

DHCD, DBFR 2009 Code Change Process

April 8, 2010 Meeting Agenda Package

Workgroup 2 -USBC/SFPC Technical Amendments

USBC: VCC

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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-307.1**

Nature of Change:

To delete the consumer fireworks category from the hazardous material table in the IBC and the IFC.

Proponent: Robby Dawson, representing the Virginia Fire Services Board

Staff Comments:

This proposal was approved at the first round of hearings for the 2012 International Codes. It is unknown whether public comment will be received for reconsideration of the proposal for the final action hearings. The result of the proposal is to regulate consumer fireworks as explosive materials. The amounts permitted to be stored however will not change as the category being deleted was the same as the category already in both the IBC and the IFC for explosive materials. The proposal may result in other explosive material requirements in the IBC and the IFC applying to consumer fireworks and to the subcategory of fireworks identified in Virginia as “permissible fireworks” which under state law are not regulated by the SFPC. The proposal was not received in time to be vetted through the workgroup process.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-307.1

Proponent Information (Check one): Individual Government Entity Company

Name: Robby Dawson Representing: Virginia Fire Services Board

Mailing Address: 1005 Technology Park Drive, Glen Allen, VA 23059

Email Address: dawsonj@chesterfield.gov Telephone Number: 804-717-6838

Proposal Information

Code(s) and Section(s): USBC Table 307.1(1); USBC Section 307.2
SFPC Table 2703.1.1(1) and Section 3302.1

Proposed Change (including all relevant section numbers, if multiple sections):

[F] TABLE 307.1(1)
MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS POSING A PHYSICAL HAZARD^{a,j,m,p}

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE ^b			USE-CLOSED SYSTEM ^c			USE-OPEN SYSTEMS	
			SOLID POUNDS (CUBIC FEET)	LIQUID GALLONS (POUNDS)	GAS (CUBIC FEET AT NTP)	SOLID POUNDS (CUBIC FEET)	LIQUID GALLONS (POUNDS)	GAS (CUBIC FEET AT NTP)	SOLID POUNDS (CUBIC FEET)	LIQUID GALLONS (POUNDS)
Consumer fireworks (Class C, Common)	1.4G	H-3	125 ^{d,e,j}	N/A	N/A	N/A	N/A	N/A	N/A	N/A

No changes to remainder of table.

Section 307.2 Definitions.

EXPLOSIVE. A chemical compound, mixture or device, the primary or common purpose of which is to function by explosion. The term includes, but is not limited to, dynamite, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord, igniters and display fireworks, 1.3G (Class B, Special).

~~The term "Explosive" includes any material determined to be within the scope of USC Title 18: Chapter 40 and also includes any material classified as an explosive other than consumer fireworks, 1.4G (Class C, Common) by the hazardous materials regulations of DOTn 49 CFR Parts 100-185. (Remainder unchanged.)~~

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 or deflagration that complies. ~~Such 1.4G fireworks which comply with the construction, chemical composition and labeling regulations of the DOTn for Fireworks, UN 0336, 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.~~

**TABLE 2703.1.1(1)
MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIALS POSING A PHYSICAL HAZARD^{a,b,c,p}**

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE ^b			USE-CLOSED SYSTEM ^c			USE-OPEN SYSTEMS	
			SOLID POUNDS (CUBIC FEET)	LIQUID GALLONS (POUNDS)	GAS (CUBIC FEET AT NTP)	SOLID POUNDS (CUBIC FEET)	LIQUID GALLONS (POUNDS)	GAS (CUBIC FEET AT NTP)	SOLID POUNDS (CUBIC FEET)	LIQUID GALLONS (POUNDS)
Consumer fireworks (Class C, Common)	1.4G	H-3	125 ^{d,e,h}	N/A	N/A	N/A	N/A	N/A	N/A	N/A

No changes to remainder of table.

Section 3302.1 Definitions.

EXPLOSIVE. A chemical compound, mixture or device, the primary or common purpose of which is to function by explosion. The term includes, but is not limited to, dynamite, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord, igniters and display fireworks, 1.3G (Class B, Special).

The term "Explosive" includes any material determined to be within the scope of USC Title 18: Chapter 40 and also includes any material classified as an explosive other than consumer fireworks, 1.4G (Class C, Common) by the hazardous materials regulations of DOTn 49 CFR Parts 100-185. (Remainder unchanged.)

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 or deflagration that complies. ~~Such 1.4G fireworks which comply with the construction, chemical composition and labeling regulations of the DOTn for Fireworks, UN 0336, 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.~~

Supporting Statement (including intent, need, and impact of the proposal):

The intent of this change is to revert to language stating consumer fireworks are explosive in nature.

The IFC definition language denoting that consumer fireworks would not be considered "explosive materials for the purpose of this code" originated through IFC code change F97-99. The proponent at the time stated the change was to "revise the definitions for consumer fireworks and display to be more closely aligned with the definitions contained in the 1997 IFCI Uniform Fire Code including 1999 Accumulative Supplement and the 1999 BOCA National Fire Prevention Code."

In looking back for the UFC and BOCA fire codes that were referenced in the F97-99 change to the IFC, code change B3-97 introduced language through the BOCA building code claiming consumer fireworks are not explosive materials and did not provide any technical substantiation to support the claim. We would accept the proponent was making the claim as a means to justify reclassifying the storage and/or sale of consumer fireworks from an H-1 to an H-3 building. For that, we would agree somewhat with the proponent in saying that it "appears reasonable" given the comparison for other H-3 commodities but that is not the issue in this proposed change.

The next BOCA cycle saw the introduction of F18-98 changing the definition of consumer fireworks, 1.4G as "not explosive materials for the purpose of this code". The committee hearing the change at the time denied the proposal with a conference action to amend. Subsequently the proponent brought the issue back in the form of an amendment. But here again, a technical substantiation was not provided.

This same F18-98 change, as amended, carved out consumer fireworks from BOCA's MAQ table to "correlate with code change B3-97 to the 1996 BOCA National Building Code" to be shown as a Group H-3 building instead of a Group H-1. The proponent also stated that it was to "correlate definitions used in the BOCA National Fire Prevention Code and Building Code with terminology used in the new DOTn/UN classifications and regulations and NFPA

standards." That may be true to a point and it's that point that gets to the heart of the reason behind this proposed change, which is, DOTn 49 CFR Parts 100-178, U.S Consumer Products Safety Commission as set forth in CPSC 16 CFR, UN 0336, NFPA standards 495, 1123, 1124, and 1126 **do not** contain language saying consumer fireworks are not explosive, at least not that was found. We went so far as to check pamphlets published by the Institute of Makers of Explosives; the U.S. Department of Justice, Bureau of Alcohol, Tobacco, Firearms and Explosives, AFT Publication 5400.7; the American Pyrotechnics Association Standard 87-1, and found nothing in that respect. In fact, everything found labels fireworks as "explosive" without distinction for 1.4G "consumer fireworks" versus a 1.4G professional pyrotechnic device such as the "gerb" that was used and ignited The Station nightclub fire in Rhode Island.

It is the accumulative results of B3-97 and F18-98 that lent itself to the reference in IFC code change F97-99 supporting statement.

That portion of the proposed definition change to include "deflagration" is a resurrection of a previously used descriptor and is to more accurately reflect the functioning of some consumer fireworks. While a sparkler or fountain may operate through combustion, simple combustion does not necessarily mean enough force will be produced quickly enough for the device to function in a desired manner. If the pyrotechnic material does not deflagrate, the flaming balls of roman candles may not launch; aerial devices may not have enough expelling force to obtain the needed altitude.

The changes to USBC Table 307.1(1) and SFPC Table 2703.1.1(1) is a change to reflect that consumer fireworks are indeed properly classified as an Explosive 1.4G and it's not necessary to have a separate line with identical threshold values, including all footnotes, to determine at what point a building would be classified as a Group H-3. It's redundant within the same tables. In reality, at the model code level, other than the deletion of language saying consumer fireworks are not explosive, the net effect of this change will be zero to what is taking place in the world of "permissible fireworks" and consumer fireworks manufacturing, storage, sale and use.

At the time of this submission copies of the UFC code changes referenced earlier have not been located but it's suspected the supporting statements closely resembled those submitted to BOCA.

The change to the definition of "Explosive" is to delete language related to consumer fireworks that was inserted as a result of IFC code change B3-97.

This proposed change, designated as F186-09/10, was accepted (modified) by the ICC Fire Code Committee at the recent Code Change hearings held in Baltimore. The Committee vote was 11 to 2 in favor of "As Modified".

Submittal Information

Date Submitted: 12/16/2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-307.2(a), C-307.2(b) and C-307.2(c)**

Nature of Change:

Three proposals which together would change the classification and amounts of permissible fireworks which may be stored in mercantile occupancies by the use of requirements of a NFPA standard.

Proponent: Charles L. Walker, representing American Promotional Events, d.b.a. TNT Fireworks

Staff Comments:

This proposal was tentatively disapproved at the Codes and Standards Committee meeting of December 14, 2009 unless public comment is received during the Compilation Document comment period.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-307.2(a)

Proponent Information

(Check one): Individual Government Entity Company

Name: Charles L. Walker

Representing: American Promotional Events, d.b.a. TNT Fireworks

Mailing Address: 4511 Helton Drive, Florence, AL 35630

Email Address: walkerc@tnfireworks.com

Telephone Number: 800-243-1189

Proposal Information

Code(s) and Section(s): IBC - 307.2 Definitions

Proposed Change (including all relevant section numbers, if multiple sections):

Add the following definition to IBC Section 307.2 Definitions to read:

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

Supporting Statement (including intent, need, and impact of the proposal):

Adding the definition of "Permissible Fireworks" maintains consistency with the definitions of the certain types of 1.4G Consumer Fireworks that are allowed by the State of Virginia. Adding this definition also will bring the Building Code into consistency with the definitions amended in the VSFPC.

Submittal Information

Date Submitted: April 20, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-307.2(b)

Proponent Information

(Check one): Individual Government Entity Company

Name: Charles L. Walker

Representing: American Promotional Events, d.b.a. TNT Fireworks

Mailing Address: 4511 Helton Drive, Florence, AL 35630

Email Address: walkerc@tnfireworks.com

Telephone Number: 800-243-1189

Proposal Information

Code(s) and Section(s): IBC - 307.5 High-hazard Group H-3.

Proposed Change (including all relevant section numbers, if multiple sections):

IBC (NEW) (Add) 307.5.1 PERMISSIBLE FIREWORKS. Sparklers, fountains, Pharaoh's serpents, caps for pistols, or pinwheels commonly known as whirligigs or spinning jennies items permitted to be sold in the Commonwealth of Virginia shall be exempt from the requirements of an H-3 Occupancy under the following circumstances:

- 1. The total amount on display and in storage in any single control area complies with the maximum allowable quantities as listed in Table 307.1 (1) of this code, or;**
- 2. The new or existing retail store or retail sales facility complies with the provisions of the National Fire Protection Association Standard 1124 - 2006 Edition (NFPA 1124-06) for new stores and facilities as herein amended by the Commonwealth of Virginia.**

Supporting Statement (including intent, need, and impact of the proposal):

45 states and The District of Columbia allow the use, sale and possession of some form of consumer fireworks. In other words, over 85% of the U.S. population can legally use some form of Consumer Fireworks. The State Virginia allows for a very limited type of non-explosive, non-aerial type of Consumer Fireworks 1.4G to be used, sold or possessed. It is common knowledge that the International Codes hold an extremely limited view on the RETAIL SALES of consumer fireworks. NFPA 1124 allows for a more concise regulation of every aspect of the retail sale, storage and display of Consumer Fireworks. It will also allow a more realistic regulatory approach for the types of products that are allowed in Virginia than merely the classification of an occupancy as Hazardous, when it contains excess of the very limited amounts of the type of Permissible Fireworks allowed in the State.

Submittal Information

Date Submitted: April 20, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-307.2(C)

Proponent Information

(Check one): Individual Government Entity Company

Name: Charles L. Walker

Representing: American Promotional Events, d.b.a. TNT Fireworks

Mailing Address: 4511 Helton Drive, Florence, AL 35630

Email Address: walkerc@tntfireworks.com

Telephone Number: 800-243-1189

Proposal Information

Code(s) and Section(s): **IBC - Chapter 35 Referenced Standards**

Proposed Change (including all relevant section numbers, if multiple sections):

Change the referenced standards in Chapter 35 of the IBC as follows:

NFPA

1124-06 Manufacture, Transportation, and Storage of Fireworks and Pyrotechnic Articles. . . , 307.5.1, 415.3.1

Supporting Statement (including intent, need, and impact of the proposal):

To be consistent with the proposed code change regarding Permissible Fireworks and referencing the most recent, available version of the National Fire Protection Standard 1124.

Submittal Information

Date Submitted: April 20, 2009

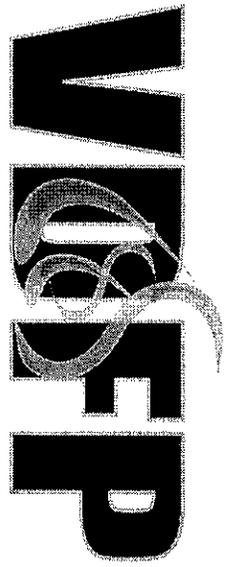
The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150





Virginia Department of Fire Programs

Structural Fires with Day Cares / Nursing Homes Summary, Virginia, 2004 - 2009 *

Year	Total	Percent	Total Property Loss	Total Contents Loss	Total Fire Dollar Loss	Civilian Fire Injuries	Civilian Fire Deaths	Fire Service Injuries	Fire Service Deaths
2004	15	13.3%	\$206,501	\$45,001	\$251,502	5	0	0	0
2005	20	17.7%	\$55,302	\$4,472	\$59,774	0	0	0	0
2006	24	21.2%	\$3,271,667	\$426,272	\$3,697,939	1	1	0	0
2007	18	15.9%	\$247,601	\$97,500	\$345,101	2	1	0	0
2008	19	16.8%	\$51,525	\$14,530	\$66,055	1	0	0	0
2009	17	15.0%	\$32,700	\$25,400	\$58,100	1	0	0	0
Grand Total	113	100.0%	\$3,885,296	\$613,175	\$4,478,471	10	2	0	0

Structural Fires with Day Cares / Nursing Homes By Automatic Extinguishing System (AES) Presence, Virginia, 2004 - 2009 *

Year	Present	None Present	Unknown or Not Reported	Grand Total	Percent
2004	11	3	1	15	13.3%
2005	14	6	0	20	17.7%
2006	12	9	3	24	21.2%
2007	11	7	0	18	15.9%
2008	12	4	3	19	16.8%
2009	12	4	1	17	15.0%
Grand Total	72	33	8	113	100.0%
Percent	63.7%	29.2%	7.1%	100.0%	

Note: Data is compiled from all fire incidents reported to the Virginia Fire Incident Reporting System (VFIRS) for 2004-2008 as of 04/06/2009, and 2009 as of 02/08/2010. Data for 2009 is still considered preliminary. Aid given (mutual or automatic) incidents were excluded and fire exposure incidents were included with the numbers. Structure fires include incidents with incident type coded as 110, 111, 120-123 and with structure type codes as 1 or 2. Day Cares and Nursing Homes include all incidents with property use coded as 254 (Day care in commercial property), 255 (Day care in residence, licensed), 256 (Day care in residence, unlicensed), 311 (Nursing homes licensed by the state, providing 24-hour nursing care for four or more persons.), and 321 (Mental retardation/development disability facility that houses, on a 24-hour basis, four or more persons.).

* Data for 2009 is considered preliminary since we are still receiving reports from fire departments and the data is not final. Caution should be exercised in releasing and comparing the numbers.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-308.1**

Nature of Change:

A rewrite of the provisions of the IBC for facilities which provide care (assisted living facilities, nursing homes, hospitals, child care facilities, group homes, etc.).

Proponent: Ed Altizer, State Fire Marshal, representing the State Fire Marshal's Office

Staff Comments:

The proposal resulted from a number of meetings of a sub-workgroup on assisted living facilities. The 2009 IBC changed the criteria for Group I-2 from being facilities with more than five persons to facilities with one of more persons. However, the specific definition of "nursing homes" within the Group I-2 classification still retained the phrase "more than five." In addition, the Group R-4 classification in the 2009 IBC, for assisted living facilities, still only regulates facilities with more than five persons. As facilities with five or fewer persons are not nursing homes or assisted living facilities under the 2009 IBC, they may be constructed as single family dwellings and the occupants may be in any condition, either able to exit without assistance or unable to exit without assistance. This remains consistent with past IBC and BOCA Code language. Further, an interpretation under the BOCA Code extended the five or less concept to facilities with more than five persons permitting a facility with more than five occupants to have up to five occupants who needed assistance in exiting, without the facility being classified as a Group I-2 facility. The USBC recognizes this interpretation in an exception for small group homes and assisted living facilities with up to eight occupants based on a zoning law prohibiting the "zoning out" of these facilities in residential neighborhoods, and specifically permits up to five of the occupants to need assistance in exiting. This proposal would reverse those established requirements and require a sprinkler system to be installed and residents incapable of exiting to be on the lowest floor. Staff notes that the provisions would be difficult to implement, especially for the small facilities with up eight occupants, as the classification does not change (both a house and a small assisted living facility are Group R-5), so there would be no change of occupancy to use a house as a small assisted living facility, therefore no way to require the additional safeguards. In addition, staff notes a number of inconsistencies and conflicts in the proposal, such as the Group R-4 classification still only applying to facilities with more than five occupants, the definition of assisted living facilities only applying to facilities caring for four or more residents of any exiting capability and the Group I-2 classification permitting facilities with five or fewer residents to be classified as Group R-5.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-308.1

Proponent Information

(Check one): Individual Government Entity Company

Name: Ed Altizer

Representing: Virginia State Fire Marshal's Office

Mailing Address: 1005 Technology Park Drive
Glen Allen, VA 23059

Email Address: ed.altizer@vdfp.virginia.gov

Telephone Number: 804-612-7267

Proposal Information

Code(s) and Section(s): 2009USBC and proposed referenced 2009 IBC 308.1, 308.2, 308.3, 308.3.1, 310.1, 310.2, (IFC [B] 202); [F] 903.2.6, [F] 903.2.8, [F] 903.3.1.3, [F] 903.3.2, [F] 907.2.6, [F] 907.2.6.2, (IFC 903.2.6, 903.2.8, 903.3.1.3, 903.3.2, 907.2.6, 907.2.6.2);

Proposed Change (including all relevant section numbers, if multiple sections): See attached

Supporting Statement (including intent, need, and impact of the proposal): See attached

Submittal Information

Date Submitted: January 6, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



Revise as follows:

308.1 Institutional Group I. Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which people are cared for or live in a supervised environment, having physical limitations because of health or age are harbored for medical treatment or other care or treatment, or in which people are detained for penal or correctional purposes or in which the liberty of the occupants is restricted care or supervision is provided to individuals who, are or are not capable of self preservation without physical assistance or in which people are detained for penal or correctional purposes or in which the movement of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

308.2 Definitions. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

(Relocate revised definitions from Section 308.3.1, and revise)

24 HOUR CARE. The actual time that a person is an occupant within a facility for the purpose of receiving care. It shall not include a facility that is open for 24 hours and is capable of providing care to someone visiting the facility during any segment of the 24 hours.

DETOXIFICATION FACILITIES. Facilities that serve patients who are provided treatment for substance abuse on a 24-hour basis and serving care recipients who are incapable of self-preservation or who are harmful to themselves or others.

CHILD FOSTER CARE FACILITIES. Facilities that provide care on a 24-hour basis to more than five children, ¹ /2 years of age or less,

HOSPITALS AND MENTAL PSYCHIATRIC HOSPITALS. Facilities buildings or portion thereof used on a 24-hour basis that provides care or treatment for the medical, psychiatric, obstetrical, or surgical treatment of inpatients who care recipients that are incapable of self-preservation.

INCAPABLE OF SELF PRESERVATION. Persons because of age; physical limitations; mental limitations; chemical dependency; or medical treatment cannot respond as an individual to an emergency situation.

MEDICAL CARE. Care involving medical or surgical procedures, nursing or for psychiatric purposes.

NURSING HOMES. ~~Nursing homes are long term care~~ Facilities that provide long-term care on a 24-hour basis, including both intermediate care facilities and skilled nursing facilities, serving more than five persons and where any of the persons are incapable of self-preservation.

RESIDENTIAL CARE/ASSISTED LIVING FACILITIES. ~~A building or part thereof housing persons on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This classification shall include, but not be limited to, the following: residential board and care facilities, assisted living facilities, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug abuse centers and convalescent facilities.~~ Assisted living facility" means any congregate residential setting that provides or coordinates personal and health care services, 24-hour supervision, and assistance (scheduled and unscheduled) for the maintenance or care of four or more adults who are aged, infirm or disabled and who are cared for in a primarily residential setting. Maintenance or care means the protection, general supervision and oversight of the physical and mental well-being of an aged, infirm or disabled individual. Residents may or may not need assistance to evacuate.

308.2 308.3 (IFC [B] 202) Group I-1. This occupancy shall include buildings, structures or portions thereof housing for more than 16 persons who reside on a 24 hour basis who because of age, mental disability or other reasons, live in a supervised residential environment that provides personal care services and receive custodial care. The occupants are capable of responding to an emergency situation without physical assistance from staff self preservation. This group shall include, but not be limited to, the following:

Alcohol and drug centers

Assisted living facilities with residents capable of self preservation
Congregate care facilities
Convalescent facilities
Group homes
Halfway houses
Initial stage Alzheimer's facilities
Residential board and custodial care facilities
Social rehabilitation facilities

A facility such as the above with five or fewer persons shall be classified as a Group R-3 or shall comply with the International Residential Code in accordance with Section 101.2 provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the International Residential Code. A facility such as above, housing at least six and not more than 16 persons, shall be classified as Group R-4. Up to five residents incapable of self preservation are permitted when located in rooms at the lowest level of exit discharge.

308.3 308.4 (IFC [B] 202) Group I-2. This occupancy shall include buildings and structures used for medical or custodial ~~surgical, psychiatric, nursing or custodial~~ care on a 24 hour basis for more than five persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

Assisted living facilities with residents incapable of self preservation
~~Foster~~ Child care facilities
Detoxification facilities
Hospitals
Nursing homes
~~Mental~~ Psychiatric hospitals

A facility such as the above with five or fewer residents shall be classified as Group R-3 or shall comply with the International Residential Code in accordance with Section 101.2.

308.3.1 Definitions. ~~The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.~~

(Relocate revised definitions to Section 308.2)

310.1 (IFC [B] 202) Residential Group R. Residential Group R includes, among others, the use of a building, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the International Residential Code in accordance with Section 101.2. Residential occupancies shall include the following:

R-1 Residential occupancies containing sleeping units where the occupants are primarily transient in nature, including:

Boarding houses (transient)
Hotels (transient)
Motels (transient)

Congregate living facilities (transient) with 10 or fewer occupants are permitted to comply with the construction requirements for Group R-3.

R-2 Residential occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature, including:

Apartment houses
Assisted living facilities with residents capable of self preservation
Boarding houses (not transient)
Convents
Dormitories
Fraternities and sororities
Hotels (nontransient)
Live/work units,
Monasteries,
Motels (nontransient),
Vacation timeshare properties

Congregate living facilities with 16 or fewer individuals are permitted to comply with the requirements for Group R-3.

R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, or I, including:

Buildings that do not contain more than two dwelling units.

Adult care facilities that provide accommodations for five or fewer persons of any age for less than 24-hours.

Child care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours.

Care facilities as that provide accommodations for five or fewer persons

Congregate living facilities with 16 or fewer individuals.

Adult care and child care facilities for 5 or fewer individuals receiving care that are within a single-family home dwellings are permitted to comply with the International Residential Code. Up to five residents incapable of self preservation are permitted provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the International Residential Code and the resident rooms are located at the lowest level of exit discharge.

R-4 Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff with the additional requirement to provide an automatic sprinkler system in accordance with Section 903.3 and the resident rooms are located at the lowest level of exit discharge.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code, or shall comply with the *International Residential Code* provided an automatic sprinkler system is installed in accordance with Section 903.3. These facilities include but are not limited to the following:

Alcohol and drug centers

Assisted living facilities with residents capable of self preservation

Congregate care facilities

Convalescent facilities,

Group homes

Halfway houses

Initial stage Alzheimer's facilities

Residential board and custodial care facilities

Social rehabilitation facilities

Exception: Group homes licensed by the Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services or the Virginia Department of Social Services that house no more than eight persons with one or more resident counselors shall be classified as Group R-2, R-3, R-4 or R-5. Not more than five of the persons may require physical assistance from staff to respond to an emergency situation provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 and the resident rooms are located at the lowest level of exit discharge.

R-5. Residential occupancies in detached one- and two-family dwellings, townhouses and accessory structures within the scope of the *International Residential Code*, also referred to as the "IRC." This group includes assisted living facilities with residents capable of self preservation provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the International Residential Code and the resident rooms are located at the lowest level of exit discharge

310.2 Definitions. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

BOARDING HOUSE. A building arranged or used for lodging for compensation, with or without meals, and not occupied as a single-family unit.

CONGREGATE LIVING FACILITIES. A building or part thereof that contains sleeping units where residents share bathroom and/or kitchen facilities.

DORMITORY. A space in a building where group sleeping accommodations are provided in one room, or in a series of

closely associated rooms, for persons not members of the same family group, under joint occupancy and single management, as in college dormitories or fraternity houses.

GROUP HOME. A facility for social rehabilitation, substance abuse or mental health problems that contain a group housing arrangement that provides custodial care but does not provide acute care.

TRANSIENT. Occupancy of a *dwelling unit* or *sleeping unit* for not more than 30 days.

[F] 903.2.6 (IFC 903.2.6) Group I. An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

Exception: An automatic sprinkler system installed in accordance with Section 903.3.1.2 or 903.3.1.3 shall be allowed permitted in Group I-1 facilities.

[F] 903.2.8 (IFC 903.2.8) Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area.

An automatic sprinkler system installed in accordance with 903.3.1.3 shall be permitted in Group R-3 or R-4 congregate residences with 16 or fewer residents. An automatic sprinkler system installed in accordance with 903.3.1.3 shall be permitted in care facilities with 5 or fewer individuals a single family dwelling.

[F] 903.3.1.3 (IFC 903.3.1.3) NFPA 13D sprinkler systems. Automatic sprinkler systems installed in one and two-family *dwelling*s, Group R-3 and R-4 congregate residences and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D.

□

[F] 903.3.2 (IFC 903.3.2) Quick-response and residential sprinklers. Where automatic sprinkler systems are required by this code, quick-response or residential automatic sprinklers shall be installed in the following areas in accordance with Section 903.3.1 and their listings:

- 1 Throughout all spaces within a smoke compartment containing patient care recipient sleeping units in Group I-2 in accordance with this code.
- 2 Dwelling units, and sleeping units in Group R and I-1 occupancies.
- 3 Light-hazard occupancies as defined in NFPA 13.

[F] 907.2.6 (IFC 907.2.6) Group I. A manual fire alarm system that activates the occupant notification system shall be installed in Group I occupancies. An automatic smoke detection system that activates the occupant notification system shall be provided in accordance with Sections 907.2.6.1, 907.2.6.2 and 907.2.6.3.3.

Exceptions:

- 1 Manual fire alarm boxes in ~~resident or patient~~ sleeping units of Group I-1 and I-2 occupancies shall not be required at *exits* if located at all ~~nurses'~~ care providers' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.4.2 are not exceeded.
- 2 Occupant notification systems are not required to be activated where private mode signaling installed in accordance with NFPA 72 is *approved* by the fire code official.

[F] 907.2.6.2 (IFC 907.2.6.2) Group I-2. An automatic smoke detection system shall be installed in *corridors* in nursing homes, long term care facilities (~~both intermediate care and skilled nursing facilities~~), assisted living, detoxification facilities and spaces permitted to be open to the *corridors* by Section 407.2. The system shall be activated in accordance with Section 907.5. Hospitals shall be equipped with smoke detection as required in Section 407.

Exceptions:

- 1 *Corridor* smoke detection is not required in smoke compartments that contain ~~patient~~ sleeping units where such units are provided with smoke detectors that comply with UL 268. Such detectors shall provide a visual display on the *corridor* side of each ~~patient sleeping unit~~ and shall provide an audible and visual alarm at the care provider nursing station attending each unit. *Corridor* smoke detection is not required in smoke compartments that contain ~~patient sleeping units~~ where ~~patient sleeping unit~~ doors are equipped with automatic door-closing devices with integral smoke detectors on the unit sides installed in accordance with their listing, provided that the integral detectors perform the required alerting function.

