia. Mr. Moldovan asked how "owner occupied" would impact the building official and he does not want to bring forth a proposal with unenforceable language.

Results: Carryover to Final Phase

B428 Higher education laboratories

Proponents: Kenney Payne, AIA-VA (kpayne@moseleyarchitects.com)

Comments: Mr. Payne defers to Mr. Milliken. Mr. Milliken summarized the proposal and its recent edits.

Results: Consensus Approval with Amendments

B901.5.1 Statement of compliance
Proponents: Andrew Milliken (amilliken@staffordcountyva.gov)

Comments: Mr. Milliken gives a brief summary and indicates that after conversation with other officials he recommends it move forward as non-consensus.

Results: Non-Consensus

B1010.1.9.3(2) Locks and latches
Proponents: Kenney Payne, AIA-VA (kpayne@moseleyarchitects.com)

Comments: Mr. Payne summarizes his proposal and notes little support, and he moves for it to be withdrawn.

Results: Withdrawn

Virginia Statewide Fire Prevention Code

FP103.2.1 (VFSB SFPC Edits)
Proponents: Andrew Milliken (amilliken@staffordcountyva.gov)

Comments: Mr. Witt provided background on the work of this committee. He and the VBCOA Fire Code Committee supports all of the Subworkgroup items submitted on behalf of the Fire Code Edit Committee.

Results: Consensus Approval

FP202(3) Restricted explosives manufacturing definition
Proponents: Glenn Dean (gad.pompier@gmail.com)

Comments: Added the word "is", an editorial change.

Results: Consensus Approval

FP316.6 Storage underneath bridges and elevated roadways
Proponents: Gerry Maiatico (gmaiatico@warrencountyfire.com)

Comments: Ms. Davis summarizes his proposal. Ms. Hale summarizes the proposal's intent from the perspective of Mr. Maiatico and specific issues he's having within his jurisdiction. Ms.

Davis question the ability to regulate VDOT structures and the ability to already cite an unsafe condition.

Results: Consensus Approval

FP609.2 Appropriate ventilation for grease laden vapors
Proponents: Andrew Milliken (amilliken@staffordcountyva.gov)

Comments: Mr. Milliken summarizes his proposal and its applicability. Mr. Witt indicates the history of this code and why it is phrased the way that it is.

Results: Carryover to Final Phase

FP903.5.1 Certification of service personnel for automatic sprinkler systems
Proponents: Joe Boisseau

Comments: Ms. Davis summarized the proposal and Mr. Milliken indicated he had worked with Mr. Boisseau on this proposal.

Results: Consensus for Disapproval

FP907.9 Requiring installation of battery powered smoke alarms in rentals
Proponents: William Andrews (cyur2b@verizon.net)

Comments: None

Results: Consensus for Disapproval

FP1031.2.1 Security devices and egress locks
Proponents: Richard Witt (wittr@chesterfield.gov)

Comments: This is an effort to remove construction language that was missed during the last cycle.

Results: Non-Consensus

Virginia Existing Building Code

EB601.4(1) Eliminates a conflict in the VEBC and USBC for energy efficiency
Proponents: Eric Lacey (eric@reca-codes.com)

Comments: Parties agree to continue working on the proposal as part of the overall discussion on existing buildings.

Results: Carryover to Final Phase

EB601.4(2) Energy conservation, delete existing building CE and RE
Proponents: Kenney Payne, AIA-VA (kpayne@moseleyarchitects.com)

Comments: Proponent requests additional time to develop the proposal.

Results: Carry Over to Final Phase

EB601.1(2) Building elements and materials in alterations
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)

Comments: Mr. Payne summarized his proposal. Ms. Cook indicated that this is not a technical change. Mr. Kines asked about historical structures and Mr. Witt responded that there's a separate section for that.

Results: Consensus Approval

EB904 Delete duplicated language in 904 which is already present in 906
Proponents: Kenney Payne, AIA-VA (kpayne@moseleyarchitects.com)

Comments: Mr. Payne summarizes his proposal.

Results: Consensus Approval

EB1101.18 Smoke and carbon monoxide alarms in old rental residences
Proponents: William Andrews (cyur2b@verizon.net)

Comments: Mr. Andrews stated that smoke and carbon monoxide alarms were included in the Landlord Tenant Act and he's trying to get this into the building codes as a requirement.

Results: Consensus Disapproval

Virginia Maintenance Code

PM302.5 Rodent harborage
Proponents: Gregory Revels (Greg.Revels@henrico.us)

Comments: Mr. Pharr summarized the proposal and indicated that he and Mr. Revels have agreed to a new definition of "Infestation" – *The presence of insects, rodents, vermin or other pests in sufficient number to adversely affect the structure or health, safety and welfare of the occupants.*

Results: Consensus Approval as Amended with new definition

PM602.4 Cooling supply codification of emergency regulation
Proponents: DHCD Staff

Comments: Ms. Davis summarized with the emergency regulations language brought in by order. This codifies the emergency regulations language instead of letting it expire. Mr. Clark supports this on behalf of homebuilders and carries in Delegate Clark's support.

Results: Consensus Approval

PM702.1 General (Means of egress) refer to SFPC and the applicable building code for maintenance.
Proponents: Ronald Clements Jr (clementsro@chesterfield.gov)

Comments: Mr. Clements summarizes his proposal and stated he's compromised with Mr. Milliken on this draft.

Results: Consensus for Approval

COMBINED WORKGROUPS 1, 2, 3, & 4 MEETING

LOCATION: VIRGINIA HOUSING CENTER - 4224 COX ROAD, GLEN ALLEN, VIRGINIA 23060

DATE: WEDNESDAY, August 20, 2019

TIME: 9:00 A.M.

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