Justification

The above proposed changes have been discussed and supported by the representatives of the Virginia Health Care Association, Virginia Association of Nonprofit Homes for the Aging, Department of Social Services, and Department of Health. The changes are to the 2009 ICC Building Code which I believe is the base document for this code cycle. Some of the changes are similar to the ICC Code Technology Committee proposed change G20 which was passed at the ICC code development hearings in Baltimore October 24-November 11, 2009. Several proposed changes were submitted regarding resident protection and care in Assisted Living Facilities and other care facilities. The changes submitted were to the 2009 ICC International Building for the update cycle to the 2012 ICC International Building Code. These particular proposed changes were heard by the General Committee on November 7 and included proposal G20. As indicated above, change G20 was the proposal by the ICC's Code Technology Committee (CTC) after several months and possibly years of studying the issue of "care" including reviews of federal regulations. Virginia was well represented on the CTC.

The 2009 ICC Building Code and the code changes proposed for the 2012 ICC Building Code require automatic sprinklers in all Use Group R, including the IRC, and Use Group I facilities with no exceptions. Also, neither edition allows residents incapable of self preservation in any Assisted Living Facilities (ALF) unless it is classified as a Use Group I-2. The CTC committee's work reflects the actual current reality of the thinking across the country regarding protection required for facilities providing care such as ALFs. Virginia has had a long history of lowering requirements of national model codes when addressing Assisted Living Facilities including allowing 8 residents in a single family dwelling, 5 of whom are not capable of self preservation and with no additional protection. While old BOCA interpretations supported allowing the 5 residents who are not capable of self preservation to be housed in other than an I-2 facility, current codes have changed the wording and do not support that interpretation. No model code has ever supported 8 residents requiring care in a single family dwelling with no protection. Virginia has consistently put these residents at risk.

These proposed code changes require protection that do fall well below those of the current national model codes but substantially increase protection above that which currently exists in the 2006 USBC. Protection for ALFs in the current 2006 USBC was also well below the 2006 ICC Building Code. The changes also are in response to the Board of Housing and Community Development's action to remove sprinkler requirements from the base document proposed in Virginia for the 2009 Code. The other changes in this proposal continue to allow 5 residents requiring assistance to evacuate but require sprinkler protection and limit resident rooms for those residents to the 1st floor.

Without any sprinkler protection, 5 residents who are not able to exit without assistance would not be able to exit. As a reminder 80%+ of fire deaths are in single family dwellings with a majority being the young and elderly. By removing the requirements vetted at the national level, we may send a wrong message to owners of these facilities that the safety of their staff and residents has been provided when in fact it has not based on current national model codes and those who develop those standards across the country. After decisions are made based on "all" facts, owners will have a better understanding of what the requirements are and what protection is in place.

Cost Impact: Will impact those facilities that Virginia has historically lessened requirements from the national model codes.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-308.2(a)**

Nature of Change:

To clarify that the term “convalescent facilities” as used in the classification provisions relate to Group I-2 facilities as opposed to Group I-1 facilities.

Proponent: Carrie Eddy, Virginia Department of Health and DHCD Staff

Staff Comments:

This proposal was tentatively approved at the Codes and Standards Committee meeting of December 14, 2009 unless public comment is received during the Compilation Document comment period.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION
Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-308.2(a)

Proponent Information

Name: Carrie Eddy, VDH
Emory Rodgers, DHCD

(Check one): Individual Government Entity Company
Representing: Workgroup 2 - 12/1/09

Mailing Address: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): USBC VCC 308.2 Group I-1 & VCC 308.3 Group I-2 & VCC 310.2 Definitions relative to convalescent facilities

Proposed Change (including all relevant section numbers, if multiple sections):

308.2 Group I-1. Delete "convalescent facilities"

308.3 Group I-2. Add "convalescent facilities"

310.2 Definitions.

RESIDENTIAL CARE/ASSISTED LIVING FACILITIES. A building or part thereof housing persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This classification shall include, but not be limited to, the following: residential board and care facilities, assisted living facilities, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, and alcohol and drug abuse centers and convalescent facilities.

Supporting Statement (including intent, need, and impact of the proposal):

Section 32.1-123 of the Code of Virginia defines nursing home (facility) to include such facilities known as, or called, 'convalescent facilities'. This regulatory change assures the USBC comports with state law and is consistent with the Virginia Department of Health licensure program.

Submittal Information

Date Submitted: 11/24/09

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-308.2(b)**

Nature of Change:

To maintain the 2006 and previous USBC requirements permitting up to five occupants of care facilities to need assistance in exiting.

Proponent: DHCD Staff

Staff Comments:

Due to a change in the Group I-2 requirements in the 2009 IBC, the long-standing allowance in the USBC for up to five residents of assisted living facilities and group homes in both small facilities with up to eight occupants classified as Group R-5 and in larger facilities classified as Group R-4 to need assistance in exiting is brought into question. The 2009 IBC requirements lowered the overall threshold for Group I-2 from facilities with more than five occupants to facilities with one or more occupants. However, the IBC definition of “nursing home” and its classification of “residential care/assisted living facilities” still applies to only facilities with five or more occupants. The proposed regulations kept the exception for group homes and small assisted living facilities to permit up to five of the residents to need assistance in exiting. As this requirement is a state amendment to the IBC, under Section 101.6, it would supersede any conflicting requirements of the IBC. However, for larger facilities, it has been established based on an interpretation issued under the current language, that up to five residents may need assistance in exiting. With the change in the IBC, that interpretation is in question. This proposal would eliminate the need for the interpretation while maintaining the status quo.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: c-308.2(b)

Proponent Information (Check one): Individual Government Entity Company

Name: Emory Rodgers, DHCD Representing: _____

Mailing Address: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): USBC VCC 308.2, 308.3 and 310.1

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 308.2 as shown below:

308.2 Group I-1. This occupancy shall include buildings, structures or parts thereof housing more than 16 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment that provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following:

- Residential board and care facilities
- Assisted living facilities
- Halfway houses
- Group homes
- Congregate care facilities
- Social rehabilitation facilities
- Alcohol and drug centers
- Convalescent facilities

Exception: In Group I-1 occupancies, not more than five of the persons may require physical assistance from staff to respond to an emergency situation.

A facility such as the above with five or fewer persons shall be classified as a Group R-3 or shall comply with the International Residential Code in accordance with Section 101.2. A facility such as above, housing at least six and not more than 16 persons, shall be classified as Group R-4.

Change the definition of "Nursing Homes" in Section 308.3 as shown below:

Nursing Homes. Nursing homes are long-term care facilities on a 24-hour basis, including both intermediate care facilities and skilled nursing facilities, serving more than five persons and any of the persons are incapable of self-preservation. Nursing homes do not include facilities permitted by other provisions of this code to have up to five occupants that may require physical assistance from staff to respond to an emergency situation.

Change the Group R-4 requirements in Section 310.1 as shown below:

R-4 Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff.

Group R-4 occupancies shall meet that requirements for construction as defined for Group R-3, except as otherwise provided for in this code, or shall comply with the International Residential Code with the additional requirement to provide an automatic sprinkler system in accordance with Section 903.2.7.

~~Exception~~ Exceptions :

1. In Group R-4 occupancies, not more than five of the persons may require physical assistance from staff to respond to an emergency situation.
2. Group homes licensed by the Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services or the Virginia Department of Social Services that house no more than eight persons with one or more resident counselors shall be classified as Group R-2, R-3, R-4 or R-5. Not more than five of the persons may require physical assistance from staff to respond to an emergency situation.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal retains the current allowance for Group R-4 and I-1 occupancies and residential licensed group homes and assisted living facilities with up to eight persons to be able to have up to five persons needing physical assistance from staff to respond to an emergency situation. The change to the "Nursing Homes" definition in the 2009 IBC making any facility containing even one occupant who needed assistance in exiting to be a nursing home created the conflict with the long-standing requirement that up to five residents could need assistance, which was based on an official interpretation from the BOCA model code organization prior to the merger with the International Code Council. The Board of Housing and Community Development changed the 2000 edition of the USBC to recognize the BOCA Interpretation based on a recommendation from the State Building Code Technical Review Board as a result of the Avalon Homes appeal case, which addressed the issue of whether five of the eight occupants of that home could require assistance in exiting. The Virginia Department of Social Services and the Virginia Health Care Association representatives have indicated that a change to this long-standing allowance to be able to have up to five residents who need assistance in any facility, even if only for new construction and change of occupancy in existing buildings, would cause confusion and inconsistency in the administration of assisted living facilities.

Submittal Information

Date Submitted: 11/24/2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-308.3.1**

Nature of Change:

To establish separate requirements for hospice facilities.

Proponent: Ron Clements, Chesterfield County Building Department, representing the Assisted Living Facility Client Interest Group

Staff Comments:

The proposal resulted from discussion in the assisted living facility sub-workgroup meetings with representatives of the Virginia Department of Health, the licensing entity for hospice facilities. Hospice facilities range in size from caring for only one person at a time (typically home hospice) to multiple persons. The Health Department representatives believe that any building used as a hospice facility should at a minimum have a sprinkler system as the person receiving care will at times be incapacitated. The proposal would permit facilities with up to five occupants to be in a single family home, but would require the home to be sprinklered. Facilities with more than five occupants up to 16 occupants would be classified as Group R-4 (assisted living/residential care) and larger facilities would be classified as Group I-2. As noted in the staff comments to Code Change No. C-308.1, this proposal would also be difficult to implement as small hospice facilities with up to five occupants would be classified as Group R-5, yet with a sprinkler requirement. However, it would not be considered a change of occupancy to use an existing single family dwelling for a hospice facility, so there would be no way to require the sprinklers to be added. In addition, in facilities with up to 16 occupants (Group R-4), all occupants could be incapacitated, yet Group R-4 is only for occupants who may evacuate without assistance. The current USBC and proposed 2009 USBC would permit facilities with up to five occupants to be in a single family dwelling and facilities with more than five occupants would be classified as Group I-2.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-308.3.1

Proponent Information

(Check one): Individual Government Entity Company

Name: Ron Clements

Representing: ALF client interest group

Mailing Address: 9800 Government Center Parkway

Email Address: clementsro@chesterfield.gov

Telephone Number: (804) 751-4163

Proposal Information

Code(s) and Section(s): IBC sections: 202, 310.2, 308.3, 310.1

Proposed Change (including all relevant section numbers, if multiple sections):

Add the following definition:

202

Hospice facility. See section 308.3.1

308.3.1 Definitions

Hospice facility. An institution, place, or building owned or operated by a hospice provider and licensed by the Virginia Department of Health as a hospice facility to provide room, board, and palliative and supportive medical and other health services to terminally ill patients and their families, including respite and symptom management, on a 24-hour basis to individuals requiring such care pursuant to the orders of a physician.

Revised section 308.3 as follows:

308.3 Group I-2. This occupancy shall include buildings shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care for persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

- Child care facilities
- Detoxifications facilities
- Hospitals
- Mental Hospitals
- Nursing homes
- Hospice facilities

Exception: Hospice facilities occupied by 16 or less occupants, excluding staff, are permitted to be classified as Group R-4.

Revised section 310.1 as follows:

R-4 Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff, and hospice facilities for one to 16 occupants, excluding staff.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code, ~~or shall comply with the International Residential Code provided the building is protected by an automatic sprinkler system in accordance with Section 903.2.7.~~

Exceptions:

1. Residential care/assisted living facilities are permitted to comply with the International Residential Code provided the building is protected by an automatic sprinkler system in accordance with IRC section P2904 or IBC Section 903.3.

2. Hospice facilities for 5 or fewer occupants, excluding staff, are permitted to comply with the International Residential Code provided the building is protected by an automatic sprinkler system in accordance with IRC section P2904 or IBC Section 903.3.

3. Group homes licensed by the Virginia Department of Behavioral Health and Developmental Services ~~Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services~~ or assisted living facilities licensed by the Virginia Department of Social Services that house no more than eight persons with one or more resident counselors shall be classified as Group R-2, R-3, R-4 or R-5. Not more than five of the persons may require physical assistance from staff to respond to an emergency situation.

Supporting Statement (including intent, need, and impact of the proposal):

This code change attempts to address reasonable occupancy classifications of small hospice care facilities. The definition of Hospice Facility is based on the Code of VA definition. Under 2009 code provisions a hospice would be classified as group I-2. Group I-2 would be prohibitive to retro-fit existing buildings, especially type 5B dwellings, into to achieve code compliance. Based on the low occupant loads of these structures and the need to allow type 5B combustible construction, group R-4 is the best fit for an occupancy classification. This change does not permit the allowance to use the R-5 designation as an alternative to group R-4 for Hospice Facilities if the number of residents is over 5 because doing so would loose the NFPA 72 based fire alarm system that is required for group R-4 per section 907.2.10 and allow a 13D sprinkler system. To maintain as much safety as possible the group R-4 classification will require an NFPA 13 or 13R sprinkler system, an NFPA 72 fire alarm system and height and area limits per table 503. This is also fairly consistent with state licensure requirements. Less than 5 residents is still allowed as group R-2, R-3 or R-5 to allow in home hospice provide the building is sprinklered in accordance with the single family dwelling sprinkler standards in NFPA 13 or the IRC Plumbing code provisions for residential sprinkler installations. Over 16 occupants would be a full group I-2 occupancy.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-310.6(R302.1(6))**

Nature of Change:

To permit exterior walls of new houses closer than five feet from a property line to be or normal construction as opposed to having to have a fire-resistance rating due to zoning, land use or deed restrictions which will prevent another dwelling on an adjacent lot from being too close.

Proponent: Chris Snidow, representing the Henrico County Building Department

Staff Comments:

While the proponent states that the purpose of the proposal is to lessen the paperwork necessary when modifications under the USBC have to be issued for every house in a subdivision when proffered conditions exist which would prevent houses on adjacent lots from being close enough together to cause a fire hazard, the model codes (the IBC and IRC in particular) have historically used the distance to the lot line to establish when exterior walls must have a fire-resistance rating. The reason for the historical use of the lot line is that zoning restrictions, proffers and even deed restrictions may change over time, but lot lines are typically more permanent. This proposal was not received in time to be vetted through the workgroup process.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-310.6(R302.1(6))

Proponent Information

(Check one): Individual Government Entity Company

Name: L. Christian Snidow, P. E.

Representing: Henrico County Building Inspections Dept.,
Plan Review Office

Mailing Address: P O Box 90775 Henrico, VA 23273-0775

Email Address: sni@co.henrico.va.us

Telephone Number: 804-501-4363

Proposal Information

Code(s) and Section(s): Virginia Residential Code (IRC) R302.1, add new exception #6

Proposed Change (including all relevant section numbers, if multiple sections):

R302.1 Exterior walls. Construction, projections, openings and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1.

Exceptions:

1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the fire separation distance.
2. Walls of dwellings and accessory structures located on the same lot.
3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the lot line.
4. Detached garages accessory to a dwelling located within 2 feet (610 mm) of a lot line are permitted to have roof eave projections not exceeding 4 inches (102 mm).
5. Foundation vents installed in compliance with this code are permitted.
6. **A fire resistance rating for exterior walls shall not be required where local ordinances, land use regulations or deed restrictions require such exterior walls or accessory structures to be separated for a distance of not less than 10 feet.**

Supporting Statement (including intent, need, and impact of the proposal):

A number of localities in the Commonwealth have adopted zoning or subdivision ordinances or accept proffered conditions that incorporate the concept of "zero lot line" development. Using the "zero lot line" concept, the usual minimum side-yard set-back (typically required by local zoning ordinances and measured from the property line) is waived and in its place a minimum distance between dwellings is established.

Typically, the exterior wall of one dwelling is permitted to be located on or near the property line and the side wall of the dwelling on the adjoining lot is required to be a specified minimum distance away. The resulting minimum separation distances may be any distance acceptable to the locality however, 15 to 20 feet between dwellings with a dedicated maintenance easement are fairly typical. However, this condition creates a code compliance issue in that R302.1 requires the exterior wall of the dwelling located at the property line to be fire-resistance rated and openings, overhangs and penetrations limited. This is in spite of the fact that the applicable "zero lot line" rules may not permit a dwelling on the adjoining lot to be any closer than

would normally occur if the separation distances of Table R302.1 were applied to both buildings. To accommodate this concept, many localities now issue modifications to allow the wall at the property line to be unrated. This approach requires additional work on the part of the applicant and building department to process and record the modifications for an entire development. The records of such modifications are required to be permanently maintained by the local building department.

This amendment would provide an exception to cover this condition without the need for issuing code modifications. Exterior walls would be permitted to be constructed without a fire-resistance rating if the distance between dwellings is not less than 10 feet—the same distance that would result from constructing unrated dwelling walls 5 feet from each side of a property line as required by R302.1—and is enforceable through local land use regulations or deed restrictions.

Submittal Information

Date Submitted: AUGUST 25, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-310.6(R311.6.1)**

Nature of Change:

To add an exception to the IRC for ramps for residential accessory structures.

Proponent: Chris Snidow, representing the Henrico County Building Department

Staff Comments:

The proponent states that the ramp provisions may be applied to ramps to residential accessory structures constructed under the IRC. However, Section R311.1, which is the Means of Egress section in the IRC and which contains the provisions for ramps, clearly states that only dwellings must be provided with a means of egress complying with the section. This proposal was not received in time to be vetted through the workgroup process; however staff did inform the proponent of the fact that the ramp provisions only apply to dwellings and not to residential accessory buildings because of the language in Section R311.1.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-310.6 (R311.6.1)

Proponent Information

(Check one): Individual Government Entity Company

Name: L. Christian Snidow, P. E.

Representing: Henrico County Building Inspections Dept.,
Plan Review Office

Mailing Address: P O Box 90775 Henrico, VA 23273-0775

Email Address: sni@co.henrico.va.us

Telephone Number: 804-501-4363

Proposal Information

Code(s) and Section(s): Virginia New Construction Code (IRC) R311.6.1 add new exception

Proposed Change (including all relevant section numbers, if multiple sections):

R311.6.1 Maximum slope.

Ramps shall have a maximum slope of one unit vertical in twelve units horizontal (8.3-percent slope).

Exceptions: 1. Where it is technically infeasible to comply because of site constraints, ramps may have a maximum slope of one unit vertical in eight horizontal (12.5 percent slope).

2. Ramps constructed for access to accessory storage buildings.

Supporting Statement (including intent, need, and impact of the proposal):

The current code language makes no distinction between ramps that may be constructed for access/egress from the main dwelling and a ramp that may be constructed at an accessory storage building to facilitate moving items such as lawn equipment or other wheeled items in or out. Ramps built for such utility functions should be excluded from the same requirements as ramps constructed for the dwelling because neither handicapped accessibility nor emergency egress are typically issues in their normal use.

It may seem commonsensical to not apply the maximum slope requirement to a lawn mower ramp built at a back yard storage shed but, as the code is written, they are not exempt.

built
Submittal Information

Date Submitted: AUGUST 25, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-310.6(R314.2)**

Nature of Change:

To remove owner and monitoring requirements from the household fire warning system option for smoke detection in the 2009 IRC.

Proponent: Mike Toalson, Home Builders Association of Virginia

Staff Comments:

This proposal was tentatively approved at the Codes and Standards Committee meeting of December 14, 2009 unless public comment is received during the Compilation Document comment period.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-310.6 (R314.2)

Proponent Information

(Check one): Individual Government Entity Company

Name: Mike Toalson

Representing: HBAV

Mailing Address: _____

Email Address: _____

Telephone Number: _____

Proposal Information

Code(s) and Section(s): **IRC 314.2 - Smoke detection systems.**

R314.3.1 - Delete

Proposed Change (including all relevant section numbers, if multiple sections):

Amend to delete 314.2 second new sentence: where a household fire warning system is installed using a combination of smoke detectors and available notification device(s), the system shall become a permanent fixture of the dwelling unit, and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72.

Delete 314.3.1 entirely.

Supporting Statement (including intent, need, and impact of the proposal):

The IRC doesn't require smoke detection systems to be monitored. The IRC does allow fire security systems to be used. These non-required systems can be removed, but R314.2 already clearly states that the primary code required smoke detection system shall be operable regardless of whether the owner wants them to be maintained as part of a fire security alarm system. This new second sentence is thus unnecessary and goes beyond the intent of the IRC and USBC by stating the system is to be permanent, and must be used by the homeowner and monitored.

Delete R314.3.1 as this section is a retrofit requirement.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-310.6(R315.2)**

Nature of Change:

To delete a retrofit requirement for carbon monoxide alarms in the 2009 IRC.

Proponent: Guy Tomberlin, Fairfax County Building Department, representing VPMIA and VBCOA's Plumbing/Mechanical/Fuel Gas Committees

Staff Comments:

This proposal was tentatively approved at the Codes and Standards Committee meeting of December 14, 2009 unless public comment is received during the Compilation Document comment period.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-310.6 (R315.2)

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: VA Plumbing and Mechanical Inspectors
Association and VA Building and Code Officials Association
Plumbing/Mechanical/Fuel Gas Committees

Mailing Address: 12055 Government Center Parkway, Suite 630
Fairfax, VA 22035

Email Address: guy.tomberlin@fairfaxcounty.gov

Telephone Number: 703-324-1611

Proposal Information Clarify Carbon Monoxide requirements

Code(s) and Section(s): IRC R315.2 Where required in existing dwellings.

Proposed Change (including all relevant section numbers, if multiple sections):

Delete Section R315.2 in its entirety.

Note to staff- renumber R315.3 to R315.2.

Supporting Statement (including intent, need, and impact of the proposal): The submitting code committees viewed this as a retroactive action and felt the USBC should not endorse this type activity. It would be extremely difficult to enforce and may even cause folks to not obtain permits. For example if someone wanted to build a deck and they happen to have an attached garage they would need to equip the dwelling unit with CO alarms, that's just not reasonable.

Submittal Information

Date Submitted: July 2, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-310.6(R315.3)**

Nature of Change:

To clarify that the 2009 IRC provisions and standards for carbon monoxide alarms permit either battery-powered, plug-in or hard-wired detectors.

Proponent: Guy Tomberlin, Fairfax County Building Department, representing VPMIA and VBCOA's Plumbing/Mechanical/Fuel Gas Committees

Staff Comments:

This proposal was tentatively approved at the Codes and Standards Committee meeting of December 14, 2009 unless public comment is received during the Compilation Document comment period.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C - 316.6(R 315.3)

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: VA Plumbing and Mechanical Inspectors
Association and VA Building and Code Officials Association
Plumbing/Mechanical/Fuel Gas Committees

Mailing Address: 12055 Government Center Parkway, Suite 630
Fairfax, VA 22035

Email Address: guy.tomberlin@fairfaxcounty.gov

Telephone Number: 703-324-1611

Proposal Information Clarify Carbon Monoxide requirements

Code(s) and Section(s): IRC R315.3 Alarms requirements..

Proposed Change (including all relevant section numbers, if multiple sections):

R315.3 Alarms requirements. Single station carbon monoxide alarms shall be hard wired, plug-in or battery type, listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

Supporting Statement (including intent, need, and impact of the proposal): The submitting code committees felt that this section needed further clarity to provide the user the information that clearly reflects the information contained in the UL Standard 2034 which includes the 3 different type s of CO alarms the added text references.

Submittal Information

Date Submitted: July 2, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-310.6(R401.3)**

Nature of Change:

To add clarifying language to the 2009 IRC for the foundation drainage requirements to apply to only situations which may affect the dwelling unit.

Proponent: Douglas S. Jones, Keystone Builders

Staff Comments:

This proposal was tentatively approved at the Codes and Standards Committee meeting of December 14, 2009 unless public comment is received during the Compilation Document comment period.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-310.6(R408.3.1)**

Nature of Change:

To add an termite inspection gap to the 2009 IRC for unvented crawl spaces.

Proponent: Lynn Underwood, City of Norfolk Building Department, representing himself

Staff Comments:

This proposal was tentatively approved at the Codes and Standards Committee meeting of December 14, 2009 unless public comment is received during the Compilation Document comment period.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

DEPT. OF HOUSING AND COMMUNITY DEVELOPMENT REGULATORY CHANGE FORM

(Use this form to submit changes to building and fire codes)

<p>Address to submit to:</p> <p>DHCD, the Jackson Center 501 North Second Street Richmond, VA 23219-1321</p> <p>Tel. No. (804) 371 – 7150 Fax No. (804) 371 – 7092 Email: bhcd@dhcd.state.va.us</p>		<p>Document No. <u>C-310.6 (R408.3.1)</u></p> <p>Committee Action: _____</p> <p>BHCD Action: _____</p>
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Submitted by: ___Lynn Underwood, CBO_____ Representing: ___himself_____

Address: _400 Granby, Norfolk, Va 23510_____ Phone No.: (757) 664-6511_____

Regulation Title: _Unvented crawl space_____ Section No(s): Section R408.3_____

Proposed Change:
R408.3 Unvented crawl space. Ventilation openings in under-floor spaces specified in Sections R408.1 and R408.2 shall not be required where:

1. Exposed earth is covered with a continuous Class I vapor retarder. Joints of the vapor retarder shall overlap by 6 inches (152 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend at least 6 inches (152 mm) up the stem wall and shall be attached and sealed to the stem wall; and
2. One of the following is provided for the under-floor space:
 - 2.1. Continuously operated mechanical exhaust ventilation at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7m²) of crawlspace floor area, including an air pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with Section N1102.2.9;
 - 2.2. *Conditioned air* supply sized to deliver at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m²) of under-floor area, including a return air pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with Section N1102.2.9;
 - 2.3. Plenum in existing structures complying with Section M1601.5, if under-floor space is used as a plenum.

R408.3.1 Termite Inspection
Where an unvented crawl space is installed and meets the criteria in Section R408, the vertical face of the sill plate shall be clear and unobstructed and an inspection gap shall be provided below the sill plate along the top of any interior foundation wall covering. The gap shall be a minimum of one inch and a maximum of two inches in width and shall extend throughout all parts of any foundation that is enclosed. Joints between the sill plate and the top of any interior wall covering may be sealed.

EXCEPTION:

- (1) In areas not subject to damage by termites as indicated by Table R301.2(1).
- (2) Where other approved means are provided to inspect for potential damage.

Where pier and curtain foundations are installed as depicted in Figure R404.1.5(1), the inside face of the rim joist and sill plate shall be clear and unobstructed except for construction joints which may be sealed.

EXCEPTION: Fiberglass or similar insulation may be installed if easily removable.

Supporting Statement:

This proposed change in the 2009 IRC would allow Termite Inspection and Treatment services to more adequately do their job. Without this language, a fully enclosed crawl space would meet the code and yet conceal undetected termite infestation. This change does not reduce the energy efficiency provided for by enclosed and conditioned crawl spaces. There is a detail provided by expert in the

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-310.6(R602.10)**

Nature of Change:

A rewrite of the International Residential Code provisions for wall bracing.

Proponent: Chuck Bajnai and Brian Foley, representing the Chesterfield and Fairfax County Building Departments

Staff Comments:

In the continuation of the development of the wall bracing requirements for the 2006 USBC, this proposal coordinates the work of a code development committee at ICC and proposals approved in the ICC code development process for the 2012 IRC. Due to the nature of the changes, the current wall bracing provisions in the USBC would be deleted and this proposal substituted in its place. As the proposal represents much of what will be in the 2012 IRC, the state amendments would be able to be deleted in the next code change cycle used by the Department for the 2012 codes.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-310.6(R602.10)

Proponent Information

(Check one): Individual Government Entity Company

Name: Chuck Bajnai

Representing: Chesterfield County

Mailing Address: 9800 Government Center Parkway Chesterfield, VA 23832

Email Address: bajnaic@chesterfield.gov

Telephone Number: 804-717-6428

Name: Brian Foley

Representing: Fairfax County

Mailing Address: 12055 Government Center Parkway Fairfax, VA 22035

Email Address: brian.foley@fairfaxcounty.gov

Telephone Number: 703-324-1842

Proposal Information

Code, Sections: IRC Table R602.3(1), new Section R602.3.5, Table R802.11, Section R602.10 and new Section R602.12

1. Edit Section R301.2.2.1.1 as follows:

R301.2.1.1.1 Alternate determination of seismic design category. The Seismic Design Categories and corresponding Short Period Design Spectral Response Accelerations, S_{DS} shown in figure R301.2(2) are based on soil Site Class D, as defined in Section 1613.5.2 of the *International Building Code*. If soil conditions are other than Site Class D, the Short Period Spectral Response Accelerations, S_{DS} , for a site can be determined according to Section 1613 of the *International Building Code*. The value of S_{DS} , determined according to Section 1613 of the *International Building Code* is permitted to be used to set the seismic design category according to Table R301.2.2.1.1, and to interpolate between values in Tables R601.10.3(3)4, R603.7 and other seismic design requirements of this code.

2. Delete Sections R301.2.2.3 and R301.2.2.4.

3. Edit Section R301.3, Item 1, Exception as follows:

Exception: For wood framed wall buildings with bracing in accordance with Section R602.10 Tables R602.10.1.2(1) and R602.10.1.2(2), the wall stud clear height used to determine the maximum permitted story height may be increased to 12 feet (3658 mm) without requiring an engineered design for the building wind and seismic force resisting system provided that the length of bracing required by Table R602.10.1.2(1) is increased by multiplying a factor of 1.10 and the length of bracing required by Table R602.10.1.2(2) is increased by multiplying by a factor of 1.20. Wall studs are still subject to the requirements of this section.

4. Edit Section R403.1.6 exceptions 2 and 3 as follows:

2. Walls 24 inches (610 mm) total length or shorter connecting offset braced wall panels shall be anchored to the foundation with a minimum of one anchor bolt located in the center third of the plate section and shall be attached to adjacent braced wall panels at corners as shown in Figure R602.10.4.4(1).

3. Connection of walls 12 inches (305 mm) total length or shorter connecting offset braced wall panels to the foundation without anchor bolts shall be permitted. The wall shall be attached to the adjacent braced wall panels at corners as shown in Figure R702.10.4.4(1).

5. Delete Section R403.1.6.1, Item 5, renumber subsequent items.

6. Edit Section R502.2.1 as follows:

R502.2.1 Framing at braced wall panels lines. A load path for lateral forces shall be provided between floor framing and braced wall panels located above or below a floor, as specified in Sections R602.3.5 and R602.10.86.

7. Revise Table R602.3(1) as follows:

**TABLE R602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS**

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER ^{a,b,c}	SPACING OF FASTENERS
Roof			
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2 1/2" x 0.113")	--
2	Ceiling joists to plate, toe nail	3-8d (2 1/2" x 0.113")	--
3	Ceiling joist not attached to parallel rafter, laps over partitions, face nail	3-10d	--
4	Collar tie to rafter, face nail, or 1-1/4" x 20 gage ridge strap	3-10d (3" x 0.128")	--
5	Rafter to plate, toe nail	2-16d (3 1/2" x 0.135")	--
6	Roof rafters to ridge, valley or hip rafters: toe nail face nail	4-16d (3 1/2" x 0.135") 3-16d (3 1/2" x 0.135")	-- --
Wall			
7	Built-up corner studs -face nail	10d (3" x 0.128")	24" o.c.
8	Abutting studs at intersecting wall corners, face nail	16d (3 1/2" x 0.135")	12"oc
89	Built-up header, two pieces with 1/2" spacer	16d (3 1/2" x 0.135")	16" o.c. along each edge
910	Continued header, two pieces	16d (3 1/2" x 0.135")	16" o.c. along each edge
1011	Continuous header to stud, toe nail	4-8d (2 1/2" x 0.113")	-
1112	Double studs, face nail	10d (3" x 0.128")	24" o.c.
1213	Double top plates, face nail	10d (3" x 0.128")	24" o.c.
1314	Double top plates, minimum 4#24-inch offset of end joints, face nail in lapped area	8-16d (3 1/2" x 0.135")	-
1415	Sole plate to joist or blocking, face nail	16d (3 1/2" x 0.135")	16" o.c.
1516	Sole plate to joist or blocking at braced wall panels	3-16d (3 1/2" x 0.135")	16" o.c.
1617	Stud to sole plate, toe nail	3-8d (2 1/2" x 0.113") or 2-16d (3 1/2" x 0.135")	-
1718	Top or sole plate to stud, end nail	2-16d (3 1/2" x 0.135")	-
1819	Top plates, laps at corners and intersections, face nail	2-10d (3" x 0.128")	-
1920	1" brace to each stud and plate, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 1/4"	-
2021	1" x 6" sheathing to each bearing, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 1/4"	-
2122	1" x 8" sheathing to each bearing, face nail	2-8d (2 1/2" x 0.113") 3 staples 1 1/4"	-
2223	Wider than 1" x 8" sheathing to each bearing, face nail	3-8d (2 1/2" x 0.113") 4 staples 1 1/4"	-
Floor			
2324	Joist to sill or girder, toe nail	3-8d (2 1/2" x 0.113")	-
2625	Rim joist to top plate, toe nail (roof applications also)	8d (2 1/2" x 0.113")	6" o.c.
26	Rim joist or blocking to sill plate, toe nail	8d (2 1/2" x 0.113")	6" o.c.
2427	1" x 6" subfloor or less to each joist, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 1/4"	-
2528	2" subfloor to joist or girder, blind and face nail	2-16d (3 1/2" x 0.135")	-
2729	2" planks (plank & beam - floor & roof)	2-16d (3 1/2" x 0.135")	at each bearing
2830	Built up girders and beams, 2-inch lumber layers	10d (3" x 0.128")	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.
2931	Ledger strip supporting joists or rafters	3-16d (3 1/2" x 0.135")	At each joist or rafter

(Remainder of table unchanged except item numbers)

8. New Section R602.3.5 as follows:

R602.3.5 Braced wall panel uplift load path. Braced wall panels located at exterior walls that support roof rafters or trusses (including stories below top story) shall have the framing members connected in accordance with one of the following:

1. Fastening in accordance with Table R602.3(1) where:
 - 1.1. The basic wind speed does not exceed 90 mph (40 m/s), the wind exposure category is B, the roof pitch is 5:12 or greater, and the roof span is 32 feet (9754 mm) or less, or
 - 1.2. The net uplift value at the top of a wall does not exceed 100 plf (146 N/mm). The net uplift value shall be determined in accordance with Section R802.11 and shall be permitted to be reduced by 60 plf (57 N/mm) for each full wall above.
2. Where the net uplift value at the top of a wall exceeds 100 plf (146 N/mm), installing approved uplift framing connectors to provide a continuous load path from the top of the wall to the foundation or to a point where the uplift force is 100 plf (146 N/mm) or less. The net uplift value shall be as determined in Item 1.2 above.
3. Wall sheathing and fasteners designed in accordance with accepted engineering practice to resist combined uplift and shear forces.

9. Edit Section R602.9 as follows:

R602.9 Cripple walls. Foundation cripple walls shall be framed of studs not smaller than the studding above. When exceeding 4 feet (1219 mm) in height, such walls shall be framed of studs having the size required for an additional story.

Cripple walls with a stud height less than 14 inches (356 mm) shall be continuously sheathed on ~~at least one~~ side with ~~a~~ wood structural panels ~~that is~~ fastened to both the top and bottom plates in accordance with Table R602.3(1), or the cripple walls shall be constructed of solid blocking.

All cripple walls shall be supported on continuous foundations.

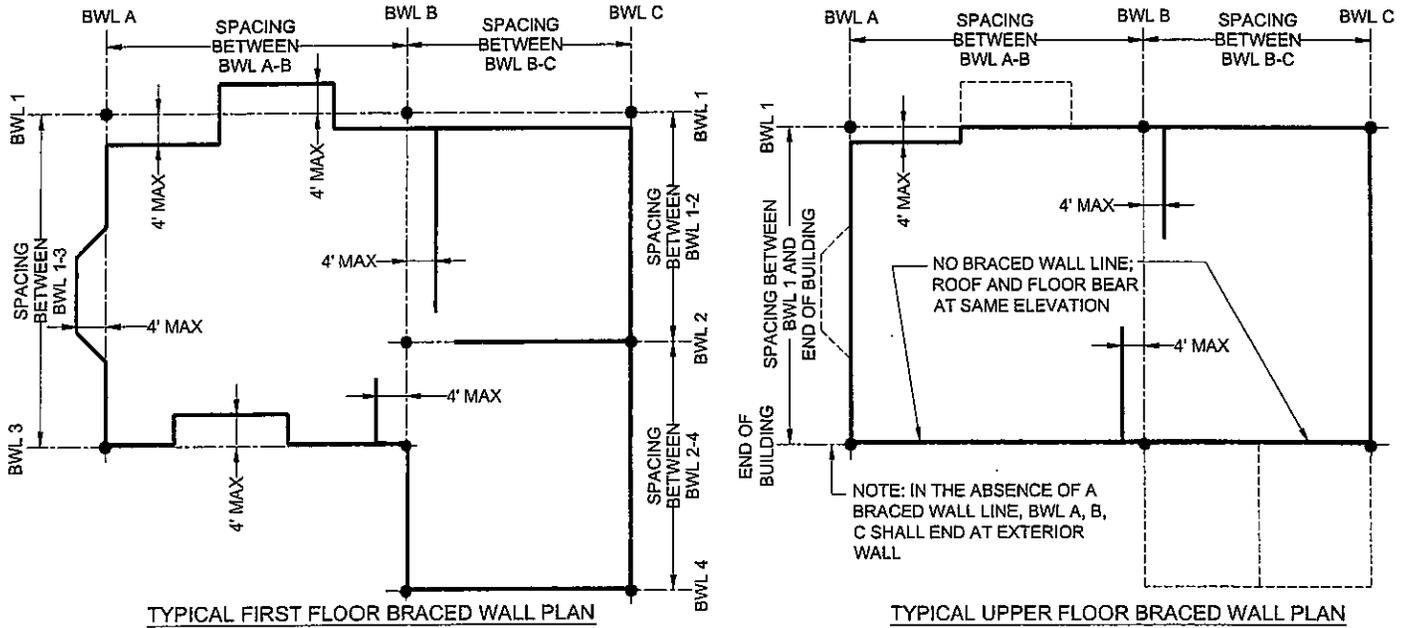
10. Delete Section R602.10 and replace with the following:

R602.10 Wall bracing. Buildings shall be braced in accordance with this section, or, when applicable, Section R602.12. Where a building, or portion thereof, does not comply with one or more of the bracing requirements in this section, those portions shall be designed and constructed in accordance with Section R301.1.

The building official may require the permit applicant to identify and locate on the construction documents braced wall lines and braced wall panels as described herein.

R602.10.1 Braced wall lines. For the purpose of determining the amount and location of bracing required in each story level of a building, braced wall lines shall be designated as straight lines in the building plan placed in accordance with this section.

R602.10.1.1 Length of a braced wall line. The length of a braced wall line shall be the distance between its ends. The end of a braced wall line shall be the intersection with a perpendicular braced wall line, an angled braced wall line as permitted in Section R602.10.1.4 or an exterior wall as shown in Figure R602.10.1.1.



For SI: 1 foot=304.8mm

**FIGURE R602.10.1.1
BRACED WALL LINES**

R602.10.1.2 Offsets along a braced wall line. All exterior walls parallel to a braced wall line shall be permitted to offset up to 4 feet (1219 mm) from the designated braced wall line location as shown Figure R602.10.1.1. Interior walls used as bracing shall be permitted to offset up to 4 feet (1219 mm) from a braced wall line through the interior of the building as shown in Figure R602.10.1.1.

R602.10.1.3 Spacing of braced wall lines. There shall be a minimum of two braced wall lines in both the longitudinal and transverse direction as shown in Figure R602.10.1.1. Intermediate braced wall lines through the interior of the building shall be permitted. The spacing between parallel braced wall lines shall be in accordance with Table R602.10.1.3.

**TABLE R602.10.1.3
BRACED WALL LINE SPACING**

APPLICATION	CONDITION	BUILDING TYPE	BRACED WALL LINE SPACING CRITERIA	
			Maximum Spacing	Exception to Maximum Spacing
Wind bracing	85 mph to <110 mph	Detached, townhouse	60 feet	None
Seismic bracing	SDC A - C	Detached	Use wind bracing	
	SDC A - B	Townhouse	Use wind bracing	
	SDC C	Townhouse	35 feet	Up to 50 feet when length of required bracing per Table R602.10.3(3) is adjusted in accordance with Table R602.10.3(4)

For SI: 1 foot = 304.8 mm

R602.10.1.4 Angled walls. Any portion of a wall along a braced wall line shall be permitted to angle out of plane for a maximum diagonal length of 8 feet (2438 mm). Where the angled wall occurs at a corner, the length of the braced wall line shall be measured from the projected corner as shown in Figure R602.10.1.4. Where the diagonal length is greater than 8 feet (2438 mm), it shall be considered a separate braced wall line and shall be braced in accordance with Section R602.10.1.

**FIGURE R602.10.2.2
LOCATION OF BRACED WALL PANELS**

R602.10.2.3 Minimum number of braced wall panels. Braced wall lines with a length of 16 feet (4877 mm) or less shall have a minimum of two braced wall panels of any length or one braced wall panel equal to 48 inches (1219 mm) or more. Braced wall lines greater than 16 feet (4877 mm) shall have a minimum of two braced wall panels.

R602.10.3 Required length of bracing. The required length of bracing along each braced wall line shall be determined as follows.

1. All buildings in Seismic Design Categories A and B shall use Table R602.10.3(1) and the applicable adjustment factors in Table R602.10.3(2).
2. Detached buildings in Seismic Design Category C shall use Table R602.10.3(1) and the applicable adjustment factors in Table R602.10.3(2).
3. Townhouses in Seismic Design Category C shall use the greater value determined from Table R602.10.3(1) or R602.10.3(3) and the applicable adjustment factors in Table R602.10.3(2) or R602.10.3(4) respectively.

Only braced wall panels parallel to the braced wall line within the 4 foot (1219 mm) offset permitted by Section R602.10.1.2 shall contribute towards the required length of bracing of that braced wall line. If a braced wall panel is located along an angled wall and meets the minimum length requirements of Tables R602.10.5 or R602.10.5.2, it shall be permitted to contribute its projected length towards the minimum required length of bracing for the braced wall line as shown in Figure R602.10.1.4. If a braced wall panel is located along an angled wall at the end of a braced wall line, it shall contribute its projected length for only one of the braced wall lines at the projected corner.

**TABLE R602.10.3(1)
BRACING REQUIREMENTS BASED ON WIND SPEED**

<ul style="list-style-type: none"> • EXPOSURE CATEGORY B • 30 FT MEAN ROOF HEIGHT • 10 FT EAVE TO RIDGE HEIGHT • 10 FT WALL HEIGHT • 2 BRACED WALL LINES 			MINIMUM TOTAL LENGTH (FEET) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE ^a			
Basic Wind Speed (mph)	Story Location	Braced Wall Line Spacing (feet)	Method LIB ^b	Method GB	Methods DWB, WSP, SFB, PBS, PCP, HPS, CS-SFB ^c	Methods CS-WSP, CS-G, CS-PF
≤85		10	3.5	3.5	2.0	1.5
		20	6.0	6.0	3.5	3.0
		30	8.5	8.5	5.0	4.5
		40	11.5	11.5	6.5	5.5
		50	14.0	14.0	8.0	7.0
		60	16.5	16.5	9.5	8.0
		10	6.5	6.5	3.5	3.0
		20	11.5	11.5	6.5	5.5
		30	16.5	16.5	9.5	8.0
		40	21.5	21.5	12.5	10.5
		50	26.5	26.5	15.0	13.0
		60	31.5	31.5	18.0	15.5
		10	NP	9.0	5.5	4.5
		20	NP	17.0	10.0	8.5
		30	NP	24.5	14.0	12.0
		40	NP	32.0	18.0	15.5
		50	NP	39.0	22.5	19.0
		60	NP	46.5	26.5	22.5
≤90		10	3.5	3.5	2.0	2.0
		20	7.0	7.0	4.0	3.5
		30	9.5	9.5	5.5	5.0
		40	12.5	12.5	7.5	6.0
		50	15.5	15.5	9.0	7.5
		60	18.5	18.5	10.5	9.0
		10	7.0	7.0	4.0	3.5
		20	13.0	13.0	7.5	6.5
		30	18.5	18.5	10.5	9.0
		40	24.0	24.0	14.0	12.0
		50	29.5	29.5	17.0	14.5

<ul style="list-style-type: none"> EXPOSURE CATEGORY B 30 FT MEAN ROOF HEIGHT 10 FT EAVE TO RIDGE HEIGHT 10 FT WALL HEIGHT 2 BRACED WALL LINES 			MINIMUM TOTAL LENGTH (FEET) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE ^a				
Basic Wind Speed (mph)	Story Location	Braced Wall Line Spacing (feet)	Method LIB ^b	Method GB	Methods DWB, WSP, SFB, PBS, PCP, HPS, CS-SFB ^c	Methods CS-WSP, CS-G, CS-PF	
		60	35.0	35.0	20.0	17.0	
		10	NP	10.5	6.0	5.0	
		20	NP	19.0	11.0	9.5	
		30	NP	27.5	15.5	13.5	
		40	NP	35.5	20.5	17.5	
		50	NP	44.0	25.0	21.5	
		60	NP	52.0	30.0	25.5	
≤100		10	4.5	4.5	2.5	2.5	
		20	8.5	8.5	5.0	4.0	
		30	12.0	12.0	7.0	6.0	
		40	15.5	15.5	9.0	7.5	
		50	19.0	19.0	11.0	9.5	
		60	22.5	22.5	13.0	11.0	
		10	8.5	8.5	5.0	4.5	
		20	16.0	16.0	9.0	8.0	
		30	23.0	23.0	13.0	11.0	
		40	29.5	29.5	17.0	14.5	
		50	36.5	36.5	21.0	18.0	
		60	43.5	43.5	25.0	21.0	
		10	NP	12.5	7.5	6.0	
		20	NP	23.5	13.5	11.5	
		30	NP	34.0	19.5	16.5	
		40	NP	44.0	25.0	21.5	
		50	NP	54.0	31.0	26.5	
		60	NP	64.0	36.5	31.0	
	< 110 ^d		10	5.5	5.5	3.0	3.0
			20	10.0	10.0	6.0	5.0
			30	14.5	14.5	8.5	7.0
40			18.5	18.5	11.0	9.0	
50			23.0	23.0	13.0	11.5	
60			27.5	27.5	15.5	13.5	
		10	10.5	10.5	6.0	5.0	
		20	19.0	19.0	11.0	9.5	
		30	27.5	27.5	16.0	13.5	
		40	36.0	36.0	20.5	17.5	
		50	44.0	44.0	25.5	21.5	
		60	52.5	52.5	30.0	25.5	
		10	NP	15.5	9.0	7.5	
		20	NP	28.5	16.5	14.0	
		30	NP	41.0	23.5	20.0	
		40	NP	53.0	30.5	26.0	
		50	NP	65.5	37.5	32.0	
		60	NP	77.5	44.5	37.5	

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

a. Linear interpolation shall be permitted.

b. Method LIB shall have gypsum board fastened to at least one side with nails or screws per Table R602.3(1) for exterior sheathing or Table R702.3.5 for interior gypsum board. Spacing of fasteners at panel edges shall not exceed 8 inches (203 mm).

c. Method CS-SFB does not apply where the wind speed is greater than 100 mph.

TABLE R602.10.3(2)
WIND ADJUSTMENT FACTORS TO THE REQUIRED LENGTH OF WALL BRACING

<u>ADJUSTMENT BASED ON</u>	<u>STORY/ SUPPORTING</u>	<u>CONDITION</u>	<u>ADJUSTMENT FACTOR^{a,b}</u> <u>(multiply length from Table R602.10.3(1) by this factor)</u>	<u>APPLICABLE METHODS</u>
<u>Exposure category</u>	<u>One story structure</u>	B	1.00	<u>All methods</u>
		C	1.20	
		D	1.50	
	<u>Two-story structure</u>	B	1.00	
		C	1.30	
		D	1.60	
	<u>Three-story structure</u>	B	1.00	
		C	1.40	
		D	1.70	
<u>Roof eave-to-ridge height</u>	<u>Roof only</u>	≤ ft	0.70	
		10 ft	1.00	
		15 ft	1.30	
		20 ft	1.60	
	<u>Roof + 1 floor</u>	≤ ft	0.85	
		10 ft	1.00	
		15 ft	1.15	
		20 ft	1.30	
	<u>Roof + 2 floors</u>	≤ ft	0.90	
		10 ft	1.00	
		15 ft	1.10	
		20 ft	Not permitted	
<u>Wall height adjustment</u>	<u>Any story</u>	8 ft	0.90	
		9 ft	0.95	
		10 ft	1.00	
		11 ft	1.05	
		12 ft	1.10	
<u>Number of braced wall lines (per plan direction)^c</u>	<u>Any story</u>	2	1.00	
		3	1.30	
		4	1.45	
		≥ 5	1.60	
		<u>Additional 800 lb hold-down device</u>	<u>Top story only</u>	<u>Fastened to the end studs of each braced wall panel and to the foundation or framing below</u>
<u>Omitted from inside face of braced wall panels</u>	1.40			<u>DWB, WSP, SFB, PBS, PCP, HPS, CS-WSP, CS-G, CS-SFB</u>
<u>Gypsum board fastening</u>	<u>Any story</u>	<u>4 in. o.c. at panel edges, including top and bottom plates, and all horizontal joints blocked</u>	0.7	<u>GB</u>

For SI: 1 foot = 305 mm, 1 lb = 4.48 N.

a. Linear Interpolation shall be permitted.

b. The total adjustment factor is the product of all applicable adjustment factors.

c. The adjustment factor is permitted to be 1.0 when determining bracing amounts of intermediate braced wall lines provided the bracing amounts on adjacent braced wall lines are based on a spacing and number that neglects the intermediate braced wall line.

TABLE R602.10.3(3)
BRACING REQUIREMENTS BASED ON SEISMIC DESIGN CATEGORY

<ul style="list-style-type: none"> • SOIL CLASS D^b • WALL HEIGHT = 10 FT • 10 PSF FLOOR DEAD LOAD • 15 PSF ROOF/CEILING DEAD LOAD • BRACED WALL LINE SPACING ≤25 FT 			MINIMUM TOTAL LENGTH (FEET) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE ^a				
Seismic Design Category	Story Location	Braced Wall Line Length (ft)	Method LIB ^c	Method GB	Methods DWB, SFB, PBS, PCP, HPS, CS-SFB	Method WSP	Methods CS-WSP, CS-G
C (townhouses only)		10	2.5	2.5	2.5	1.6	1.4
		20	5.0	5.0	5.0	3.2	2.7
		30	7.5	7.5	7.5	4.8	4.3
		40	10.0	10.0	10.0	6.4	5.4
		50	12.5	12.5	12.5	8.0	6.8
		10	NP	4.5	4.5	3.0	2.6
		20	NP	9.0	9.0	6.0	5.1
		30	NP	13.5	13.5	9.0	7.7
		40	NP	18.0	18.0	12.0	10.2
		50	NP	22.5	22.5	15.0	12.8
		10	NP	6.0	6.0	4.5	3.8
		20	NP	12.0	12.0	9.0	7.7
		30	NP	18.0	18.0	13.5	11.5
		40	NP	24.0	24.0	18.0	15.3
		50	NP	30.0	30.0	22.5	19.1

For SI: 1 foot = 305 mm

- a. Linear interpolation shall be permitted.
- b. Wall bracing lengths are based on a soil site class "D." Interpolation of bracing length between the S_{ds} values associated with the Seismic Design Categories shall be permitted when a site-specific S_{ds} value is determined in accordance with Section 1613.5 of the International Building Code.
- c. Method LIB shall have gypsum board fastened to at least one side with nails or screws per Table R602.3(1) for exterior sheathing or Table R702.3.5 for interior gypsum board. Spacing of fasteners at panel edges shall not exceed 8 inches (203 mm).

TABLE R602.10.3(4)
SEISMIC ADJUSTMENT FACTORS TO THE REQUIRED LENGTH OF WALL BRACING

ADJUSTMENT BASED ON:	STORY/SUPPORTING	CONDITION	ADJUSTMENT FACTOR ^{a,b} (Multiply length from Table R602.10.3(3) by this factor)	APPLICABLE METHODS	
Story height (Section 301.3)	Any story	≤10 ft >10 ft ≤12 ft	1.0 1.2	All methods	
Braced wall line spacing	Any story	≤35 ft >35 ft ≤50 ft	1.0 1.43		
Wall dead load	Any story	>8 psf <15 psf <8 psf	1.0 0.85		
Roof/ceiling dead load for wall supporting	Any story	≤15 psf	1.0		
	Roof plus one or two stories	>15 psf ≤25 psf	1.1		
Walls with stone or masonry veneer		>15 psf ≤25 psf	1.2		
			1.0		
			1.5		
Interior gypsum board finish (or equivalent)	Any story	Omitted from inside face of braced wall panels	1.5		DWB, WSP, SFB, PBS, PCP, HPS, CS-WSP, CS-G, CS-SFB

For SI: 1 psf = 47.8 N/m².

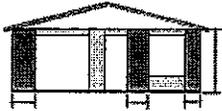
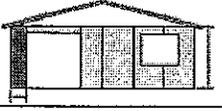
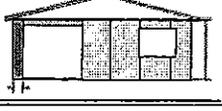
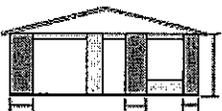
- a. Linear interpolation shall be permitted.
- b. The total length of bracing required for a given wall line is the product of all applicable adjustment factors.
- c. The length-to-width ratio for the floor/roof diaphragm shall not exceed 3:1. The top plate lap splice nailing shall be a minimum of 12-16d nails on each side of the splice.

- d. Applies to stone or masonry veneer exceeding the first story height.
 e. The adjustment factor for stone or masonry veneer shall be applied to all exterior braced wall lines and all braced wall lines on the interior of the building.

R602.10.4 Bracing methods for braced wall panels. Braced wall panels shall be constructed in accordance with this section and the methods listed in Table R602.10.4.

**TABLE R602.10.4
BRACING METHODS**

METHODS, MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA ^a		
			Fasteners	Spacing	
Intermittent Bracing Methods	LIB Let-in-bracing	1x4 wood or approved metal straps at 45° to 60° angles for maximum 16" stud spacing		Wood: 2-8d common nails or 3-8d (2 1/2" long x 0.113" dia.) nails Metal: per manufacturer	Wood: per stud and top and bottom plates Metal: per manufacturer
	DWB Diagonal wood boards	3/4" (1" nominal) for maximum 24" stud spacing		2-8d (2 1/2" long x 0.113" dia.) nails or 2 - 1 3/4" long staples	Per stud
	WSP Wood structural panel (See Section R604)	3/8"		Exterior sheathing per Table R602.3(3) Interior sheathing per Table R602.3(1) or R602.3(2)	6" edges 12" field Varies by fastener
	SFB Structural fiberboard sheathing	1/2" or 25/32" for maximum 16" stud spacing		1 1/2" long x 0.12" dia. (for 1/2" thick sheathing) 1 3/4" long x 0.12" dia. (for 25/32" thick sheathing) galvanized roofing nails or 8d common (2 1/2" long x 0.131" dia.) nails	3" edges 6" field
	GB Gypsum board	1/2"		Nails or screws per Table R602.3(1) for exterior locations Nails or screws per Table R702.3.5 for interior locations	For all braced wall panel locations; 7" edges (including top and bottom plates) 7" field
	PBS Particleboard sheathing (See Section R605)	3/8" or 1/2" for maximum 16" stud spacing		For 3/8", 6d common (2" long x 0.113" dia.) nails For 1/2", 8d common (2 1/2" long x 0.131" dia.) nails	3" edges 6" field
	PCP Portland cement plaster	See Section R703.6 for maximum 16" stud spacing		1 1/2" long, 11 gage, 1/16" dia. head nails or 7/8" long, 16 gage staples	6" o.c. on all framing members
	HPS Hardboard panel siding	7/16" for maximum 16" stud spacing		0.092" dia., 0.225" dia. head nails with length to accommodate 1 1/2" penetration into studs	4" edges 8" field
	ABW Alternate braced wall	3/8"		See Section R602.10.6.1	See Section R602.10.6.1
	PFH Portal frame with hold-downs	3/8"		See Section R602.10.6.2	See Section R602.10.6.2
PFG Portal frame at garage	7/16"		See Section R602.10.6.3	See Section R602.10.6.3	

Continuous Sheathing Methods	CS-WSP Continuously sheathed wood structural panel	$\frac{3}{8}$ "		Exterior sheathing per Table R602.3(3) Interior sheathing per Table R602.3(1) or R602.3(2)	6" edges 12" field
	CS-G^{b, c} Continuously sheathed wood structural panel adjacent to garage openings	$\frac{3}{8}$ "		See Method CS-WSP	Varies by fastener
	CS-PF Continuously sheathed portal frame	$\frac{7}{16}$ "		See Section R602.10.6.4	See Section R602.10.6.4
	CS-SFB^d Continuously sheathed structural fiberboard	$\frac{1}{2}$ " or $\frac{25}{32}$ " for maximum 16" stud spacing		$1\frac{1}{2}$ " long x 0.12" dia. (for $\frac{1}{2}$ " thick sheathing) $1\frac{3}{4}$ " long x 0.12" dia. (for $\frac{25}{32}$ " thick sheathing) galvanized roofing nails or 8d common ($2\frac{1}{2}$ " long x 0.131 dia.) nails	3" edges 6" field

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm.

- Adhesive attachment of wall sheathing, including Method GB, shall not be permitted in townhouses in Seismic Design Category C.
- Applies to panels next to garage door opening when supporting gable end wall or roof load only. May only be used on one wall of the garage.
- Garage openings adjacent to a Method CS-G panel shall be provided with a header in accordance with Table R502.5(1). A full height clear opening shall not be permitted adjacent to a Method CS-G panel.
- Method CS-SFB does not apply in areas where the wind speed exceeds 100 mph.

R602.10.4.1 Mixing methods. Mixing of bracing methods shall be permitted as follows:

- Mixing intermittent bracing and continuous sheathing methods from story to story shall be permitted.
- Mixing intermittent bracing methods from braced wall line to braced wall line within a story shall be permitted. In regions where the basic wind speed is less than or equal to 100 mph, mixing of intermittent bracing and continuous sheathing methods from braced wall line to braced wall line within a story shall be permitted.
- Mixing intermittent bracing methods along a braced wall line shall be permitted in Seismic Design Categories A and B, and detached dwellings in Seismic Design Category C provided the length of required bracing in accordance with Table R602.10.3(1) or R602.10.3(3) is the highest value of all intermittent bracing methods used.
- Mixing of continuous sheathing methods CS-WSP, CS-G and CS-PF along a braced wall line shall be permitted.
- In Seismic Design Categories A and B, and for detached one- and two-family dwellings in Seismic Design Category C, mixing of intermittent bracing methods along the interior portion of a braced wall line with continuous sheathing methods CS-WSP, CS-G and CS-PF along the exterior portion of the same braced wall line shall be permitted. The length of required bracing shall be the highest value of all intermittent bracing methods used in accordance with Table R602.10.3(1) or R602.10.3(3) as adjusted by Tables R602.10.3(2) and R602.10.3(4), respectively. The requirements of Section R602.10.7 shall apply to each end of the continuously sheathed portion of the braced wall line.

R602.10.4.2 Continuous sheathing methods. Continuous sheathing methods require structural panel sheathing to be used on all sheathable surfaces on one side of a braced wall line including areas above and below openings and gable end walls and shall meet the requirements of Section R602.10.7.

R602.10.4.3 Braced wall panel interior finish material. Braced wall panels shall have gypsum wall board installed on the side of the wall opposite the bracing material. Gypsum wall board shall be not less than $\frac{1}{2}$ inch (12.7 mm) in thickness and be fastened with nails or screws in accordance with Table R602.3(1) for exterior sheathing or Table R702.3.5 for interior gypsum wall board. Spacing of fasteners at panel edges for gypsum wall board opposite Method LIB bracing shall not exceed 8 inches (203 mm). Interior finish material shall not be glued in townhouses in Seismic Category C.

Exceptions:

1. Interior finish material is not required opposite wall panels that are braced in accordance with Method GB, ABW, PFH, PFG and CS-PF, unless otherwise required by Section R302.6.
2. An approved interior finish material with an in-plane shear resistance equivalent to gypsum board shall be permitted to be substituted, unless otherwise required by Section R302.6.
3. Except for Method LIB, gypsum wall board is permitted to be omitted provided the required length of bracing in Tables R602.10.3(1) and R602.10.3(3) is multiplied by the appropriate adjustment factor in Tables R602.10.3(2) and R602.10.3(4) respectively, unless otherwise required by Section R302.6.

R602.10.5 Minimum length of a braced wall panel. The minimum length of a braced wall panel shall comply with Table R602.10.5. For Methods CS-WSP and CS-SFB, the minimum panel length shall be based on the vertical dimension of the adjacent opening in accordance with Table R602.10.5 and Figure R602.10.5. When a panel has openings on either side of differing heights, the larger vertical dimension shall be used to determine the minimum braced wall panel length.

R602.10.5.1 Contributing length. For purposes of complying with the required length of bracing in Tables R602.10.3(1) and R602.10.3(3), the contributing length of each braced wall panel to the total length of bracing shall be as specified in Table R602.10.5.

**TABLE R602.10.5
MINIMUM LENGTH OF BRACED WALL PANELS**

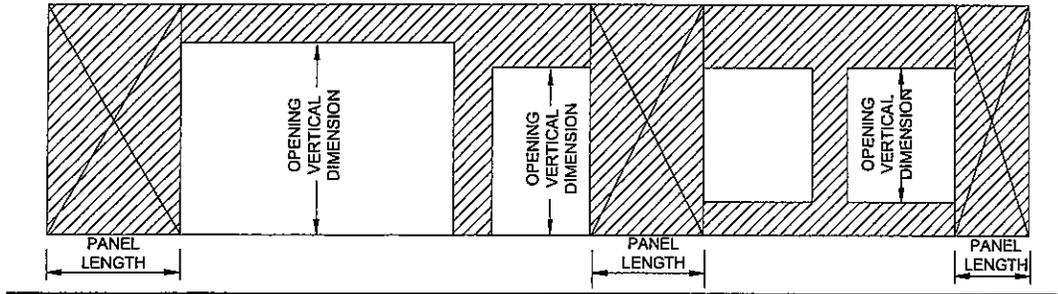
METHOD (See Table R602.10.4)	MINIMUM LENGTH ^a (in)					CONTRIBUTING LENGTH (in)	
	Wall Height						
	8 ft	9 ft	10 ft	11 ft	12 ft		
DWG, WSP, SFB, PBS, PCP, HPS	48	48	48	53	58	Actual ^b	
GB	48	48	48	53	58	Double sided = Actual Single sided = 0.5 x Actual	
LIB	55	62	69	NP	NP	Actual ^b	
ABW	28	32	34	38	42	48	
PFH	Supporting roof only	16	16	16	18 ^c	20 ^c	48
	Supporting one story and roof	24	24	24	27 ^c	29 ^c	48
PFG	24	27	30	33 ^c	36 ^b	1.5 x Actual ^b	
CS-G	24	27	30	33	36	Actual ^b	
CS-PF	16	18	20	22 ^c	24 ^c	Actual ^b	
CS-WSP, CS-SFB	Adjacent opening vertical dimension (in)						
	≤64	24	27	30	33	36	Actual ^b
	68	26	27	30	33	36	
	72	27	27	30	33	36	
	76	30	29	30	33	36	
	80	32	30	30	33	36	
	84	35	32	32	33	36	
	88	38	35	33	33	36	
	92	43	37	35	35	36	
	96	48	41	38	36	36	
	100		44	40	38	38	
	104		49	43	40	39	
	108		54	46	43	41	
	112			50	45	43	
	116			55	48	45	
	120			60	52	48	
	124				56	51	
	128				61	54	
132				66	58		
136					62		
140					66		
144					72		

For SI: 1 inch = 25.4 mm

NP = Not permitted

a. Linear interpolation shall be permitted.

- b. Use the actual length provided it is greater than or equal to the minimum length.
- c. Maximum header height for is 10'; however, wall height may be increased to 12' with a pony wall per Table R602.10.6.4.



**FIGURE R602.10.5
BRACED WALL PANELS WITH CONTINUOUS SHEATHING**

R602.10.5.2 Partial credit. For Methods DWB, WSP, SFB, PBS, PCP and HPS panels between 36 inches and 48 inches in length shall be considered a braced wall panel and shall be permitted to partially contribute towards the required length of bracing in Table R602.10.3(1) and R602.10.3(3), and the contributing length shall be determined from Table R602.10.5.2.

**TABLE R602.10.5.2
PARTIAL CREDIT FOR BRACED WALL PANELS LESS THAN 48 INCHES IN ACTUAL LENGTH**

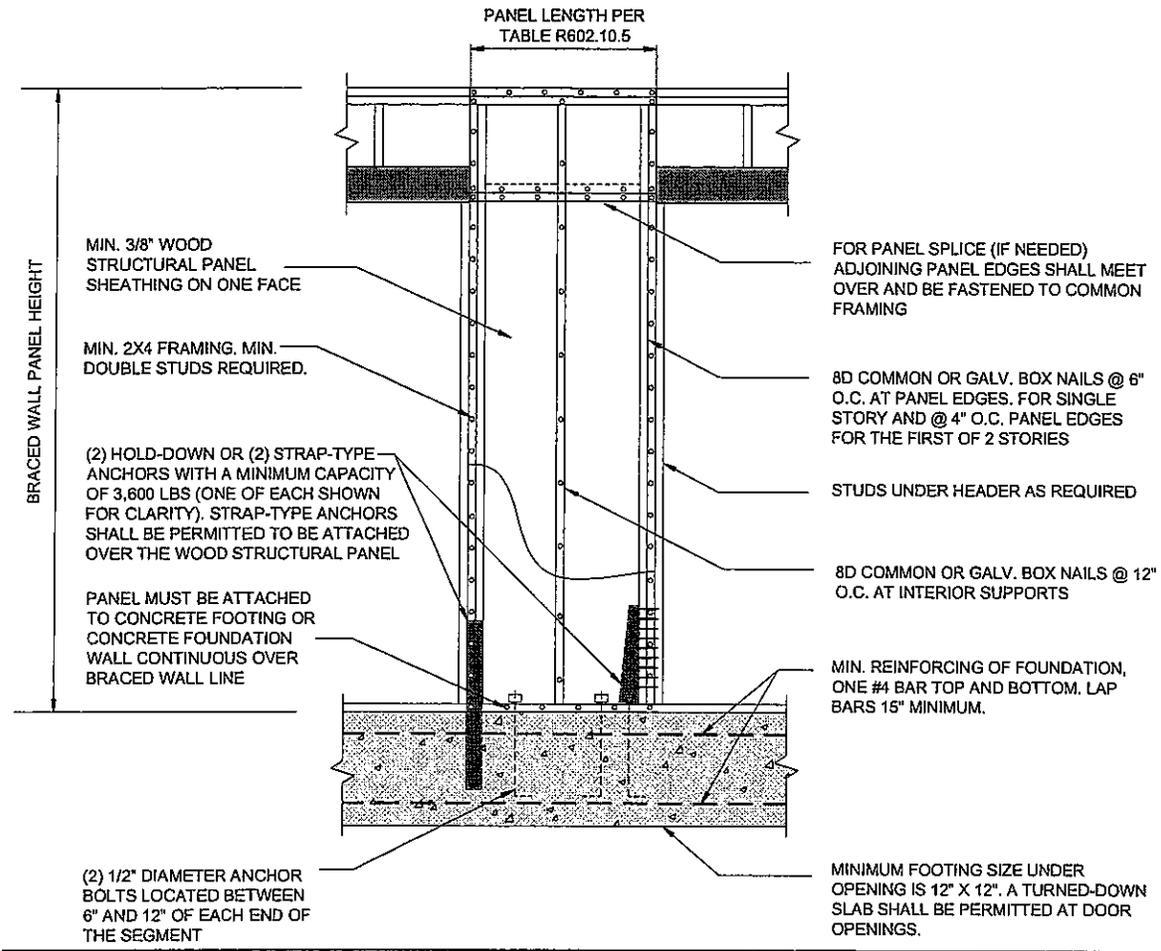
Actual Length of Braced Wall Panel (in)	Contributing Length of Braced Wall Panel (in) ^a	
	8 ft Wall Height	9 ft Wall Height
48	48	48
42	36	36
36	27	N/A

For SI: 1 inch = 25.4mm

a. Linear interpolation shall be permitted.

R602.10.6 Construction of Methods ABW, PFH, PFG and CS-PF. Methods ABW, PFH, PFG and CS-PF shall be constructed as specified in Sections R602.10.6.1 through R602.10.6.4.

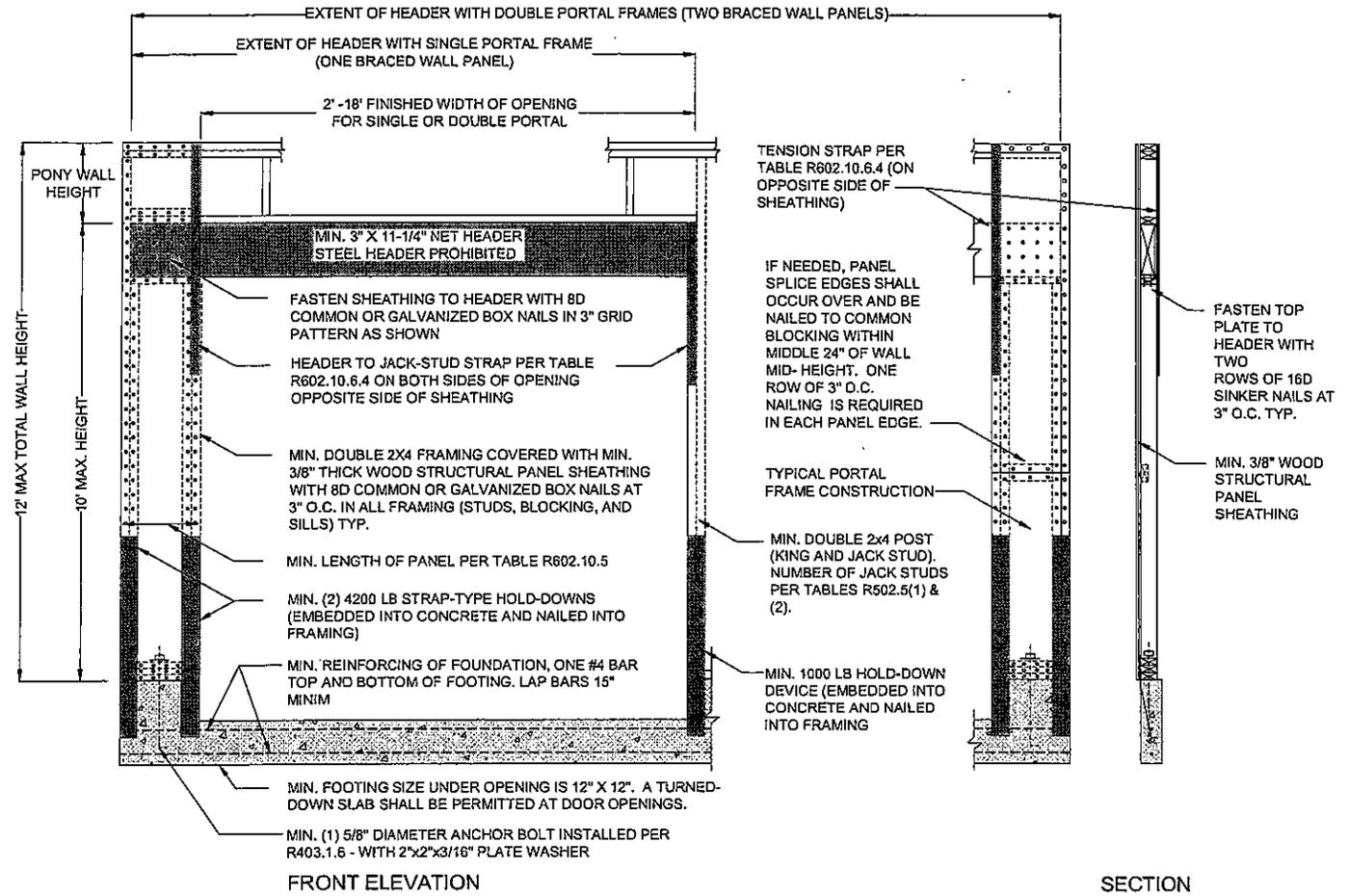
R602.10.6.1 Method ABW: Alternate braced wall panels. Method ABW braced wall panels shall be constructed in accordance with Figure R602.10.6.1.



For SI: 1 inch = 25.4 mm, 1 foot = 305 mm

FIGURE R602.10.6.1
METHOD ABW: ALTERNATE BRACED WALL PANEL

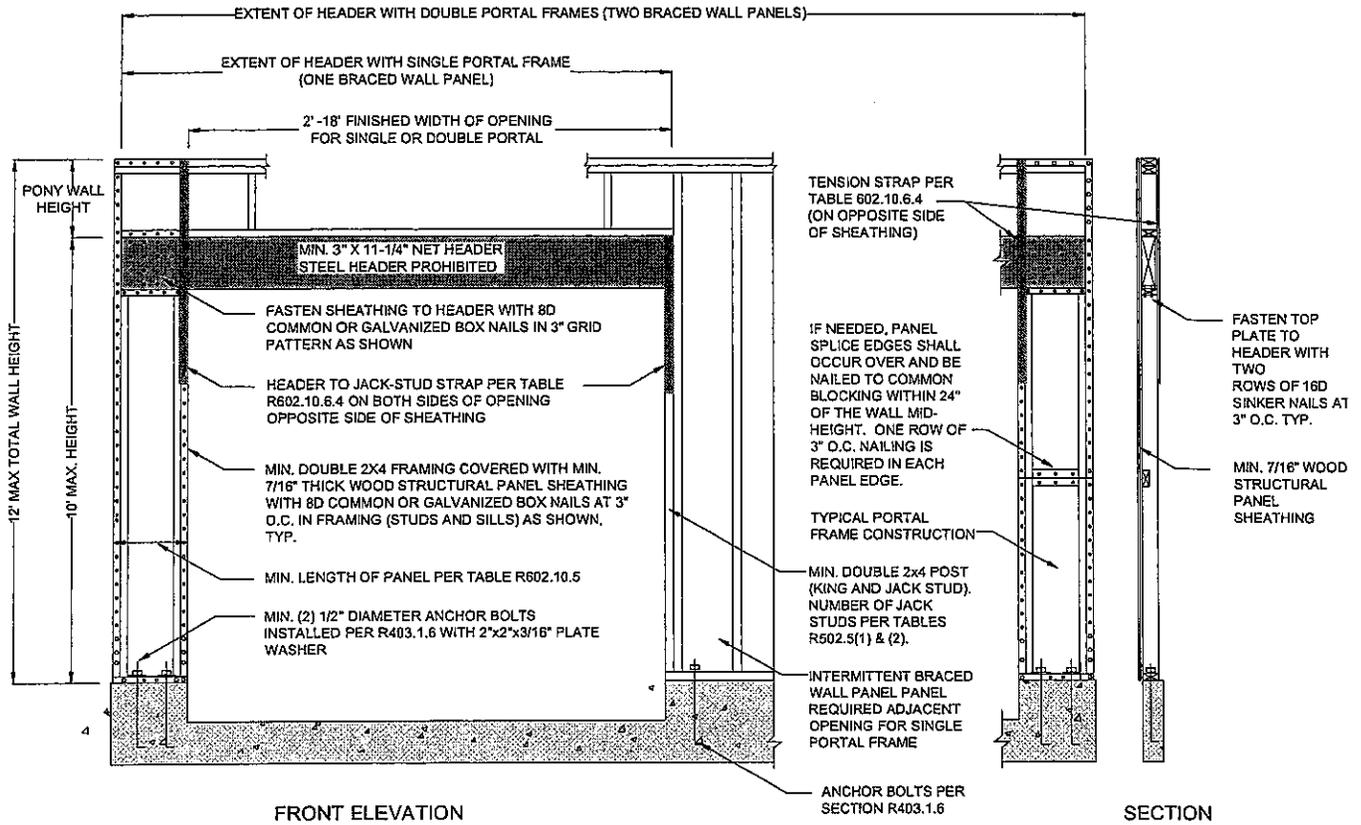
R602.10.6.2 Method PFH: Portal frame with hold-downs. Method PFH braced wall panels shall be constructed in accordance with Figure R602.10.6.2.



For SI: 1 inch = 25.4 mm, 1 foot = 305 mm

FIGURE R602.10.6.2
METHOD PFH: PORTAL FRAME WITH HOLD-DOWNS

R602.10.6.3 Method PFG: Portal frame at garage door openings. Where supporting a roof or one story and a roof, a Method PFG braced wall panel constructed in accordance with Figure R602.10.6.3 shall be permitted on either side of garage door openings.



For SI: 1 inch = 25.4 mm, 1 foot = 305 mm

FIGURE R602.10.6.3
METHOD PFG: PORTAL FRAME AT GARAGE DOOR OPENINGS
IN SEISMIC DESIGN CATEGORIES A, B AND C

R602.10.6.4 Method CS-PF: Continuously sheathed portal frame. Continuously sheathed portal frame braced wall panels shall be constructed in accordance with Figure R602.10.6.4 and Table R602.10.6.4. The number of continuously sheathed portal frame panels in a single braced wall line shall not exceed four.

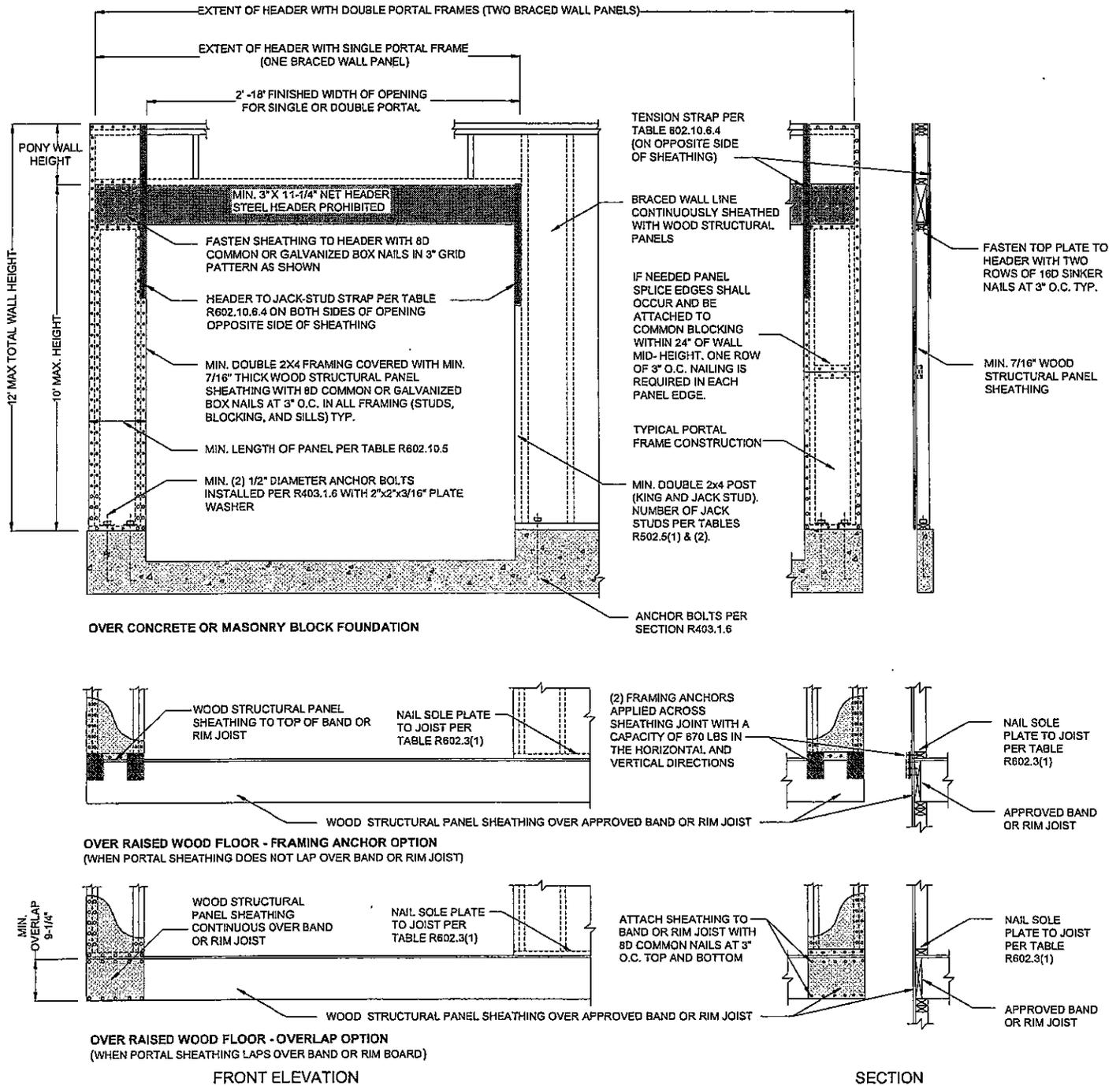
**TABLE R602.10.6.4
TENSION STRAP CAPACITY REQUIRED FOR RESISTING WIND PRESSURES
PERPENDICULAR TO METHOD PFH, PFG AND CS-PF BRACED WALL PANELS**

MINIMUM WALL STUD FRAMING NOMINAL SIZE AND GRADE	MAXIMUM PONY WALL HEIGHT (ft)	MAXIMUM TOTAL WALL HEIGHT (ft)	MAXIMUM OPENING WIDTH (ft)	TENSION STRAP CAPACITY REQUIRED (lb) ^a					
				Basic Wind Speed (mph)					
				85	90	100	85	90	100
				Exposure B			Exposure C		
2x4 No. 2 Grade	0	10	18	1000	1000	1000	1000	1000	1000
			9	1000	1000	1000	1000	1000	1275
			16	1000	1000	1750	1800	2325	3500
	1	10	18	1000	1200	2100	2175	2725	DR
			9	1000	1000	1025	1075	1550	2500
			16	1525	2025	3125	3200	3900	DR
	2	10	18	1875	2400	3575	3700	DR	DR
			9	1000	1200	2075	2125	2750	4000
			16	2600	3200	DR	DR	DR	DR
	2	12	18	3175	3850	DR	DR	DR	DR
			9	1775	2350	3500	3550	DR	DR
			16	4175	DR	DR	DR	DR	DR
4	12	9	1000	1000	1325	1375	1750	2550	
		16	1650	2050	2925	3000	3550	DR	
		18	2025	2450	3425	3500	4100	DR	
2x6 Stud Grade	2	12	9	1125	1500	2225	2275	2775	3800
			16	2650	3150	DR	DR	DR	DR
	4	12	16	2650	3150	DR	DR	DR	DR
			18	3125	3675	DR	DR	DR	DR

For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 lb = 4.45 N

DR = design required

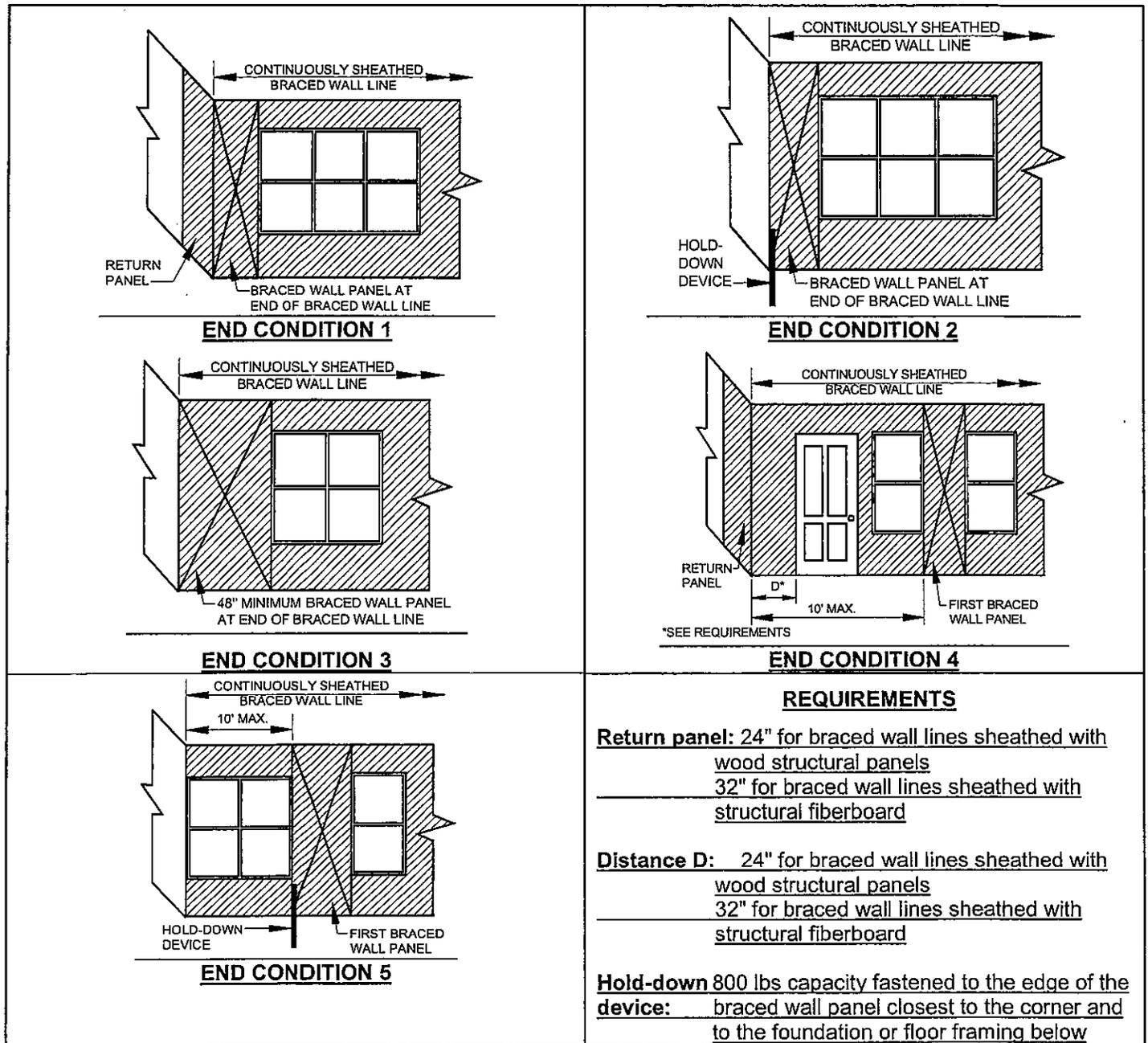
a. Strap shall be installed in accordance with manufacturer's recommendations.



For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 lb = 4.45 N

FIGURE R602.10.6.4
METHOD CS-PF: CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION

R602.10.7 Ends of braced wall lines with continuous sheathing. Each end of a braced wall line with continuous sheathing shall be in accordance with one of the end conditions shown in Figure R602.10.7.

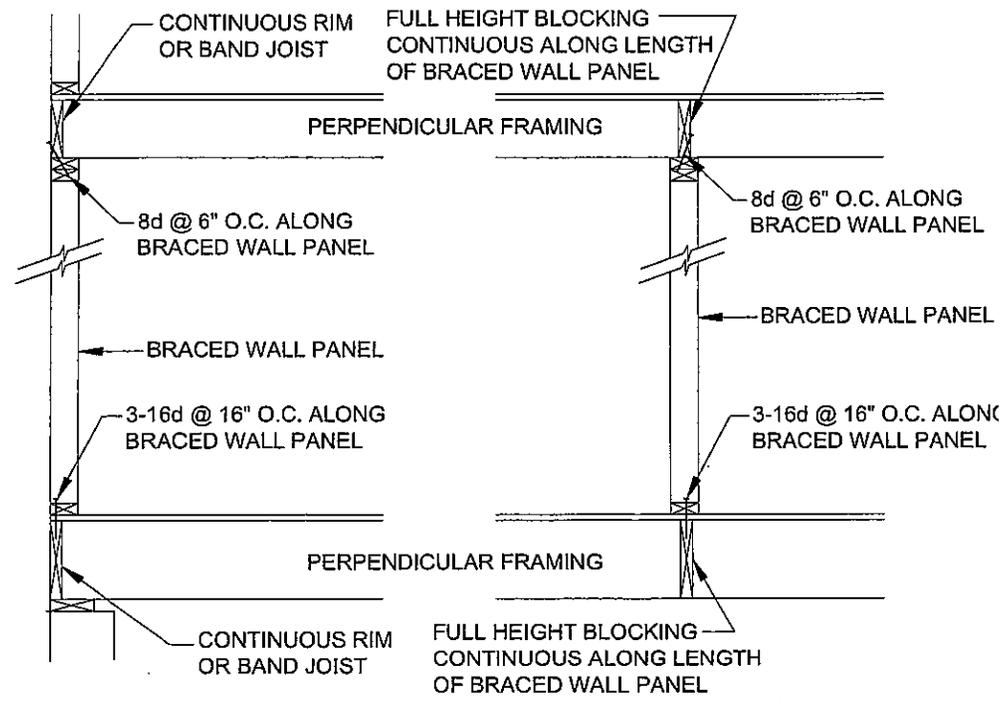


For SI: 1 inch = 25.4 mm, 1 foot = 305 mm, 1 lb = 4.45 N

FIGURE R602.10.7
END CONDITIONS FOR BRACED WALL LINES WITH CONTINUOUS SHEATHING

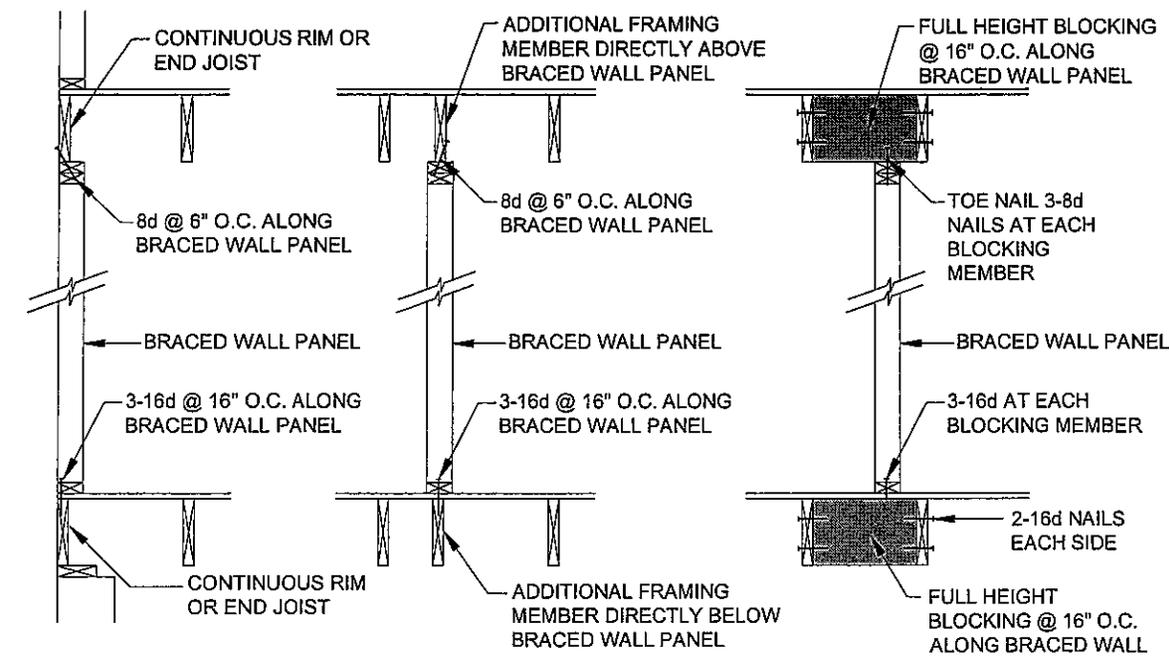
R602.10.8 Braced wall panel connections. Braced wall panels shall be connected to floor framing or foundations as follows:

1. Where joists are perpendicular to a braced wall panel above or below, a rim joist, band joist or blocking shall be provided along the entire length of the braced wall panel in accordance with Figure R602.10.8(1). Fastening of top and bottom wall plates to framing, rim joist, band joist and/or blocking shall be in accordance with Table R602.3(1).
2. Where joists are parallel to a braced wall panel above or below, a rim joist, end joist or other parallel framing member shall be provided directly above and below the braced wall panel in accordance with Figure R602.10.8(2). Where a parallel framing member cannot be located directly above and below the panel, full-depth blocking at 16 inch (406 mm) spacing shall be provided between the parallel framing members to each side of the braced wall panel in accordance with Figure R602.10.8(2). Fastening of blocking and wall plates shall be in accordance with Table R602.3(1) and Figure R602.10.8(2).
3. Connections of braced wall panels to concrete or masonry shall be in accordance with Section R403.1.6.



For SI: 1 inch = 25.4 mm

FIGURE R602.10.8(1)
BRACED WALL PANEL CONNECTION WHEN
PERPENDICULAR TO FLOOR/CEILING FRAMING

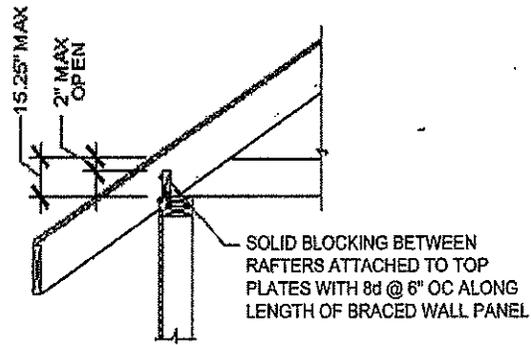


For SI: 1 inch = 25.4 mm

FIGURE R602.10.8(2)
BRACED WALL PANEL CONNECTION WHEN
PARALLEL TO FLOOR/CEILING FRAMING

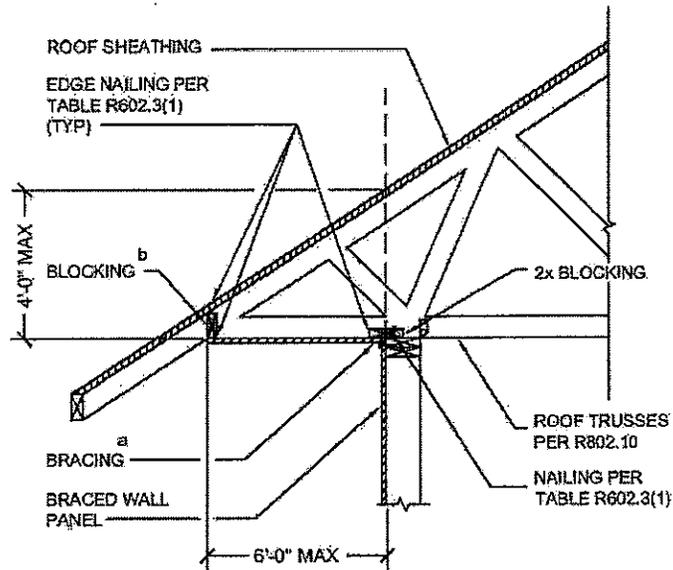
R602.10.8.1 Connections to roof framing. Top plates of exterior braced wall panels shall be attached to rafters or roof trusses above in accordance with Table R602.3(1) and this section. Where required by this section, blocking between rafters or roof trusses shall be attached to top plates of braced wall panels and to rafters and roof trusses in accordance with Table R602.3(1). A continuous band, rim, or header joist or roof truss parallel to the braced wall panels shall be permitted to replace the blocking required by this section. Blocking shall not be required over openings in continuously-sheathed braced wall lines. In addition to the requirements of this section, lateral support shall be provided for rafters and ceiling joists in accordance with Section R802.8 and for trusses in accordance with Section R802.10.3. Roof ventilation shall be provided in accordance with R806.1.

1. For wind speeds less than 100 mph (45 m/s):
 - 1.1 Where the distance from the top of the braced wall panel to the top of the rafters or roof trusses above is 9.25 inches (235 mm) or less, blocking between rafters or roof trusses shall not be required.
 - 1.2 Where the distance from the top of the braced wall panel to the top of the rafters or roof trusses above is between 9.25 inches (235 mm) and 15.25 inches (387 mm) blocking between rafters or roof trusses shall be provided above the braced wall panel in accordance with Figure R602.10.8.1(1).
2. For wind speeds of 100 mph (45 m/s) or greater, where the distance from the top of the braced wall panel to the top of the rafters or roof trusses is 15.25 inches (387 mm) or less, blocking between rafters or roof trusses shall be provided above the braced wall panel in accordance with Figure R602.10.8.1(1).
3. Where the distance from the top of the braced wall panel to the top of the rafters or roof trusses exceeds 15.25 inches (387 mm), the top plate of the braced wall panel shall be connected to perpendicular rafters or roof trusses above in accordance with one or more of the following methods:
 - 3.1. Soffit blocking panels constructed per Figure R602.10.8.1(2).
 - 3.2. Vertical blocking panels constructed per Figure R602.10.8.1(3).
 - 3.3. Full-height engineered blocking panels designed per the AF&PA WFCM.
 - 3.4. Blocking, blocking panels, or other methods of lateral load transfer designed in accordance with accepted engineering practice.



For SI: 1 inch = 25.4 mm

FIGURE R602.10.8.1(1)
BRACED WALL PANEL CONNECTION TO PERPENDICULAR RAFTERS



For SI: 1 inch = 25.4 mm

- a. Methods of bracing shall be as described in Section R602.10.4
- b. Provide ventilation (not shown) per Section R806.

FIGURE R602.10.8.1(2)
BRACED WALL PANEL CONNECTION OPTION TO PERPENDICULAR RAFTERS OR ROOF TRUSSES

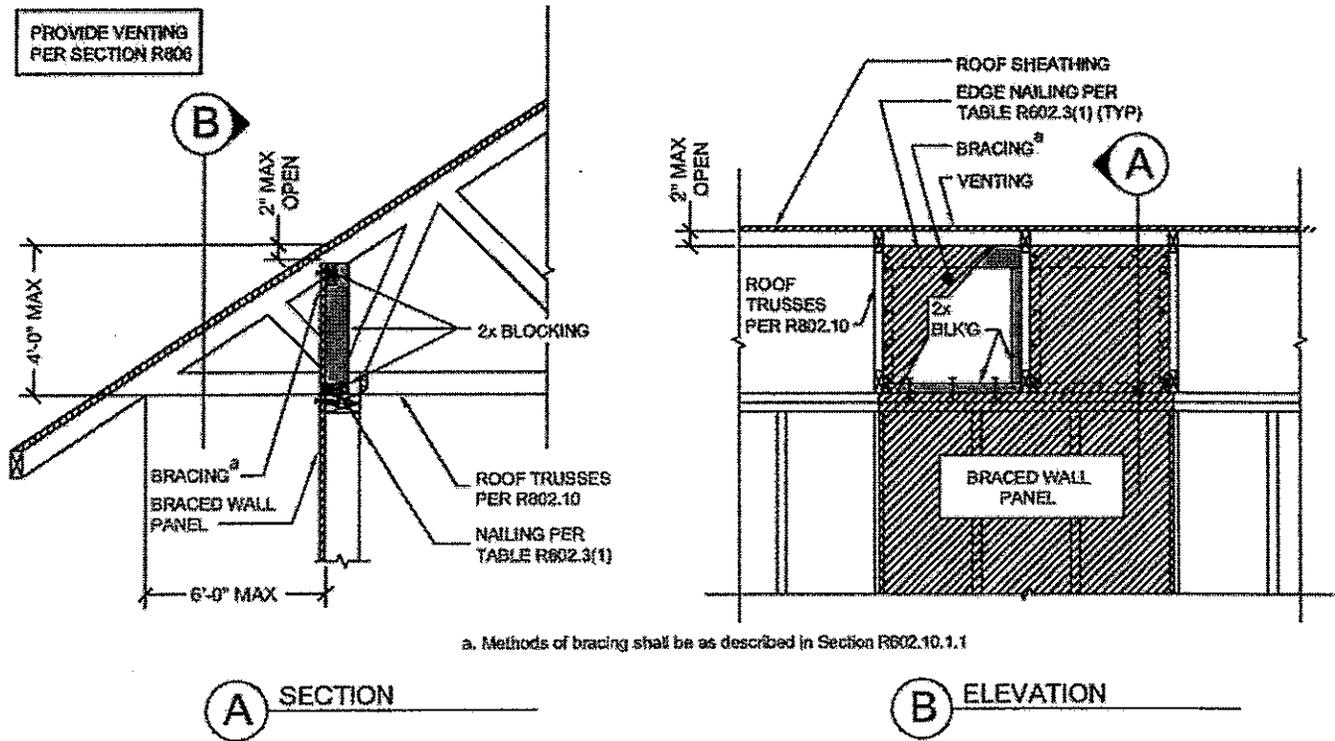
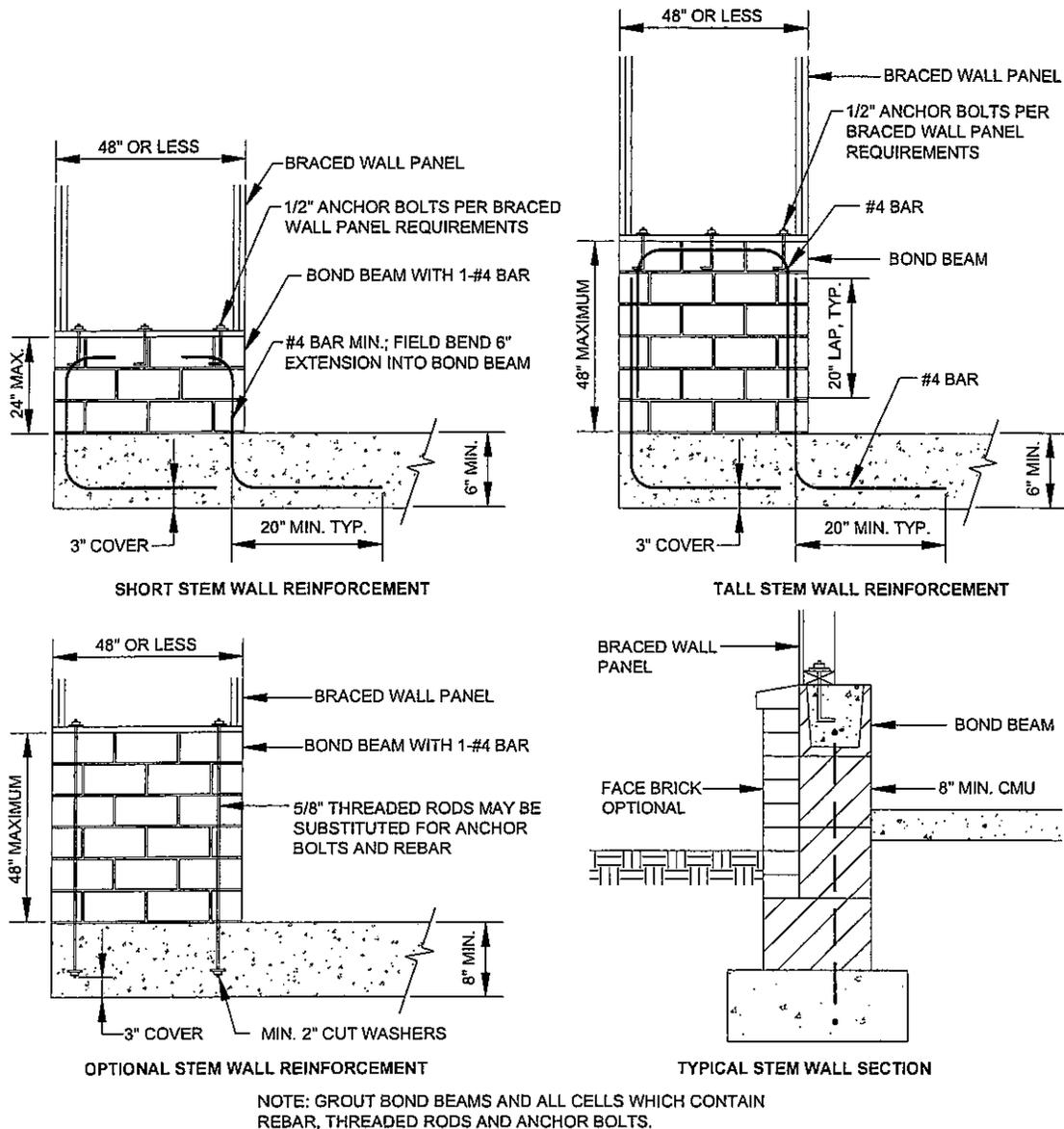


FIGURE R602.10.8.1(3)
BRACED WALL PANEL CONNECTION OPTION TO PERPENDICULAR RAFTERS OR ROOF TRUSSES

R602.10.9 Braced wall panel support. Braced wall panel support shall be provided as follows:

1. Cantilevered floor joists complying with Section R502.3.3 shall be permitted to support braced wall panels.
2. Elevated post or pier foundations supporting braced wall panels shall be designed in accordance with accepted engineering practice.
3. Masonry stem walls with a length of 48 inches (1220 mm) or less supporting braced wall panels shall be reinforced in accordance with Figure R602.10.9. Masonry stem walls with a length greater than 48 inches (1220 mm) supporting braced wall panels shall be constructed in accordance with Section R403.1. Methods ABW and PFH shall not be permitted to attach to masonry stem walls.
4. Concrete stem walls with a length of 48 inches (1220 mm) or less, greater than 12 inches (305 mm) tall and less than 6 inches (152 mm) thick shall have reinforcement sized and located in accordance with Figure R602.10.9.



For SI: 1 in=305 mm

FIGURE R602.10.9
MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS

R602.10.10 Panel joints. All vertical joints of panel sheathing shall occur over, and be fastened to common studs. Horizontal joints in braced wall panels shall occur over, and be fastened to common blocking of a minimum 1-1/2 inch (38 mm) thickness.

Exceptions:

1. Vertical joints of panel sheathing shall be permitted to occur over double studs, where adjoining panel edges are attached to separate studs with the required panel edge fastening schedule, and the adjacent studs are attached together with 2 rows of 10d box nails (3 in. long x 0.128 in. dia.) at 10 inches (254 mm) O.C.
2. Blocking at horizontal joints shall not be required in wall segments that are not counted as braced wall panels.
3. Where the length of bracing provided is at least twice the required length of bracing from Tables R602.10.3(1) and R602.10.3(3) blocking at horizontal joints shall not be required in braced wall panels constructed using Methods WSP, SFB, GB, PBS or HPS.
4. When Method GB panels are installed horizontally, blocking of horizontal joints is not required.

R602.10.11 Cripple wall bracing. Cripple walls shall be constructed in accordance with Section R602.9 and braced in accordance with this section. Cripple walls shall be braced with the length and method of bracing used for the wall above in accordance with Tables R602.10.3(1) and R602.10.3(3), except that the length of cripple wall bracing shall be multiplied by a factor of 1.15.

R602.10.11.1 Cripple wall bracing for townhouses in Seismic Design Category C. In addition to the requirements in Section R602.10.11, the distance between adjacent edges of braced wall panels shall be 14 feet (4267 mm) maximum.

Where braced wall lines at interior walls are not supported on a continuous foundation below, the adjacent parallel cripple walls, where provided, shall be braced with Method WSP or CS-WSP per Section R602.10.4. The length of bracing required per Table R602.10.3(3) for the cripple walls shall be multiplied by 1.5. Where the cripple walls do not have sufficient length to provide the required bracing, the spacing of panel edge fasteners shall be reduced to 4 inches (102 mm) on center and the required bracing length adjusted by 0.7. If the required length can still not be provided, the cripple wall shall be designed in accordance with accepted engineering practice.

R602.10.11.2 Redesignation of cripple walls. Where all cripple wall segments along a braced wall line do not exceed 48 inches (1220 mm) in height, the cripple wall shall be permitted to be redesignated as a first story wall for purposes of determining wall bracing requirements. Where any cripple wall segment in a braced wall line exceeds 48 inches (1220 mm) in height, the entire cripple wall shall be counted as an additional story. If the cripple walls are redesignated, the stories above the redesignated story shall be counted as the second and third stories respectively.

11. Edit Section R602.11 as follows.

R602.11 Wall anchorage. Braced wall line sills shall be anchored to concrete or masonry foundations in accordance with Sections R403.1.6 and R602.11.1.

R602.11.1 Wall anchorage for all buildings in Seismic Design Categories D₀, D₁, and D₂ and townhouses in Seismic Design Category C. Plate washers, a minimum of 0.229 inches by 3 inches by 3 inches (5.8 mm by 76 mm by 76 mm) in size, shall be provided between the foundation sill plate and the nut except where approved anchor straps are used. The hole in the plate washer is permitted to be diagonally slotted with a width of up to ³/₁₆ inch (5 mm) larger than the bolt diameter and a slot length not to exceed 1 ³/₄ inches (44 mm) provided a standard cut washer is placed between the plate washer and the nut.

R602.11.2 Stepped foundations in Seismic Design Categories D₀, D₁, and D₂. ~~In all buildings located in Seismic Design Categories D₀, D₁, or D₂, where the height of a required braced wall line that extends from foundation to floor above varies more than 4 feet (1220 mm), the braced wall line shall be constructed in accordance with the following:~~

- ~~1. Where the lowest floor framing rests directly on a sill bolted to a foundation not less than 8 feet (2440 mm) in length along a line of bracing, the line shall be considered as braced. The double plate of the cripple stud wall beyond the segment of footing that extends to the lowest framed floor shall be spliced by extending the upper top plate a minimum of 4 feet (1219 mm) along the foundation. Anchor bolts shall be located a maximum of 1 foot and 3 feet (305 and 914 mm) from the step in the foundation. See Figure R602.11.2.~~
- ~~2. Where cripple walls occur between the top of the foundation and the lowest floor framing, the bracing requirements of Sections R602.10.9 and R602.10.9.1 shall apply.~~
- ~~3. Where only the bottom of the foundation is stepped and the lowest floor framing rests directly on a sill bolted to the foundations, the requirements of Sections R403.1.6 and R602.11.1 shall apply.~~

12. Add new Section R602.12 as follows. Renumber remaining sections.

R602.12 Simplified wall bracing. Buildings meeting all of the conditions listed below shall be permitted to be braced in accordance with this section as an alternate to the requirements of Section R602.10. The entire building shall be braced in accordance with this section; the use of other bracing provisions of R602.10, except as specified herein, shall not be permitted.

1. There shall be no more than two stories above the top of a concrete or masonry foundation or basement wall. Permanent wood foundations shall not be permitted.
2. Floors shall not cantilever more than 24 inches (607 mm) beyond the foundation or bearing wall below.
3. Wall height shall not be greater than 10 feet (2743 mm).

4. The building shall have a roof eave-to-ridge height of 15 feet (4572 mm) or less.
5. All exterior walls shall have gypsum board with a minimum thickness of $\frac{1}{2}$ inches (12.7 mm) installed on the interior side fastened in accordance with Table R702.3.5.
6. The structure shall be located where the basic wind speed is less than or equal to 90 mph (40 m/s), and the Exposure Category is A or B.
7. The structure shall be located in Seismic Design Category of A, B or C for detached one- and two-family dwellings or Seismic Design Category A or B for townhouses.
8. Cripple walls shall not be permitted in two-story buildings.

R602.12.1 Circumscribed rectangle. Required bracing shall be determined by circumscribing a rectangle around the entire building on each floor as shown in Figure R602.12.1. The rectangle shall surround all enclosed offsets and projections such as sunrooms and attached garages. Open structures, such as carports and decks shall be permitted to be excluded. The rectangle shall have no side greater than 60 feet (18 288 mm), and the ratio between the long side and short side shall be a maximum of 3:1.

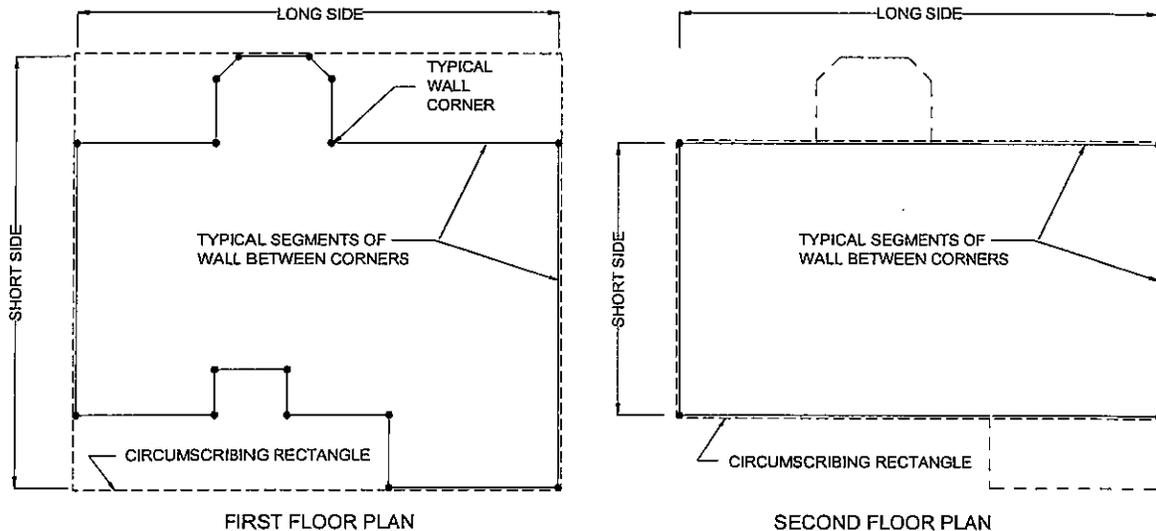


FIGURE R602.12.1
RECTANGLE CIRCUMSCRIBING AN ENCLOSED BUILDING

R602.12.2 Sheathing materials. The following sheathing materials installed on the exterior side of exterior walls shall be used to construct a bracing unit as defined in Section R602.12.3. Mixing materials is prohibited.

1. Wood structural panels with a minimum thickness of $\frac{3}{8}$ inch (9.5 mm) fastened in accordance with Table R602.3(3).
2. Structural fiberboard sheathing with a minimum thickness of $\frac{1}{2}$ inch (12.7 mm) fastened in accordance with Table R602.3(1).

R602.12.3 Bracing unit. A bracing unit shall be a full-height sheathed segment of the exterior wall with no openings or vertical or horizontal offsets and a minimum length as specified below. Interior walls shall not contribute toward the amount of required bracing. Mixing of Items 1 and 2 below is prohibited on the same story.

1. Where all framed portions of all exterior walls are sheathed in accordance with Section R602.12.2, including wall areas between bracing units, above and below openings and on gable end walls, the minimum length of a bracing unit shall be 3 feet (914 mm).
2. Where the exterior walls are braced with sheathing panels in accordance with Section R602.12.2 and areas between bracing units are covered with other materials, the minimum length of a bracing unit shall be 4 feet (1219 mm).

R602.12.3.1 Multiple bracing units. Segments of wall compliant with Section R602.12.3 and longer than the minimum bracing unit length shall be considered as multiple bracing units. The number of bracing units shall be determined by dividing the wall segment length by the minimum bracing unit length. Full-height sheathed segments of

wall narrower than the minimum bracing unit length shall not contribute toward a bracing unit except as specified in Section R602.12.6.

R602.12.4 Number of bracing units. Each side of the circumscribed rectangle, as shown in Figure R602.12.1, shall have, at a minimum, the number of bracing units per Table R602.12.4 placed on the parallel exterior walls facing the side of the rectangle. Bracing units shall then be placed using the distribution requirements specified in Section R602.12.5.

TABLE R602.12.4
MINIMUM NUMBER OF BRACING UNITS ON EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE

STORY LEVEL	EAVE-TO RIDGE HEIGHT (FEET)	MINIMUM NUMBER OF BRACING UNITS ON EACH LONG SIDE ^{a,b}						MINIMUM NUMBER OF BRACING UNITS ON EACH SHORT SIDE ^{a,b}					
		Length of short side (ft) ^c						Length of long side (ft) ^c					
		10	20	30	40	50	60	10	20	30	40	50	60
	10	1	2	2	2	3	3	1	2	2	2	3	3
		2	3	3	4	5	6	2	3	3	4	5	6
	15	1	2	3	3	4	4	1	2	3	3	4	4
		2	3	4	5	6	7	2	3	4	5	6	7

For SI: 1 ft = 304.8 mm

- Interpolation shall not be permitted.
- Cripple walls or wood-framed basement walls in a walk-out condition of a one-story structure shall be designed as the first floor of a two-story house.
- Actual lengths of the sides of the circumscribed rectangle shall be rounded to the next highest unit of 10 when using this table.

R602.12.5 Distribution of bracing units. The placement of bracing units on exterior walls shall meet all of the following requirements as shown in Figure R602.12.5.

- A bracing unit shall begin no more than 12 feet (3658 mm) from any wall corner.
- The distance between adjacent edges of bracing units shall be no greater than 20 feet (6096 mm).
- Segments of wall greater than 8 feet (2438 mm) in length shall have a minimum of one bracing unit.

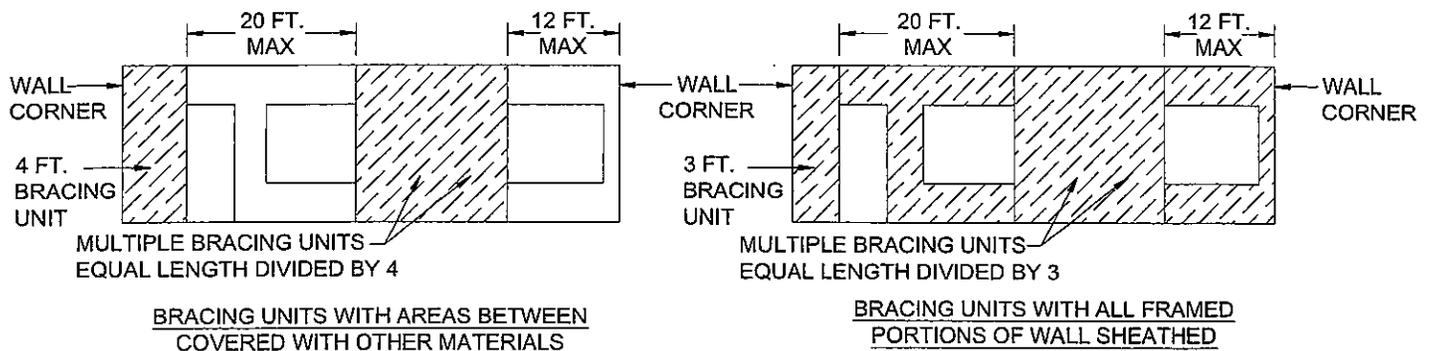


FIGURE R602.12.5
BRACING UNIT DISTRIBUTION

R602.12.6 Narrow panels. The bracing methods referenced in Section R602.10 and specified in Sections R602.12.6.1 through R602.12.6.3 shall be permitted when using simplified wall bracing.

R602.12.6.1 Method CS-G. Braced wall panels constructed as Method CS-G in accordance with Tables R602.10.4.1 and R602.10.5 shall be permitted for one-story garages when all framed portions of all exterior walls are sheathed with wood structural panels. Each CS-G panel shall be equivalent to 0.5 bracing units.

R602.12.6.2 Method CS-PF. Braced wall panels constructed as Method CS-PF in accordance with Section R602.10.6.4 shall be permitted when all framed portions of all exterior walls are sheathed with wood structural panels. Each CS-PF panel shall equal 0.5 bracing units. A maximum of four CS-PF panels shall be permitted on all the segments of walls parallel to each side of the circumscribed rectangle.

R602.12.6.3 Methods PFH and PFG. Braced wall panels constructed as Method PFH, in accordance with Section R602.10.6.2, and PFG, in accordance with Section R602.10.6.3, shall be permitted when bracing units are constructed using wood structural panels. Each PFH panel shall equal one bracing unit, and each PFG shall equal 0.75 bracing units.

R602.12.7 Lateral support. For bracing units located along the eaves, the vertical distance from the outside edge of the top wall plate to the roof sheathing above shall not exceed 9.25 inches (235 mm) at the location of a bracing unit unless lateral support is provided in accordance with Section R602.10.8.1.

R602.12.8 Stem walls. Masonry stem walls with a height and length of 48 inches (1219 mm) or less supporting a bracing unit or a Method CS-G, CS-PF or PFG braced wall panel shall be constructed in accordance with Figure R602.10.9. Concrete stem walls greater than 12 inches (305 mm) tall and less than 6 inches (152 mm) thick shall have reinforcement sized and located in accordance with Figure R602.10.9.

13. Delete Section R602.12.

14. Edit Section R703.7 as follows:

R703.7 Stone and masonry veneer, general. Stone and masonry veneer shall be installed in accordance with this chapter, Table R703.4 and Figure R703.7. These veneers installed over a backing of wood or cold-formed steel shall be limited to the first story above-grade and shall not exceed 5 inches (127 mm) in thickness. See Section Tables R602.10.3(3) and R602.10.3(4) for wall bracing requirements for masonry veneer for wood framed construction and Section R603.9.5 for wall bracing requirements for masonry veneer for cold formed steel construction.

15. Edit Table R802.11 as follows:

TABLE R802.11
REQUIRED STRENGTH OF TRUSS OR RAFTER CONNECTIONS TO RESIST WIND UPLIFT FORCES^{a, b, c, e, f}
(Pounds per connection)

(No change to table values.)

a. through e. (no change)

f. For wall to wall and wall to foundation connections, the capacity of the uplift connector is permitted to be reduced by 100 pounds for each full wall above. (For example, if a 600 pound rated connector is used on the roof framing, a 500 pound rated connector is permitted at the next floor level down.)

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-310.6(R602.10.6)**

Nature of Change:

To add a prescriptive method for the construction of stem walls under the IRC using anchors in lieu of reinforcing steel in the footings.

Proponent: Chris Snidow, representing the Henrico County Building Department

Staff Comments:

The proposal was not received in time to be vetted through the workgroup process, but was reviewed by the proponents of the braced wall code change to make sure no conflict was present between the two proposals. While no conflict is present, it was noted that this proposal did not appear to be based on any engineering studies to substantiate the methodology used is equivalent to that prescribed by the wall bracing provisions. This type of alternative is typically approved through the modification process or with the use of an ICC Evaluation Services Report.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-310.6(R602.10.6)

Proponent Information

(Check one): Individual Government Entity Company

Name: L. Christian Snidow, P. E.

Representing: Henrico County Building Inspections Dept.,
Plan Review Office

Mailing Address: P O Box 90775 Henrico, VA 23273-0775

Email Address: sni@co.henrico.va.us

Telephone Number: 804-501-4363

Proposal Information

Code(s) and Section(s): Virginia New Construction Code (IRC) R602.10.6

Proposed Change (including all relevant section numbers, if multiple sections):

R602.10.6 Braced wall panel support. Braced wall panels shall be supported as follows:

1. Braced wall panels shall be permitted to be supported on cantilevered floor joists meeting the cantilever limits of Section R502.3.3 provided joists are blocked at the nearest bearing wall location.
2. Elevated post or pier foundations supporting braced wall panels shall be designed in accordance with accepted engineering practice.
3. Masonry stem walls supporting braced wall panels with a length of less than 48 inches (1220 mm) ~~or less~~ shall be reinforced in accordance with Figure R602.10.6. Masonry stem walls supporting braced wall panels with a length equal to or greater than 48 inches (1220 mm) shall be constructed in accordance with Section R403.1. Braced wall panels constructed in accordance with Methods ABW and IPF shall not be permitted to attach to masonry stem walls.

Exception: As an alternative to the Optional Stem Wall Reinforcement in Fig. R602.10.6, a post-installed adhesive anchoring system shall be permitted to be installed in accordance with the manufacturer's instructions. Not fewer than two anchors shall be installed. Anchors shall be located within 12 inches of each end of the stem wall. Each anchor shall be rated for an allowable tension load of not less than 1,000 pounds (4,448 N). The top course of masonry units shall form a bond beam reinforced with not less than 1- #4 rebar. Masonry cells containing anchors and the bond beam shall be filled solid with concrete grout.

Supporting Statement (including intent, need, and impact of the proposal):

The stem wall reinforcement details provided in Figure R602.10.6 present a variety of obstacles in terms of execution and coordination of work that will be extremely difficult, if not impossible, for most residential footing and masonry contractors to execute successfully. This is because the anchors shown in every illustration in the figure would be installed when the concrete for the

footing is initially poured. At that stage of construction, it is unlikely that the installer would be able to precisely locate the rebar or threaded rod to position it where it would align with the cores of the hollow masonry stem wall constructed at a later time. The proposed exception provides a prescribed alternative that would allow the footings to be poured, the masonry wall laid out and the exact position of the cmu cores located. Several manufacturers (Hilti, Simpson, USP) produce post-installed adhesive anchoring systems that consist of threaded rod bolts of various sizes and proprietary adhesives. These systems typically involve drilling a hole into the cured concrete to a specified depth and injecting a given quantity of epoxy or other proprietary adhesive compound. The threaded rod is inserted into the adhesive, which is then allowed to cure. The obvious advantage to this approach is the masonry contractor would be able to install an effective anchor in the precise location where it is needed. This stem wall reinforcement will occur most frequently at portal frame openings. Therefore, the minimum tension load rating for the anchoring system is specified to be 1,000 pounds to be consistent with the requirement for the hold down strap installed at the header of a portal frame opening.

The minimum braced wall panel length in traditional wood-framed construction is 48 inches. With regard to the continuously sheathed bracing methods, no valid reason has been put forth as to justify the need for stem wall reinforcement when a braced wall panel is 48 inches in length but not if the panel were 48-1/32 inches in length. The submitter is not attempting to argue against stem wall reinforcement, only that the stem wall reinforcement called for in R602.10.6 should be limited to panels that are **less** than 48 inches. This change relieves the builder of a substantial burden in terms of not having to execute a complicated anchoring detail where a 4' panel is installed. Moving the line for this requirement from exactly 48 inches to slightly less than 48 inches does not change the foundation loading to the degree that the structural strength of the building would be adversely affected.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-310.6(E3902.11)**

Nature of Change:

To retain the arc-fault circuits requirements of the 2006 IRC just limited to bedroom installations rather than use the 2009 IRC requirements of through-out the house.

Proponent: Mike Toalson, Home Builders Association of Virginia

Staff Comments:

The proposal was not received in time to be considered by the workgroups, however, the issue was identified as a significant change between the 2006 IRC and 2009 IRC at the workgroup meetings and was debated. Representatives of the International Association of Electrical Inspectors suggested that the cost increase was minimal and was warranted by the extra safety provided. The home builder representatives indicated that now is not the time to increase housing costs given the current economic situation.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-310.6(E3902.11)

Proponent Information

(Check one): Individual Government Entity Company

Name: Mike Toalson

Representing: HBAV

Mailing Address: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): 2009 USBC VCC IRC E3902.11 and 2008 NEC 210.12(B0)

Proposed Change (including all relevant section numbers, if multiple sections):

Amend to read: All branch circuits that supply 120 volt, single-phase, 15- and 20-ampere outlets installed in bedrooms shall be protected by a combination type arc-fault interrupter installed to provide protection of the branch circuit.

Supporting Statement (including intent, need, and impact of the proposal):
The 2009 IRC and the 2008 NEC have expanded the use of arc-fault devices to all habitable rooms of a dwelling unit. We prefer to leave them required for bedrooms as currently is done in the 2006 USBC and the 2005 NEC. We do dispute the estimated cost of these additional devices in other habitable rooms of only a few hundred dollars and believe it is closer to twice that estimate when you have to include the cost of the devices, installation and overhead. Arc-fault devices were just required in bedrooms in the 2006 USBC/2005 NEC and it might be prudent to see if there are technical issues with their effectiveness as they are now just being widely used and prior to their mandate to be being required, there were issues where the devices were making false reads from the operation of some appliances.

Submittal Information

Date Submitted: 1-25-10

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center

Email Address: tsu@dhcd.virginia.gov

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-310.6(Appendix O)(a) and (b)**

Nature of Change:

Two proposals to use Appendix O of the International Residential Code, the first for gray water recycling systems and the second for both gray water recycling systems and rain water re-use.

Proponent: Guy Tomberlin, Fairfax County Building Department, representing VPMIA and VBCOA's Plumbing/Mechanical/Fuel Gas Committees for (a) and representing only himself for (b)

Staff Comments:

Appendix O of the IRC, for gray water recycling systems, was added to the IRC in the 2006 edition. Virginia did not make it part of the USBC. This issue has been discussed at the workgroup meetings and the first proposal is to provide standards for the voluntary use of gray water recycling systems. The second proposal is to also use the appendix for rain water re-use, which essentially uses the same technology as gray water systems. The Department has formed a sub-workgroup of state agency representatives from the Department of Environmental Quality, the Department of Conservation and Recreation and the Department of Health and other interested parties to determine whether functional design issues are present and need to be addressed, such as protection of the potable water supply outside of a building or structure and the disposal of re-used gray water or rain water. The sub-workgroup is still meeting to develop recommendations concerning these proposals.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-310.6 (Appendix O)(a)

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association Plumbing/Mechanical/Fuel Gas Committees

Mailing Address: 12055 Government Center Parkway, Suite 630
Fairfax, VA 22035

Email Address: guy.tomberlin@fairfaxcounty.gov

Telephone Number: 703-324-1611

Proposal Information Include Appendix

Code(s) and Section(s): Incorporate Appendix O of the IRC into the body of the code.

Proposed Change (including all relevant section numbers, if multiple sections):

New USBC/IRC Section R329.1 Use of Appendix O for Gray water recycling systems. In addition to the other applicable provisions of this code, gray water recycling systems shall comply with the provisions in Appendix O.

Supporting Statement (including intent, need, and impact of the proposal): This technology has developed into a system that results in a safe installation with a huge energy conserving advantage. In today's "Green" environment this is a much needed step in the right direction for plumbing systems. Currently being located in an Appendix results in the requirements for a code modification review each time one of these systems is proposed. Once this option is inserted into the body of the code it becomes a designers choice whether to take advantage of recycling or not. This proposal has also been submitted on the National level. The impact is this creates another option for industry to utilize, enabling greater energy/water savings.

Submittal Information

Date Submitted: July 2, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: E-310.6 (Appendix O)(b)

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: Myself

Mailing Address: 12055 Government Center Parkway, Suite 630
Fairfax, VA 22035

Email Address: guy.tomberlin@fairfaxcounty.gov

Telephone Number: 703-324-1611

Proposal Information Include Appendix into the main body of the code

Code(s) and Section(s): Incorporate Appendix O of the IRC into the body of the code.

Proposed Change (including all relevant section numbers, if multiple sections):

New USBC/IPC

Section R329.1 Use of Appendix C for Gray water recycling systems. In addition to the other applicable provisions of this code, gray water recycling systems shall comply with the provisions in Appendix C of the IPC.

329.1.2 Rain water re-use. Where approved rainwater re-use shall be permitted when installed in accordance with the IPC Appendix C provisions for gray water recycling systems. Rainwater and gray water systems shall not be interconnected.

Note to staff – renumber existing sections accordingly.

Supporting Statement (including intent, need, and impact of the proposal): This technology has developed into a system that results in a safe installation with a huge energy conserving advantage. In today's "Green" environment this is a much needed step in the right direction for plumbing systems. Currently being located in an Appendix results in the requirements for a code modification review each time one of these systems is proposed. Once this option is inserted into the body of the code it becomes a designers choice whether to take advantage of recycling or not. The words "where approved" are incorporated into the text due to the facts that other agencies may be involved in the decision making process such as Health Dept or Department of Environmental Quality. The impact is this creates another option for industry to utilize, enabling greater energy/water savings.

Submittal Information

Date Submitted: July 2, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-403.3.5**

Nature of Change:

To retain the current dimensions for fire command rooms in high-rise buildings and in other buildings subject to the requirement.

Proponent: Shaun Pharr, representing the Apartment and Office Building Association of Metropolitan Washington DC and the Virginia Apartment Management Association

Staff Comments:

While the proposal was not submitted early during the workgroup process, this was an issue identified as a significant difference between the 2006 and 2009 International Building Code and it was discussed at the workgroup meetings. Some pros and cons identified were that the larger rooms were necessary as command centers now serve multiple functions and larger rooms could tend to be used for storage, which could be a hazard.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-403.3.5

Proponent Information

(Check one): Individual Government Entity Company

Name: W. Shaun Pharr

Representing: The Apartment and Office Building Assn. of
Metropolitan Washington DC and the Virginia Apartment
Management Association

Mailing Address: 1050 17th Street NW Suite 300 Washington, DC 20036

Email Address: spharr@aoba-metro.org

Telephone Number: (202) 296-3390

Proposal Information

Code(s) and Section(s): IBC/IFC 403.3.5, 911.1.3

Proposed Change (including all relevant section numbers, if multiple sections):
Change 200 square feet to 96 square feet and 10 feet to 8 feet

Supporting Statement (including intent, need, and impact of the proposal):

No evidence has been presented to show that the size of fire command rooms in Virginia buildings built under current and previous codes has been so inadequate as to now be more than doubled from what the USBC has previously required. For various reasons, the use of fire command centers has arguably diminished in recent years (e.g. use of portable radios/phones rather than in-building telephone system, active smoke control/management systems not required; continued miniaturization of panel circuitry etc. reducing equipment space needs). Fire command centers' location in street-front space on exterior of buildings means they occupy space that is often the most expensive leased space on a per square foot basis in the building. Absent compelling evidence that fire command centers in Virginia buildings must be made significantly larger, current VSBC size requirements should be maintained.

Submittal Information

Date Submitted: January 25, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-403.4.4(a) and C-403.4.4(b)**

Nature of Change:

Two proposals to coordinate the emergency communication requirements in the 2006 USBC with the 2009 IBC.

Proponent: J. Kenneth Payne, Jr., AIA, representing VSAIA (C-403.4.4(a)) and Shaun Pharr, representing the Apartment and Office Building Association of Metropolitan Washington DC and the Virginia Apartment Management Association (C-403.4.4(b))

Staff Comments:

While staff did coordinate the 2006 emergency communication requirements with the 2009 IBC in the proposed regulations, Section 403.4.4 in the IBC was inadvertently overlooked, so Mr. Payne's proposal is appropriate except that there is no need to renumber the subsequent subsections as that would cause problems with cross-references. Mr. Pharr's proposal is identical except that he recommends deleting Section 510 in the IFC in addition to Section 403.4.4 of the IBC. That is unnecessary as the proposed regulations already renumber the IFC provision to keep the 2006 requirements of the Virginia Statewide Fire Prevention Code for emergency communications.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-403.4.4(a)

Proponent Information

(Check one): Individual Government Entity Company

Name: J. Kenneth Payne, Jr., AIA

Representing: VSAIA

Mailing Address: 3200 Norfolk Street, Richmond, Virginia 23230

Email Address: kpayne@moseleyarchitects.com

Telephone Number: 804-794-7555

Proposal Information

Code(s) and Section(s): 2009 IBC Section 403.4.4 – Emergency responder radio coverage

Proposed Change (including all relevant section numbers, if multiple sections):

~~**[F] 403.4.4 Emergency responder radio coverage.** Emergency responder radio coverage shall be provided in accordance with Section 510 of the *International Fire Code*.~~

Renumber subsequent 403.4 subsection numbers and coordinate with cross references throughout the IBC.

Supporting Statement (including intent, need, and impact of the proposal):

Per 2006 VCC Section 913.1 and the definition of *emergency communication equipment*, emergency responder radio coverage is not included in the VCC requirements. Therefore, the above referenced section in the IBC does not comport with the VCC.

Submittal Information

Date Submitted: January 19, 2010 (revised)

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-403.4.4(b)

Proponent Information

(Check one): Individual Government Entity Company

Name: W. Shaun Pharr

Representing: The Apartment and Office Building Assn. of Metropolitan Washington DC and the Virginia Apartment Management Association

Mailing Address: 1050 17th Street NW Suite 300 Washington, DC 20036

Email Address: spharr@aoba-metro.org

Telephone Number: (202) 296-3390

Proposal Information

Code(s) and Section(s): IBC Sec. 403.4.4, IFC 510

Proposed Change (including all relevant section numbers, if multiple sections):
Delete both sections

Supporting Statement (including intent, need, and impact of the proposal):

The provisions currently found in the VSBC are the product of extensive negotiations and compromises engaged in by all key Virginia stakeholders in a previous code cycle-- something which cannot be said for the provisions in the new IBC/IFC. The current VSBC provisions should be retained to avoid confusion and maintain continuity.

Submittal Information

Date Submitted: January 25, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-420.4**

Nature of Change:

To require Group I-1 buildings used as Assisted Living Facilities to provide at least one smoke compartment.

Proponent: DHCD Staff

Staff Comments:

The proposal stems from discussions at a sub-workgroup for assisted living facilities and is intended to address both the fact that in reality many occupants of assisted living facilities need assistance in evacuating and that an inexpensive alternative should be provided to move such residents to a safe part of the building in the event of an emergency. This proposal could affect the implementation of fire drills also by permitting the movement of occupants to the smoke compartment instead of having to exit the building. The proposal is more of a place-holder as an incomplete proposal to provide an alternative to other more problematic options of either reclassifying assisted living facilities or changing the provisions of the code for assisted living facilities. Provisions would have to be added to this proposal to specify under what circumstances the compartmentation would be available as an alternative to exiting and language would have to be added to address the capability of the occupants in needing assistance in exiting rather than being able to exit without assistance.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-420.4

Proponent Information

(Check one): Individual Government Entity Company

Name Emory Rodgers, DHCD _____

Representing: Workgroup 2 - 12/1/09

Mailing Address: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): USBC VCC 419.4 Smoke Compartments – New Section for Group I-1 Assisted Living Facilities

Proposed Change (including all relevant section numbers, if multiple sections):
Add Section 419.4 Smoke Compartments.

420.4: Smoke Compartments. At least one unrated smoke compartment per floor having a maximum fire area of 20,000 square feet and a maximum travel distance of 150 feet shall be constructed of smoke partitions in accordance with Section 710, and openings shall be protected in accordance with Section 710.5. Doors within such smoke compartments shall be smoke and draft controlled doors in accordance with Section 710.5.2, having self- or automatic-smoke activated closers in accordance with Section 715.4.7.3.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal addresses the primary life safety issue/concern of smoke migration, including in sprinkled buildings, as discussed in past work group meetings and at the ICC. Sprinkled I-1 and R-4/assisted living occupancies continue to achieve an excellent fire record that may pose a valid argument in favor of no additional action. This code change proposal coincides with the code change proposals in definitions that finally recognize the practical reality of residents needing limited assistance when they are not chronically ill or mentally disabled, but require some assistance with daily living functions and are generally slower in mobility and evacuation. In addition, the smoke compartments would offer an internal area of refuge; the existing requirement for external evacuation during fire drills under the SFPC could be revised to permit internal evacuation during fire drills to reduce the risks of injury to and health of the residents.

Submittal Information

Date Submitted: 12/18/09

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-422(a) and C-422(b)**

Nature of Change:

Two proposals to permit the typical doctor and dentist offices to be exempt from the new requirements in the 2009 IBC for ambulatory health care facilities, which would require a sprinkler system and other safeguards.

Proponent: Jerry Canaan/Karah Gunther, representing the Medical Society of Virginia (C-422(a)) and Shaun Pharr, representing the Apartment and Office Building Association of Metropolitan Washington DC and the Virginia Apartment Management Association (C-422(b))

Staff Comments:

While the proposals were not received in time to be vetted through the workgroup process, the issue was identified as a significant difference between the 2006 and 2009 IBC and was discussed at the workgroup meetings with the fire services representatives generally supporting the new 2009 IBC requirements. The Canaan/Gunther proposal adds specific language and is more of a complete proposal while Mr. Pharr's proposal was more of a placeholder to keep the issue on the table.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-422(a)

Proponent Information (Check one): Individual Government Entity Company

Name: Jerry Canaan/Karah Gunther Representing: Medical Society of Virginia

Mailing Address: 4701 Cox Road, Suite 400, Glen Allen, VA 23060

Email Address: jcanaan@hdjn.com Telephone Number: 804.967.9604

Proposal Information

Code(s) and Section(s): 2009 IBC Section 202 (Definition of Ambulatory Health Care Facility)

Proposed Change (including all relevant section numbers, if multiple sections):

Change the definition to read as shown:

Ambulatory Health Care Facility. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to individuals who are rendered incapable of self-preservation other than doctor and dentist offices where procedures will incapacitate patients for less than a four-hour period and adequate staffing is provided to assist in evacuation if necessary.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal would leave the typical doctor and dentist office as a Group B occupancy without the added requirements for Ambulatory Health Care Facilities, which are more for hospital-like surgical procedures. The safety record for Group B doctor and dentist offices is excellent and staffing levels are adequate assist patients undergoing minor procedures should the need to evacuate arise.

Submittal Information

Date Submitted: January 25, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C - 422(b)

Proponent Information

(Check one): Individual Government Entity Company

Name: W. Shaun Pharr

Representing: The Apartment and Office Building Assn. of Metropolitan Washington DC and the Virginia Apartment Management Association

Mailing Address: 1050 17th Street NW Suite 300 Washington, DC 20036

Email Address: spharr@aoba-metro.org

Telephone Number: (202) 296-3390

Proposal Information

Code(s) and Section(s): IBC Secs. 202, 304.2 Definition of AHCFs; 304.1 or 903.2.2 B Occupancy

Proposed Change (including all relevant section numbers, if multiple sections):
Relocate from 202 to 304.2 Ambulatory Health Care Facility: Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to individuals who are rendered incapable of self-preservation by the services provided.

Amend 304.1 Exception. Professional Services

Amend 903.2.2 Exception. Professional Services

Supporting Statement (including intent, need, and impact of the proposal):
This change will clarify that medical office buildings or tenant spaces in an office or apartment building would not be considered as AHCFs and thus require sprinklering because four or more patients might be momentarily under sedation. The intent of the section as currently written appears ambiguous; if it is intended to require sprinklering of doctors' and dentists' offices, for example, no record has been presented as to frequency of fires in such spaces and difficulties in effecting patient evacuation, etc. that would justify such a requirement in Virginia.

Submittal Information

Date Submitted: January 25, 2010

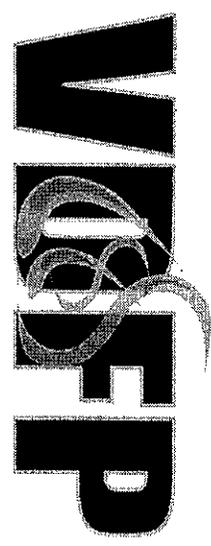
The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150





Virginia Department of Fire Programs

Structural Fires with Business Property Use By Building Height Summary, Virginia, 2004 - 2009 *

Year	Building Height - Stories	Total	Percent	Total Property Loss	Total Contents Loss	Total Fire Dollar Loss	Civilian Fire Injuries	Civilian Fire Deaths	Fire Service Injuries	Fire Service Deaths
2004	1 Story	102	72.9%	\$2,739,701	\$2,115,052	\$4,854,753	1	0	1	0
	2 Stories	21	15.0%	\$506,610	\$151,600	\$658,210	0	0	0	0
	3 - 6 Stories	7	5.0%	\$53,500	\$52,010	\$105,510	0	0	0	0
	7 Stories or More	0	0.0%	\$0	\$0	\$0	0	0	0	0
	Unknown or Not Reported	10	7.1%	\$13,600	\$3,702	\$17,302	0	0	0	0
2004 Total		140	100.0%	\$3,313,411	\$2,322,364	\$5,635,775	1	0	1	0
2005	1 Story	137	66.5%	\$5,144,707	\$4,652,705	\$9,797,412	5	0	4	0
	2 Stories	32	15.5%	\$1,017,351	\$1,274,001	\$2,291,352	1	0	3	0
	3 - 6 Stories	10	4.9%	\$283,500	\$2,027,551	\$2,311,051	0	0	0	0
	7 Stories or More	10	4.9%	\$203,000	\$168,100	\$371,100	0	0	1	0
	Unknown or Not Reported	17	8.3%	\$6,019,550	\$6,034,050	\$12,053,600	0	0	0	0
2005 Total		206	100.0%	\$12,668,108	\$14,156,407	\$26,824,515	6	0	8	0
2006	1 Story	153	68.3%	\$5,166,368	\$5,028,785	\$10,195,153	5	0	6	0
	2 Stories	35	15.6%	\$2,852,000	\$937,450	\$3,789,450	2	0	4	0
	3 - 6 Stories	12	5.4%	\$75,350	\$337,000	\$412,350	0	0	0	0
	7 Stories or More	9	4.0%	\$282,500	\$835,056	\$1,117,556	0	0	0	0
	Unknown or Not Reported	15	6.7%	\$69,901	\$19,001	\$88,902	0	0	0	0
2006 Total		224	100.0%	\$8,446,119	\$7,157,292	\$15,603,411	7	0	10	0
2007	1 Story	152	74.5%	\$5,124,949	\$2,292,078	\$7,417,027	2	0	2	0
	2 Stories	29	14.2%	\$447,001	\$315,827	\$762,828	1	0	3	0
	3 - 6 Stories	11	5.4%	\$37,601	\$14,202	\$51,803	0	0	0	0
	7 Stories or More	7	3.4%	\$6,880	\$3,670	\$10,550	0	0	0	0
	Unknown or Not Reported	5	2.5%	\$126,205	\$45,101	\$171,306	0	0	0	0
2007 Total		204	100.0%	\$5,742,656	\$2,670,878	\$8,413,534	3	0	5	0
2008	1 Story	169	71.0%	\$9,756,987	\$6,760,307	\$16,517,294	11	3	4	0
	2 Stories	37	15.5%	\$4,502,801	\$3,135,826	\$7,638,426	5	1	5	0
	3 - 6 Stories	18	7.6%	\$1,519,101	\$455,126	\$1,974,227	0	0	0	0
	7 Stories or More	6	2.5%	\$35,700	\$8,500	\$44,200	0	0	1	0
	Unknown or Not Reported	8	3.4%	\$679,165	\$211,050	\$890,215	0	0	0	0
2008 Total		238	100.0%	\$16,493,554	\$10,570,808	\$27,064,362	16	4	10	0
2009 *	1 Story	159	67.4%	\$10,794,467	\$7,439,380	\$18,233,847	4	1	10	0
	2 Stories	54	22.9%	\$3,882,451	\$3,450,603	\$7,333,054	0	0	1	0

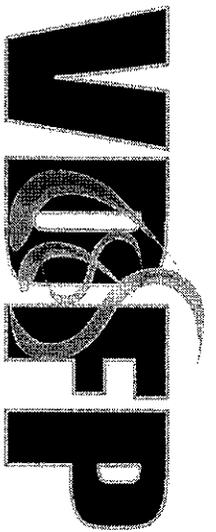
Prepared by the Information and Statistics Section

Structural Fires with Business Property Use By Building Height Summary, Virginia, 2004 - 2009 *

Year	Building Height - Stories	Total	Percent	Total Property Loss	Total Contents Loss	Total Fire Dollar Loss	Civilian Fire Injuries	Civilian Fire Deaths	Fire Service Injuries	Fire Service Deaths
2009 *	3 - 6 Stories	14	5.9%	\$21,600	\$50,500	\$72,100	0	0	0	0
	7 - 10 Stories or More	5	2.1%	\$10,300	\$80,100	\$190,400	0	0	0	0
	Unknown or Not Reported	4	1.7%	\$5,500	\$16,500	\$22,000	0	0	0	0
2009 Total		236	100.0%	\$14,814,318	\$11,037,083	\$25,851,401	4	1	11	0
Grand Total		1,248	100.0%	\$61,478,146	\$47,914,832	\$109,392,978	37	5	45	0

Note: Data is compiled from all fire incidents reported to the Virginia Fire Incident Reporting System (VFIRS) for 2004-2008 as of 04/06/2009, and 2009 as of 02/08/2010. Data for 2009 is still considered preliminary. Aid given (mutual or automatic) incidents were excluded and fire exposure incidents were included with the numbers. Structure fires include incidents with incident type coded as 110, 111, 120-123 and with structure type codes as 1 or 2. Business includes all incidents coded with mercantile, business property use (Series 5).

* Data for 2009 is considered preliminary since we are still receiving reports from fire departments and the data is not final. Caution should be exercised in releasing and comparing the numbers.



Virginia Department of Fire Programs

Structural Fires with Business Property Use By Building Height By Automatic Extinguishing System (AES) Presence, Virginia, 2004 - 2009 *

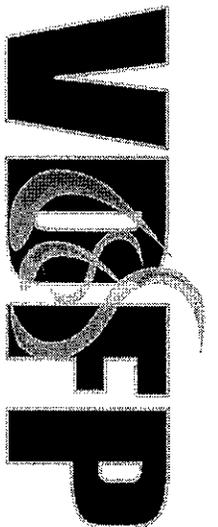
Year	Building Height - Stories	Present	Note Present	Unknown or Not Reported	Grand Total	Percent
2004	1 Story	23	73	6	102	72.9%
	2 Stories	6	14	1	21	15.0%
	3 - 6 Stories	3	4	0	7	5.0%
	7 Stories or More	0	0	0	0	0.0%
	Unknown or Not Reported	1	8	1	10	7.1%
2004 Total		33	99	8	140	100.0%
2005	1 Story	28	97	12	137	66.5%
	2 Stories	7	22	3	32	15.5%
	3 - 6 Stories	8	2	0	10	4.9%
	7 Stories or More	5	5	0	10	4.9%
	Unknown or Not Reported	6	8	3	17	8.3%
2005 Total		54	134	18	206	100.0%
2006	1 Story	27	103	23	153	68.3%
	2 Stories	10	22	3	35	15.6%
	3 - 6 Stories	6	2	4	12	5.4%
	7 Stories or More	2	6	1	9	4.0%
	Unknown or Not Reported	4	9	2	15	6.7%
2006 Total		49	142	33	224	100.0%
2007	1 Story	36	90	26	152	74.5%
	2 Stories	5	19	5	29	14.2%
	3 - 6 Stories	5	4	2	11	5.4%
	7 Stories or More	3	3	1	7	3.4%
	Unknown or Not Reported	3	1	1	5	2.5%
2007 Total		52	117	35	204	100.0%
2008	1 Story	36	105	28	169	71.0%
	2 Stories	16	18	3	37	15.5%
	3 - 6 Stories	7	9	2	18	7.6%
	7 Stories or More	3	3	0	6	2.5%
	Unknown or Not Reported	1	5	2	8	3.4%
2008 Total		63	140	35	238	100.0%
2009 *	1 Story	32	94	33	159	67.4%
	2 Stories	12	33	9	54	22.9%

Structural Fires with Business Property Use By Building Height By Automatic Extinguishing System (AES) Presence, Virginia, 2004 - 2009 *

Year *	Building Height - Stories	Present	None Present	Unknown or Not Reported	Grand Total	Percent
2009 *	3 - 6 Stories	8	4	2	14	5.9%
	7 Stories or More	1	4	0	5	2.1%
	Unknown or Not Reported	1	1	2	4	1.7%
2009 Total		54	136	46	236	100.0%
Grand Total		305	768	175	1,248	100.0%
Percent		24.4%	61.5%	14.0%	100.0%	

Note: Data is compiled from all fire incidents reported to the Virginia Fire Incident Reporting System (VFIRS) for 2004-2008 as of 04/06/2009, and 2009 as of 02/08/2010. Data for 2009 is still considered preliminary. Aid given (mutual or automatic) incidents were excluded and fire exposure incidents were included with the numbers. Structure fires include incidents with incident type coded as 110, 111, 120-123 and with structure type codes as 1 or 2. Business includes all incidents coded with mercantile, business property use (Series 5).

* Data for 2009 is considered preliminary since we are still receiving reports from fire departments and the data is not final. Caution should be exercised in releasing and comparing the numbers.



Virginia Department of Fire Programs

Structural Fires with Doctor Offices Summary, Virginia, 2004 - 2009 *

Year	Total	Percent	Total Property Loss	Total Contents Loss	Total Fire Dollar Loss	Civilian Fire Injuries	Civilian Fire Deaths	Fire Service Injuries	Fire Service Deaths
2004	4	13.8%	\$2,001	\$1	\$2,002	0	0	0	0
2005	7	24.1%	\$36,700	\$20,500	\$57,200	0	0	0	0
2006	5	17.2%	\$50,500	\$53,000	\$103,500	0	0	0	0
2007	7	24.1%	\$70,200	\$5,300	\$75,500	0	0	0	0
2008	2	6.9%	\$510,000	\$300,200	\$810,200	0	0	0	0
2009 *	4	13.8%	\$2,500,200	\$4,000,000	\$6,500,200	0	0	0	0
Grand Total	29	100.0%	\$3,169,801	\$4,379,001	\$7,548,802	0	0	0	0

Structural Fires with Doctor Offices By Automatic Extinguishing System (AES) Presence, Virginia, 2004 - 2009 *

Year	Present	None Present	Unknown or Not Reported	Grand Total	Percent
2004	2	1	1	4	13.8%
2005	2	5	0	7	24.1%
2006	0	3	2	5	17.2%
2007	2	4	1	7	24.1%
2008	0	1	1	2	6.9%
2009 *	0	4	0	4	13.8%
Grand Total	6	18	5	29	100.0%
Percent	20.7%	62.1%	17.2%		

Note: Data is compiled from all fire incidents reported to the Virginia Fire Incident Reporting System (VFIRS) for 2004-2008 as of 04/06/2009, and 2009 as of 02/08/2010. Data for 2009 is still considered preliminary. Aid given (mutual or automatic) incidents were excluded and fire exposure incidents were included with the numbers. Structure fires include incidents with incident type coded as 110, 111, 120-123 and with structure type codes as 1 or 2. Doctor offices include all incidents with property use coded as 342 (Doctor, dentist, or oral surgeon office), 343 (Hemodialysis unit, free standing, not a part of a hospital), and 340 (Clinics, doctors' offices, hemodialysis centers, other).

* Data for 2009 is considered preliminary since we are still receiving reports from fire departments and the data is not final. Caution should be exercised in releasing and comparing the numbers.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-424(a) through (d)**

Nature of Change:

To establish specific requirements for the installation of large above-ground liquid fertilizer storage tanks.

Proponent: DHCD Staff, sub-workgroup on fertilizer tanks

Staff Comments:

The proposals are a placeholder while a sub-workgroup works on more detailed language. This issue was raised through legislation just introduced to the 2010 General Assembly. Staff is attempting to work with all interested parties to see if a regulatory change will resolve the concerns.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-424 (a)

Proponent Information (Check one): Individual Government Entity Company

Name: DHCD Staff/sub-workgroup fert. tanks Representing: _____

Mailing Address: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): USBC VCC/IBC 422 - NEW SECTION - ALFST & USBC VMC - NEW SECTION - 309 - ALFST

Proposed Change (including all relevant section numbers, if multiple sections):

USBC Section 422.0 Above ground liquid fertilizer storage tanks. (WHAT ABOUT BELOW GROUND).

This section shall regulate the installation, retrofitting, repair, abandonment and removal of ALFST's as defined in this chapter in order to prevent discharge and when a discharge occurs to provide for the detection and remediation at the earliest possible stage. This minimizes fertilizer displacement into surface and ground water protecting human health and safety.

422.1 Definitions. Add: ALFST, API 653, Capacity, Discharge, Fertilizer, Liquid Fertilizer, Operator, Owner, Secondary Containment Tank.

422.2 ALFST Construction and Installation Standards. Each ALFST container and appurtenances shall be constructed and installed to prevent the discharge of liquid fertilizer. Each ALFST container and appurtenances shall be constructed of materials that are resistant to corrosion, puncture or cracking.

422.2.1 All ALFST's shall be built, installed, altered, repaired, retrofitted and removed in accordance with API 653. All ALFST's shall be strength tested in accordance with the applicable code or standard under which they were built before being placed into use. (DEQ REGULATIONS)

422.2.2 Converting Existing Tanks to ALFST's. Construction documents shall be submitted for approval to the building official prior to use of a tank for liquid fertilizer storage in accordance with API 653. (WOULD API 653 BE THE APPLICABLE STANDARD?) WHAT IS TO BE IN USBC VMC 309 ALFST NEW SECTION?

Supporting Statement (including intent, need, and impact of the proposal):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-424 (b)

Proponent Information (Check one): Individual Government Entity Company

Name: DHCD Staff/sub-workgroup fert. tanks Representing: _____

Mailing Address: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): USBC VCC Chapter 35 and VMC

Proposed Change (including all relevant section numbers, if multiple sections):

Add for IBC 35 reference standards the API 650 and 653 standards for ALFST's.

Supporting Statement (including intent, need, and impact of the proposal): Now not listed for ALFST in the IBC. Provides construction standard. Is in the IFC for refineries only. There maybe other standards to reference or regulations can prescribe standards. This responds to the Chesapeake spill and HB 206, 1211 and SB198.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-424(C)

Proponent Information (Check one): Individual Government Entity Company

Name: DHCD Staff/sub-workgroup fert. tanks Representing: _____

Mailing Address: _____

Email Address: _____ Telephone Number: _____

Proposal Information

Code(s) and Section(s): SFPC 107.2, T107.2

Proposed Change (including all relevant section numbers, if multiple sections):

Add for Operational Permits: Above-ground Liquid Fertilizer Storage Tanks. An operational permit is required for storage of liquid fertilizer of 100,000 gallons or more.

Supporting Statement (including intent, need, and impact of the proposal): Now not listed for an operational permit. Would allow fire official to issue annual operational permit or for longer periods, to inspect and to charge a fee. Would be done under APR 653 standards. There maybe other standards to reference or regulations can prescribe standards. The SFPC and law allows already for localities to do these ordinances and they can be more stringent except for construction matters. This responds to the Chesapeake spill and HB 206, 1211 and SB198.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-424(d)

Proponent Information

(Check one): Individual Government Entity Company

Name: DHCD Staff/sub-workgroup fert. tanks

Representing: _____

Mailing Address: _____

Email Address: _____

Telephone Number: _____

Proposal Information

Code(s) and Section(s): SFPC CHAPTER 22, NEW SECTION - 2212

Proposed Change (including all relevant section numbers, if multiple sections):

2212 Definitions: Add all the definitions for ALFST, API 653, Capacity, Discharge, Fertilizer, Liquid fertilizer, operator, owner, secondary containment, tank.

2212.1 ALFST Operational permits. A fee may be assessed on each newly installed ALFST, on the conversion to an ALFST, on an ALFST returned to service after temporary or permanent closure or on transferred of ownership. The amount of the fee shall be reasonable and used solely to cover the costs of administering the program. Renewal of the operational permit shall be as provided for in the ordinance. Where an operational permit is required, the owner, operator or duly authorized representative shall have 30/60 days to obtain the operational permit.

2212.1.2 Operational permit application to include as a minimum:

1. ALFST owner, operator and duly authorized representative name, address, phone number and email.
2. Facility information name, address, contact person, phone number, email, type.
3. ALFST and piping information for storage capacity, type of liquid fertilizer, tank design and construction standards
4. Other information as maybe reasonable required by the fire official.
5. Owner certification of the information.

Existing ALFST tanks shall have an inspection for compliance in accordance with the code under which they were built or deemed to be safe to operate by the building official for safe construction and the fire official for safe operating conditions. (New)

2212.2 ALFST Discharge Contingency Plan. A locality by ordinance shall require a discharge liquid fertilizer contingency plan by the owner or operator that the owner or operator can take such steps as necessary to (i) protect the public health and the environment, (ii) respond to the threat of a discharge from the ALFST, (iii) contain, and (iv) clean up and mitigate a liquid fertilizer release within the shortest feasible time. The plan shall contain the following information, submitted to the locality as requested and available for inspection by the fire official:

1. Describe the storage, handling, disposal and incident handling practices. (are there standards in API653)
2. Name of the facility. Access roads from land and water, if appropriate.
3. Name and addresses along with contact information for the owner and operator who are authorized to act to implement containment and clean-up operations..
4. A physical description of the facility identifying the liquid fertilizer storage area, transfer location, control station and the above and below ground liquid fertilizer transfer piping within the facility.
5. An inventory and location of natural resources at risk.

6. An inventory of the facility's containment equipment and inventory control procedures.
7. Procedures to be followed upon detection of a discharge, for testing and inspection of all ALFST's and piping that could be expected to be a source of discharge; and,
8. Description of the security procedures used by the operator to avoid intentional or unintentional damage to the ALFST.

2212.3 Pollution Prevention Standards and Procedures, Inventory Control, and Inspections.

1. Each operator shall institute inventory control procedures capable of detecting a significant variation of inventory. A significant variation shall be considered a gain or loss of one percent of the individual ALFST's storage capacity. Inventory records shall be kept of incoming and outgoing volumes of liquid fertilizer from each ALFST. Each ALFST shall undergo an internal and external inspection. Inspections shall be conducted in accordance with the API Standard 653. Existing ALFST's shall undergo an internal and external inspection within two years (?) from the effective date of this code. Each new ALFST will have an inspection prior to filling the ALFST with liquid fertilizer. Thereafter, each ALFST will have an external inspection every five years and an internal inspection every ten years in accordance with API 653.
2. The operator or duly authorized representative shall conduct daily visual inspections (IS THIS NECESSARY ?). The person conducting the inspection shall document completion of the inspection and sign the ALFST records.
3. The operator shall establish a training program for those persons conducting the daily inspections. (STANDARD - HOW OFTEN TRAINED).
4. Secondary containment apparatus shall be maintained and certified to perform its function. The secondary containment area shall be adequate for the containment of the ALFST discharges, inspected and certified by a person complying with the qualifications required under API 653 or a design professional. (HOW OFTEN?)
5. Each owner or operator should institute safe fill, full shut down and transfer procedures that will ensure discharges resulting from ALFST refills or other product transfer operations do not occur. (HOW CAN THIS BE 100%?).

2212.4 Record Keeping. Each operator shall maintain the following ALFST records:

1. Records related to required measurements and inventory of liquid fertilizer in the ALFST.
2. Records related to the required tank and pipe testing and inspections.
3. Records related to discharge events and other discharge of liquid fertilizer for the ALFST.
4. Records related to the secondary containment tank and inspections.
5. Records implementing the monitoring of each discharge and the liquid discharge contingency plan.
6. Records related to the training of individuals.
7. Any other records required by the fire official to be kept by the owner or operator.
8. Records shall be retained for three years.

2212.5 Notifications. An owner or operator shall notify the fire official at least 60 days prior to any ALFST:

1. retrofit and any repairs;
2. upgrades, replacements, relocating or repositioning of an existing ALFST;
3. Conversion of an existing storage tank to an ALFST;
4. Change in service and operation conditions that effect the ALFST's sustainability for service, such as gravity, corrosion or temperature.

2212.5.1 Temporary Closure and Out of Service. Any ALFST taken out of service and liquid fertilizer in the ALFST, connected piping and appurtenances shall be removed and thoroughly cleaned. The ALFST shall be clearly labeled "out of Service". Prior to placing back into service the ALFST shall be inspected and tested in accordance with API 653

2212.5.2 (NOTE REPLICATE IN USBC 422 AND 422.3) Permanent Closure of an ALFST. Unless removed, permanent closures of ALFST's shall be in accordance with API 653 and the following:

1. Liquid fertilizer vapors shall be removed from the ALFST and associated piping. All waste shall be removed in accordance with applicable state and federal regulations.
2. Adequate ventilation shall be provided in order to ensure the ALFST remains vapor free.
3. Vent lines shall remain open and maintained.

4. All access openings shall be secured against tampering and flooding.
5. Piping shall be disconnected.

2212.6 Reporting of Discharge. The owner, operator or employees shall report immediately to the fire official and the national response center a discharge from the ALFST and shall take measures for the prompt control, containment, and removal of liquid fertilizer that has been discharged.

2212.6.1 The locality may take measures for the prompt control, containment, and removal of liquid fertilizer when it determines the user, operator or responsible agent is not responding promptly or appropriately. The locality may seek reimbursement for costs incurred. (CHECK OAG)

Supporting Statement (including intent, need, and impact of the proposal):

Adds all definitions and will do the same for the USBC VCC. There may be other standards to reference or regulations can prescribe standards.

This responds to the Chesapeake spill and HB 206, 211 and SB 198.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-424.4**

Nature of Change:

To correlate skirting requirements for manufactured homes with new federal HUD requirements.

Proponent: DHCD Staff

Staff Comments:

While staff revised the USBC requirements for manufactured home installations to correlate the new HUD requirements in the proposed 2009 USBC, there is a requirement for skirting in state law which also needed to be correlated. This proposal simply recognizes the state law and makes it clear that the federal requirements also apply.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-424.4

Proponent Information

(Check one): Individual Government Entity Company

Name: Staff

Representing: DHCD SBCAO

Mailing Address: Main Street Centre, 600 E. Main St., Suite 300, Richmond, VA 23219

Email Address: taso@dhcd.virginia.gov

Telephone Number: 804-371-7150

Proposal Information

Code(s) and Section(s): Virginia Construction Code Section 424.4.

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 424.4 of the IBC to read: Skirting requirements for manufactured homes. As used in this section, "skirting" means a weather-resistant material used to enclose the space from the bottom of the manufactured home to grade. In accordance with §36-99.8 of the Code of Virginia, manufactured homes installed or relocated shall have skirting installed within 60 days of occupancy of the home. Skirting materials shall be durable, suitable for exterior exposures and installed in accordance with the manufacturer's installation instructions. Skirting shall be secured as necessary to ensure stability, to minimize vibrations, to minimize susceptibility to wind damage and to compensate for possible frost heave. Each manufactured home shall have a minimum of one opening in the skirting providing access to any water supply or sewer drain connections under the home. Such openings shall be a minimum of 18 inches (457 mm) in any dimension and not less than three square feet (.28m²) in area. The access panel or door shall not be fastened in a manner requiring the use of a special tool to open or remove the panel or door. On-site fabrication of the skirting by the owner or installer of the home shall be acceptable, provided that the material meets the requirements of this code. In addition, as a requirement of this code, skirting for the installation and set-up of a new manufactured home shall also comply with the requirements of 24 CFR Part 3285 - Model Manufactured Home Installation Standards.

Supporting Statement (including intent, need, and impact of the proposal):

The purpose of this change is to add language that will bring the requirements for the installation of skirting, for new homes, in line with the requirements as set forth by the federal standards. This change is necessary in order to comply with §36-85.5 of the Code of Virginia, whereby, the Department of Housing and Community Development (DHCD), acting as the State Administrative Agency (SAA) for the U.S. Department of Housing and Urban Development (HUD), is required to enforce the Federal Standards with respect to manufactured homes in Virginia. This change provides for an installation that is in compliance with the federal standards and it will provide for cross-ventilation, in the crawl space areas, and the ability to control that ventilation which will reduce the possibility of moisture problems occurring under and within manufactured homes.

Submittal Information

Date Submitted: 1-5-2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-705.2(a) and C-705.2(b)**

Nature of Change:

Two proposals to clarify whether decks and porches extending off of the end walls of homes and townhouses close to a perpendicular property line need to have fire protection.

Proponent: Frank Castelvechi, representing Henrico County Building Department (C-705.2(a)) and Roger Robertson, representing Chesterfield County Building Department (C-705.2(b))

Staff Comments:

Mr. Castelvechi's proposal assumes that the 2009 IRC already requires decks and porches to have a fire wall constructed on the property line side of a porch or deck. This issue has been discussed at the workgroup meetings and there is no consensus that the IRC does in fact require porches and decks to be separated just because a perpendicular property line is present. The IRC only regulates the dwelling unit itself and the fire wall between units in townhouses or the exterior wall of a house built close to a property line does not include a deck or porch as a projection. Projections are typically only roof overhangs. Mr. Robertson's proposal is based on the IRC not requiring such extensions of the fire wall or exterior wall and modifies the IBC to be consistent. Staff would suggest that clarifying language also needs to be added to the IRC to make it clear whether porches and decks are considered projections.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-705.2(a)

Proponent Information

(Check one): Individual Government Entity Company

Name: Frank G Castelvechi, III, PE

Representing: Henrico County

Mailing Address:

PO Box 90775
Henrico VA 23273

Email Address: cas13@co.henrico.va.us

Telephone Number: 804 501 4375

Proposal Information

Code(s) and Section(s): IBC 705.2, 706.5.2 R-5 IRC 302.1 Exceptions

Proposed Change (including all relevant section numbers, if multiple sections):

IRC 302.1 and IBC 705.2—add exception

Decks and porches, not under a roof or other structure, where the walking surface is not more than 36 inches above the adjoining ground level.

Supporting Statement (including intent, need, and impact of the proposal):

Low decks are unlikely to direct venting flames and products of combustion to adjoining properties and present little more hazard than if the items on them were sitting on the grass. The 36 inch limiting height minimizes the potential fire hazard of storage under the deck and the amount of fuel package exposing the adjoining property.

In contrast high decks and roofed decks or porches can shelter occupancies and the fire underneath will direct flames onto the adjacent property. Adjoining porch roofs and upper or multi-level decks can and do lead to the spread of fire from one inside one building to another around the firewalls. Covered or enclosed porches are likely to have higher fire loads than open decks.

Submittal Information

Date Submitted: 12/8/2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov

Fax Number: (804) 371-7092

Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-705.2(b)

Proponent Information (Check one): Individual Government Entity Company

Name: Roger Robertson Representing: Chesterfield County

Mailing Address: P.O. Box 40, 9800 Government Center parkway, Chesterfield, VA 23832

Email Address: robertsonr@chesterfield.gov Telephone Number: 804-751-4749

Proposal Information

Code(s) and Section(s): Virginia Construction Code part I, section 705.2 and 706.5.2:

Proposed Change (including all relevant section numbers, if multiple sections):

705.2 Projections. Except for buildings and structures in R-3 and R-4 occupancy classifications, Cornices, eave overhangs, exterior balconies and similar projections extending beyond the exterior wall shall conform to the requirements of this section and Section 1406. Exterior egress balconies and exterior exit stairways shall also comply with Sections 1019 and 1026 respectively. Projections shall not extend beyond the distance determined by the following three methods, whichever results in the lesser projection:

(Remainder of section unchanged.)

706.5.2 Horizontal projecting elements.

Fire walls shall extend to the outer edge of horizontal projecting elements such as balconies, roof overhangs, canopies, marquees and similar projections that are within 4 feet (1220 mm) of the fire wall.

Exceptions:

1. Horizontal projecting elements without concealed spaces, provided the exterior wall behind and below the projecting element has not less than 1-hour fire-resistance-rated construction for a distance not less than the depth of the projecting element on both sides of the fire wall. Openings within such exterior walls shall be protected by opening protectives having a fire protection rating of not less than ¾ hour.
2. Noncombustible horizontal projecting elements with concealed spaces, provided a minimum 1-hour fire-resistance-rated wall extends through the concealed space. The projecting element shall be separated from the building by a minimum of 1-hour fire-resistance-rated construction for a distance on each side of the fire wall equal to the depth of the projecting element. The wall is not required to extend under the projecting element where the building exterior wall is not less than 1-hour fire-resistance rated for a distance on each side of the fire wall equal to the depth of the projecting element. Openings within such exterior walls shall be protected by opening protectives having a fire protection rating of not less than ¾ hour.
3. For combustible horizontal projecting elements with concealed spaces, the fire wall need only extend through the concealed space to the outer edges of the projecting elements. The exterior wall behind and below the projecting element shall be of not less than 1-hour fire-resistance-rated construction for a distance not less than the depth of the

projecting elements on both sides of the fire wall. Openings within such exterior walls shall be protected by opening protectives having a fire-protection rating of not less than ¾ hour.

4. Buildings and structures in R-3 and R-4 occupancy classifications.

Supporting Statement (including intent, need, and impact of the proposal): The intent of this proposed change is to clarify that the building code does not intend that buildings of R-3 and R-4 occupancies be required to meet the provisions of Sections 705.2 or 706.5.2. The alternative for these structures when relatively adjacent would require construction of fire or separation walls between adjacent decks or porches. This change eliminates the misinterpretations and inconsistencies caused by the ambiguity of the current language.

Submittal Information

Date Submitted: January 25, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-708.14**

Nature of Change:

To add elevator lobby requirements back to the International Building Code to prevent the migration of smoke from floor to floor via the elevator shaft in fire conditions.

Proponent: Frank Hertzog, representing the Smoke Safety Council

Staff Comments:

When Virginia first began using the International Codes, the elevator lobby provisions contained in the International Building Code (IBC) were deleted as they had not been in the legacy code used in Virginia prior to the International Codes. This was largely due to the fact that most buildings needing elevator lobbies have sprinkler systems and there was an exception to the elevator lobby requirements for buildings with sprinkler systems. If the requirements are added back to the IBC, Group B or E buildings less than 55 feet in height, but more than three stories in height would have to have elevator lobbies or an equivalent alternative as they are not required to have sprinklers installed when constructed. Most other buildings are required to be sprinklered anyway and would not have to provide the lobbies or an alternative. The proposal would, however, require elevator lobbies or an alternative in all high-rise buildings, where the current USBC does not.

An identical proposal was submitted during the 2006 code change cycle and was considered by the appropriate workgroup without a recommendation for approval. The current proposal was not received in time to be fully vetted through the workgroup process.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change
Number: C-708.14

Proponent Information (Check one): Individual Government Entity Company

Name: Frank Hertzog Representing: Smoke Safety Council

Mailing Address: 6775 SW 111th Ave. Ste 10, Beaverton, OR 97008

Email Address: frank@smokeguard.com Telephone Number: 208-639-7860

Proposal Information

Code(s) and Section(s): 708.14 Elevator, dumbwaiter and other hoistways

Proposed Change (including all relevant section numbers, if multiple sections):

To Add back into the Virginia State Uniform Building Code 2010 the provisions of the IBC 2009 Minimum Standard Building Code for hoistway protection:

708.14 Elevator, dumbwaiter and other hoistways. Elevator, dumbwaiter and other hoistway enclosures shall be constructed in accordance with Section 708 and Chapter 30.

708.14.1 Elevator lobby. An enclosed elevator lobby shall be provided at each floor where an elevator shaft enclosure connects more than three stories. The lobby enclosure shall separate the elevator shaft enclosure doors from each floor by *fire partitions*. In addition to the requirements in Section 709 for *fire partitions*, doors protecting openings in the elevator lobby enclosure walls shall also comply with Section 715.4.3 as required for *corridor* walls and penetrations of the elevator lobby enclosure by ducts and air transfer openings shall be protected as required for *corridors* in accordance with Section 716.5.4.1. Elevator lobbies shall have at least one *means of egress* complying with Chapter 10 and other provisions within this code.

Exceptions:

1. Enclosed elevator lobbies are not required at the street floor, provided the entire street floor is equipped with an *automatic sprinkler system* in accordance with Section 903.3.1.1.
2. Elevators not required to be located in a shaft in accordance with Section 708.2 are not required to have enclosed elevator lobbies.
3. Enclosed elevator lobbies are not required where additional doors are provided at the hoistway opening in accordance with Section 3002.6. Such doors shall be tested in accordance with UL 1784 without an artificial bottom seal.
4. Enclosed elevator lobbies are not required where the building is protected by an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. This exception shall not apply to the following:
 - 4.1. Group I-2 occupancies;
 - 4.2. Group I-3 occupancies; and
 - 4.3. High-rise buildings.
5. Smoke partitions shall be permitted in lieu of *fire partitions* to separate the elevator lobby at each floor where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. In addition to the requirements in Section 711 for smoke partitions, doors protecting openings in the smoke partitions shall also comply with Sections 711.5.2, 711.5.3, and 715.4.8 and duct penetrations of the smoke partitions shall be protected as required for *corridors* in accordance with Section 716.5.4.1.
6. Enclosed elevator lobbies are not required where the elevator hoistway is pressurized in accordance with Section 708.14.2.

7. Enclosed elevator lobbies are not required where the elevator serves only *open parking garages* in accordance with Section 406.3.

708.14.1.1 Areas of refuge. Areas of refuge shall be provided as required in Section 1007.

708.14.2 Enclosed elevator lobby. Where elevator hoistway pressurization is provided in lieu of required enclosed elevator lobbies, the pressurization system shall comply with this section.

708.14.2.1 Pressurization requirements. Elevator hoistways shall be pressurized to maintain a minimum positive pressure of 0.10 inches of water (25 Pa) and a maximum positive pressure of 0.25 inches of water (67 Pa) with respect to adjacent occupied space on all floors. This pressure shall be measured at the midpoint of each hoistway door, with all elevator cars at the floor of recall and all hoistway doors on the floor of recall open and all other hoistway doors closed. The opening and closing of hoistway doors at each level must be demonstrated during this test. The supply air intake shall be from an outside, uncontaminated source located a minimum distance of 20 feet (6096 mm) from any air exhaust system or outlet.

708.14.2.2 Rational analysis. A rational analysis complying with Section 909.4 shall be submitted with the *construction documents*.

708.14.2.3 Ducts for system. Any duct system that is part of the pressurization system shall be protected with the same *fire-resistance rating* as required for the elevator shaft enclosure.

708.14.2.4 Fan system. The fan system provided for the pressurization system shall be as required by this section.

708.14.2.4.1 Fire resistance. When located within the building, the fan system that provides the pressurization shall be protected with the same *fire-resistance rating* required for the elevator shaft enclosure.

708.14.2.4.2 Smoke detection. The fan system shall be equipped with a smoke detector that will automatically shut down the fan system when smoke is detected within the system.

708.14.2.4.3 Separate systems. A separate fan system shall be used for each elevator hoistway.

708.14.2.4.4 Fan capacity. The supply fan shall either be adjustable with a capacity of at least 1,000 cfm (.4719 m³/s) per door, or that specified by a *registered design professional* to meet the requirements of a designed pressurization system.

708.14.2.5 Standby power. The pressurization system shall be provided with standby power from the same source as other required emergency systems for the building.

708.14.2.6 Activation of pressurization system. The elevator pressurization system shall be activated upon activation of the building fire alarm system or upon activation of the elevator lobby smoke detectors. Where both a building fire alarm system and elevator lobby smoke detectors are present, each shall be independently capable of activating the pressurization system.

708.14.2.7 Special inspection. *Special inspection* for performance shall be required in accordance with Section 909.18.8. System acceptance shall be in accordance with Section 909.19.

708.14.2.8 Marking and identification. Detection and control systems shall be marked in accordance with Section 909.14.

708.14.2.9 Control diagrams. Control diagrams shall be provided in accordance with Section 909.15.

708.14.2.10 Control panel. A control panel complying with Section 909.16 shall be provided.

708.14.2.11 System response time. Hoistway pressurization systems shall comply with the requirements for smoke control system response time in Section 909.17.

Supporting Statement (including intent, need, and impact of the proposal):

While the legacy BOCA code did not require elevator shaft protection, the IBC recognizes this life safety issue of protecting elevator shafts in highrise buildings for smoke migration and has since its inception with IBC 2000.

The IBC has incorporated over 200 trade-offs within the prescriptive requirements of the building code, including Exceptions 1 and 7 to Section 708.14.1. Exception 4 limits the requirement to provide elevator lobbies to buildings over 75 feet above fire department lowest access as long as they are sprinkled, I-2 and I-3 Occupancies and High Rise Buildings. The IBC recognizes the level of protection and life safety afforded in fully sprinkled buildings but protects buildings above 75 feet in height with additional requirements.

The IBC 2009 will again establish the MINIMUM national standards for life safety and work to discourage amendments to the IBC which create variations from state to state. Virginia should work to adopt their state MINIMUM building code to provide life safety standards equal to or better than the national MINIMUM IBC 2009.

Based on Virginia's 2008 (reported) Fire Statistics, 83% of all fire locations did not have sprinklers and only 28% had smoke detectors; there were 114 fires in buildings 5 stories or taller with over \$3.5 million in damage, with 7 civilian injuries, 3 firefighter injuries, and 2 civilian deaths. Based on Virginia's 2009 (reported) Fire Statistics for the first 6 months, there have already been 26 fires in buildings above 7 stories. With 83% of buildings not having sprinklers according to fire statistics, a change in the Virginia Building Code to support protection of Elevator Hoistways can only improve the Fire statistics and better protect the citizens of the state, be they building occupants or emergency responders.

New construction invariably incorporates automatic sprinkler systems, limiting the vast majority of the impact of this amendment to buildings that are renovated or buildings in institutional occupancies. Virginia, by adopting this amendment, will align the Virginia Building Code with the minimum fire and life safety standards established in the IBC 2009 for high rise buildings and institutional occupancies.

Submittal Information

Date Submitted: 10/26/2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219
(804) 371-7150

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-903.2**

Nature of Change:

To retain the current sprinkler threshold for Group E buildings of 20,000 square feet instead of using the new IBC threshold of 12,000 square feet.

Proponent: Dan Zacharias, representing the Old Dominion Association of Church Schools

Staff Comments:

The issue was discussed at the workgroup meetings as a significant difference between the 2006 and 2009 IBCs. The fire service representatives supported the new IBC thresholds with the reason that schools are used as multipurpose facilities, including shelters at times. The proposal was received subsequent to the discussions but was considered at at least one client group meeting; however, no consensus was reached.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-903.2

Proponent Information

(Check one): Individual Government Entity Company

Name: Dan Zacharias

Representing: Old Dominion Association of Church Schools

Mailing Address: 3131 Valor Court, Broadway, VA 22815

Email Address: vaodacs@verizon.net

Telephone Number: 540-896-2785

Proposal Information

Code(s) and Section(s): IBC Section 903.2

Proposed Change (including all relevant section numbers, if multiple sections):

Retain 20,000 square foot threshold for requiring automatic sprinkler systems in educational structures (Group E).

Supporting Statement (including intent, need, and impact of the proposal):

The cost of dropping the threshold to 12,000 square feet would be extremely high compared to the minute risk involved with retaining it at the current 20,000 square feet. A number of private schools would bear an inordinate financial burden when they build. These schools are already complying with the multitude of fire safety regulations designed to protect the students and teachers, and their safety record over the years has been outstanding.

Submittal Information

Date Submitted: July 13, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150





Virginia Department of Fire Programs

Structural Fires with Educational Property Use Summary, Virginia, 2004 - 2009 *

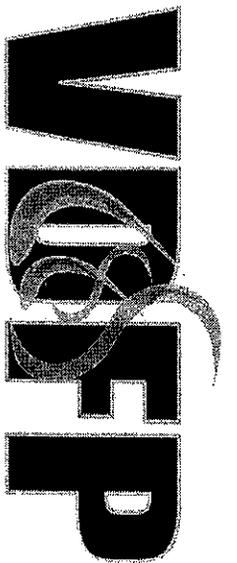
Year	Total	Percent	Total Property Loss	Total Contents Loss	Total Fire Dollar Loss	Civilian Fire Injuries	Civilian Fire Deaths	Fire Service Injuries	Fire Service Deaths
2004	28	12.5%	\$133,601	\$69,301	\$202,902	1	0	0	0
2005	43	21.4%	\$289,814	\$320,781	\$610,592	0	0	0	0
2006	33	14.7%	\$837,725	\$253,733	\$1,091,458	0	0	2	0
2007	49	21.9%	\$3,486,798	\$1,502,599	\$4,989,397	0	1	0	0
2008	41	18.3%	\$644,304	\$279,899	\$924,203	0	0	0	0
2009	25	11.2%	\$1,056,110	\$515,165	\$1,571,275	8	0	1	0
Grand Total	224	100.0%	\$6,448,289	\$2,941,478	\$9,389,767	9	1	3	0

Structural Fires with Educational Property Use By Automatic Extinguishing System (AES) Presence, Virginia, 2004 - 2009 *

Year	Present	None Present	Unknown or Not Reported	Grand Total	Percent
2004	6	21	1	28	12.5%
2005	16	29	3	48	21.4%
2006	11	19	3	33	14.7%
2007	12	30	5	49	21.9%
2008	15	22	4	41	18.3%
2009	10	13	2	25	11.2%
Grand Total	72	134	18	224	100.0%

Note: Data is compiled from all fire incidents reported to the Virginia Fire Incident Reporting System (VFIIRS) for 2004-2008 as of 04/06/2009, and 2009 as of 02/08/2010. Data for 2009 is still considered preliminary. Aid given (mutual or automatic) incidents were excluded and fire exposure incidents were included with the numbers. Structure fires include incidents with incident type coded as 110, 111, 120-123 and with structure type codes as 1 or 2. Educational includes all incidents coded with educational property use (Series 2).

* Data for 2009 is considered preliminary since we are still receiving reports from fire departments and the data is not final. Caution should be exercised in releasing and comparing the numbers.



Virginia Department of Fire Programs

Structural Fires with Nursing Homes Summary, Virginia, 2004 - 2009 *

Year	Total	Percent	Total Property Loss	Total Contents Loss	Total Fire Dollar Loss	Civilian Fire Injuries	Civilian Fire Deaths	Fire Service Injuries	Fire Service Deaths
2004	14	16.7%	\$206,501	\$45,001	\$251,502	5	0	0	0
2005	14	16.7%	\$50,301	\$3,951	\$54,252	0	0	0	0
2006	19	22.6%	\$3,219,651	\$416,071	\$3,635,722	1	1	0	0
2007	7	8.3%	\$15,601	\$7,500	\$23,101	2	0	0	0
2008	17	20.2%	\$26,525	\$4,530	\$31,055	1	0	0	0
2009	13	15.5%	\$14,700	\$3,400	\$18,100	1	0	0	0
Grand Total	84	100.0%	\$3,533,279	\$480,453	\$4,013,732	10	1	0	0

Structural Fires with Nursing Homes By Automatic Extinguishing System (AES) Presence, Virginia, 2004 - 2009 *

Year	Present	Note Present	Unknown or Not Reported	Grand Total	Percent
2004	11	2	1	14	16.7%
2005	12	2		14	16.7%
2006	12	4	3	19	22.6%
2007	7			7	8.3%
2008	12	4	1	17	20.2%
2009	12		1	13	15.5%
Grand Total	66	12	6	84	100.0%
Percent	78.6%	14.3%	7.1%	100.0%	

Note: Data is compiled from all fire incidents reported to the Virginia Fire Incident Reporting System (VFIRS) for 2004-2008 as of 04/06/2009, and 2009 as of 02/08/2010. Data for 2009 is still considered preliminary. Aid given (manual or automatic) incidents were excluded and fire exposure incidents were included with the numbers. Structure fires include incidents with incident type coded as 110, 111, 120-123 and with structure type codes as 1 or 2. Nursing Homes include all incidents with property use coded as 311 (Nursing homes licensed by the state, providing 24-hour nursing care for four or more persons).

* Data for 2009 is considered preliminary since we are still receiving reports from fire departments and the data is not final. Caution should be exercised in releasing and comparing the numbers.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-903.2.1.2**

Nature of Change:

To delete the current USBC amendment to the IBC which retained the 2003 IBC sprinkler threshold for restaurants of 300 occupants rather than 100 occupants.

Proponent: Robby Dawson, representing the Virginia Fire Services Board

Staff Comments:

The proposal was not received in time to be vetted through the workgroup process. The 2006 amendment was the result of a proposal from the Virginia Hospitality and Travel Association which would have left the sprinkler threshold at 300 for all Group A-2 occupancies. Public comment by the fire services community raised the concern over nightclubs, so the final approval kept the 300 occupant threshold for all A-2 occupancies other than nightclubs. Staff agrees that the having a different threshold for sprinklers within the same occupancy classification is problematic as a change of occupancy doesn't necessarily trigger the requirement for a sprinkler system to be necessary. However, that may be remedied by changing the requirements for a change of occupancy to address changes in activities which may affect the application of the code.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

**VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
CODE CHANGE FORM**

Address to submit to:		Document No. <u>C-903.2.1.2</u>
DHCD, The Jackson Center 501 North Second Street Richmond, VA 23219-1321		Committee Action: _____
Tel. No. (804) 371 – 7150 Fax No. (804) 371 – 7092 Email: bhcd@dhcd.virginia.gov		BHCD Action: _____

Submitted by: Robby Dawson Representing: Fire Services Board
Address: 1005 Technology Park Drive, Glen Allen, VA 23059 Phone No. 804-717-6838
Regulation Title: USBC Section No(s): 903.2.1.2

903.2.1.2 Group A-2. An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists:

1. The fire area exceeds 5,000 square feet (465 m²);
2. The fire area has an occupant load of 100 ~~or more in night clubs or 300 or more in other Group A-2 occupancies;~~ or
3. The fire area is located on a floor other than the level of exit discharge.

Supporting Statement:

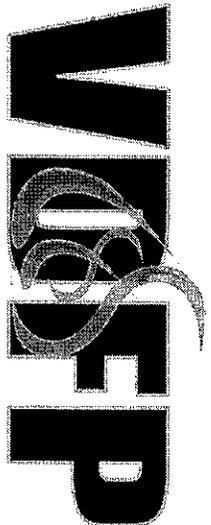
This change seeks to utilize the model IBC thresholds for sprinklers in A-2 use groups.

The 100 number as an occupant load is defined in the model building code. The Board of Housing amended the 2006 edition of the IBC to increase the A-2 use limit to 300 but retain the 100 occupant threshold for “night clubs”. This change creates an unrealistic expectation and burden on fire officials to require sprinkler systems in A-2 uses when they begin using the business as a “night club”, but there are no provisions in the code for a change of use, and no provisions in the SFPC to require building elements to be added when they were not required under the building code.

As an example, a business builds an A-2 restaurant with a bar area with an occupant load of 299 and fire area less than 5000 square feet. At some time after opening, the proprietor adds a dancing area (which does not change the use group), an area for a band or DJ (which does not change the use group), and the A-2 restaurant is now a night club. There is no avenue to require sprinklers in this A-2 use because at the time of construction it wasn’t a night club, and now there is no change of use from the original A-2 use.

A significant number of historic fires in this country have been those that involve all of the elements of night clubs and did not include sprinkler systems. Virginia's own study following the Station Night Club fire in 2003 identified that the IBC was moving toward the occupant threshold of 100 for the requirement of sprinklers, and the NFPA had issued an interim code establishing that same threshold and did not pursue additional requirements or retro-fitting requirements.

In light of the Virginia Task Force Study, the decision of both model code making agencies to establish 100 as the occupant load to require sprinklers, the fact this change was put into place in the 2006 code cycle with very little debate or discussion, and the difficulty if not impossibility of enforcing this provision, the Fire Service Board Code Committee is requesting this change to eliminate the state amendment and utilize the base model code requirements.



Virginia Department of Fire Programs

Structural Fires with Assembly Property Use By Building Height Summary, Virginia, 2004 - 2009 *

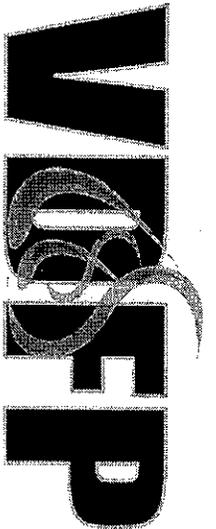
Year	Building Height - Stories	Total	Percent	Total Property Loss	Total Contents Loss	Total Fire Dollar Loss	Civilian Fire Injuries	Civilian Fire Deaths	Fire Service Injuries	Fire Service Deaths
2004	1 Story	42	61.8%	\$3,229,050	\$360,080	\$3,589,130	3	0	2	0
	2 Stories	14	20.6%	\$840,150	\$230,950	\$1,071,100	0	0	0	0
	3 - 6 Stories	5	7.4%	\$750,000	\$1,252,000	\$2,002,000	0	0	0	0
	7 Stories or More	0	0.0%	\$0	\$0	\$0	0	0	0	0
Unknown or Not Reported		7	10.3%	\$54,000	\$500	\$54,500	0	0	0	0
2004 Total		68	100.0%	\$4,873,200	\$1,843,530	\$6,716,730	3	0	4	0
2005	1 Story	60	60.0%	\$1,263,101	\$1,872,252	\$3,135,353	4	0	1	0
	2 Stories	28	28.0%	\$456,600	\$241,200	\$697,800	7	0	0	0
	3 - 6 Stories	5	5.0%	\$95,000	\$56,000	\$151,000	0	0	0	0
	7 Stories or More	2	2.0%	\$100,150	\$50,000	\$150,150	0	0	0	0
Unknown or Not Reported		5	5.0%	\$75,000	\$61,000	\$136,000	0	0	0	0
2005 Total		100	100.0%	\$1,989,851	\$2,280,452	\$4,270,303	11	0	1	0
2006	1 Story	55	68.8%	\$8,553,601	\$17,324,601	\$25,878,202	1	0	2	0
	2 Stories	11	13.8%	\$240,775	\$761,500	\$1,002,275	0	0	0	0
	3 - 6 Stories	9	11.3%	\$524,500	\$2,000	\$526,500	0	0	0	0
	7 Stories or More	1	1.3%	\$20,000	\$5,000	\$25,000	0	0	0	0
Unknown or Not Reported		4	5.0%	\$70,700	\$31,100	\$101,800	0	0	0	0
2006 Total		80	100.0%	\$9,409,576	\$18,124,201	\$27,533,777	1	0	2	0
2007	1 Story	61	59.2%	\$2,139,970	\$1,051,126	\$3,190,096	1	0	0	0
	2 Stories	27	26.2%	\$681,505	\$308,900	\$990,405	3	0	1	0
	3 - 6 Stories	6	5.8%	\$5,000	\$0	\$5,000	0	0	0	0
	7 Stories or More	3	2.9%	\$350,000	\$175,050	\$525,050	0	0	0	0
Unknown or Not Reported		6	5.8%	\$80,000	\$77,400	\$157,400	0	0	0	0
2007 Total		103	100.0%	\$3,255,475	\$1,612,476	\$4,867,951	4	0	1	0
2008	1 Story	78	66.5%	\$4,293,895	\$1,944,954	\$6,238,849	2	0	1	0
	2 Stories	29	24.4%	\$1,276,701	\$323,301	\$1,600,002	0	0	0	0
	3 - 6 Stories	4	3.4%	\$2,110	\$2,510	\$4,620	0	0	0	0
	7 Stories or More	2	1.7%	\$5,000	\$1,000	\$6,000	1	0	0	0
Unknown or Not Reported		6	5.0%	\$12,500	\$100	\$12,600	0	0	0	0
2008 Total		119	100.0%	\$5,590,206	\$2,271,865	\$7,862,071	3	0	1	0
2009 *	1 Story	77	72.6%	\$5,543,226	\$2,176,277	\$7,719,503	1	0	8	0
	2 Stories	21	19.3%	\$209,552	\$181,401	\$390,953	0	0	0	0

Structural Fires with Assembly Property Use By Building Height Summary, Virginia, 2004 - 2009 *

Year	Building Height - Stories	Total	Percent	Total Property Loss	Total Contents Loss	Total Fire Dollar Loss	Civilian Fire Injuries	Civilian Fire Deaths	Fire Service Injuries	Fire Service Deaths
2009 *	3 - 6 Stories	5	4.7%	\$66,000	\$100,001	\$166,001	0	0	0	0
	7 Stories or More	1	0.9%	\$250,000	\$100,000	\$350,000	0	0	0	0
	Unknown or Not Reported	2	1.9%	\$0	\$0	\$0	0	0	0	0
2009 Total	106	100.0%	\$6,068,778	\$2,559,679	\$8,628,457	1	0	8	0	0
Grand Total	576	100.0%	\$31,187,086	\$28,692,203	\$59,879,289	23	0	17	0	0

Note: Data is compiled from all fire incidents reported to the Virginia Fire Incident Reporting System (VFRIS) for 2004-2008 as of 04/06/2009, and 2009 as of 02/06/2010. Data for 2009 is still considered preliminary. Aid given (manual or automatic) incidents were excluded and fire exposure incidents were included with the numbers. Structure fires include incidents with incident type coded as 110, 111, 120-123 and with structure type codes as 1 or 2. Assembly includes all incidents coded with assembly property use (Series 1).

* Data for 2009 is considered preliminary since we are still receiving reports from fire departments and the data is not final. Caution should be exercised in releasing and comparing the numbers.



Virginia Department of Fire Programs

Structural Fires with Assembly Property Use By Building Height By Automatic Extinguishing System (AES) Presence, Virginia, 2004 - 2009 *

Year	Building Height - Stories	Present	None Present	Unknown or Not Reported	Grand Total	Percent
2004	1 Story	11	25	6	42	61.8%
	2 Stories	4	9	1	14	20.6%
	3 - 6 Stories	2	3	0	5	7.4%
	7 Stories or More	0	0	0	0	0.0%
	Unknown or Not Reported	3	3	1	7	10.3%
2004 Total		20	40	8	68	100.0%
2005	1 Story	23	27	10	60	60.0%
	2 Stories	9	16	3	28	28.0%
	3 - 6 Stories	0	5	0	5	5.0%
	7 Stories or More	0	2	0	2	2.0%
	Unknown or Not Reported	1	4	0	5	5.0%
2005 Total		33	54	13	100	100.0%
2006	1 Story	14	34	7	55	68.8%
	2 Stories	3	7	1	11	13.8%
	3 - 6 Stories	4	4	1	9	11.3%
	7 Stories or More	0	0	1	1	1.3%
	Unknown or Not Reported	2	2	0	4	5.0%
2006 Total		23	47	10	80	100.0%
2007	1 Story	14	35	12	61	59.2%
	2 Stories	7	17	3	27	26.2%
	3 - 6 Stories	4	2	0	6	5.8%
	7 Stories or More	0	2	1	3	2.9%
	Unknown or Not Reported	2	4	0	6	5.8%
2007 Total		27	60	16	103	100.0%
2008	1 Story	26	45	7	78	65.5%
	2 Stories	10	13	6	29	24.4%
	3 - 6 Stories	1	2	1	4	3.4%
	7 Stories or More	1	1	0	2	1.7%
	Unknown or Not Reported	0	6	0	6	5.0%
2008 Total		38	67	14	119	100.0%
2009 *	1 Story	27	38	12	77	72.6%
	2 Stories	7	11	3	21	19.8%

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-903.2.7(a) and C-903.2.7(b)**

Nature of Change:

Two proposals to address a new requirement in the IBC for sprinklers to be required in Group M wherever upholstered furniture is present.

Proponent: Frank Castelvechi, representing Henrico County Building Department (C-903.2.7(a)) and Roger Robertson, representing Chesterfield County Building Department (C-903.2.7(b))

Staff Comments:

The issue was discussed in workgroup meetings as a significant difference between the 2006 and 2009 IBC; however, no proposals had been received. The fire services representatives were generally supportive of the new IBC sprinkler threshold while the business community did not believe the change was necessary. Mr. Castelvechi's proposal is similar to a proposal approved during the first round of proposals at ICC for the 2012 IBC and would permit upholstered furniture without sprinklers at up to 5000 square feet. Mr. Robertson's proposal would keep the current USBC requirements intact.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-903.2.7(a)

Proponent Information (Check one): Individual Government Entity Company

Name: Frank G. Castelvechi, III, PE Representing: Henrico County

Mailing Address:
PO Box 90775
Henrico VA 23273

Email Address: cas13@co.henrico.va.us Telephone Number: 804 501 4375

Proposal Information

Code(s) and Section(s): IBC 903.2.4, 903.2.7, 093.2.9

Proposed Change (including all relevant section numbers, if multiple sections):
903.2.4 add new subsection--
4. Where a Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses exceeds 2500 square feet.
903.2.7 Change to read--
4. Where a Group M occupancy used for the display and sale of upholstered furniture or mattresses exceeds 5000 square feet.
903.2.9 add new subsection--
5. Where a Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2500 square feet.

Supporting Statement (including intent, need, and impact of the proposal):
This is consistent with the action taken by the ICC Fire Code Committee in Baltimore to address the hazards of the manufacture, storage and sales of these items. Severe fires occur in these occupancies on a regular basis often resulting in total loss to the structure and the loss of neighboring buildings, as well as occasional fatalities. The 2500 square foot threshold for Manufacture and Storage is to permit small re-upholstery shops and the storage of furniture in mini storage facilities.
The 5000 square foot threshold adopted by the IFC committee is intended to permit the sale of small amounts of these articles in other stores and in small specialty shops.

Submittal Information

Date Submitted: 12/8/2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-903.2.7 (b)

Proponent Information (Check one): Individual Government Entity Company

Name: Roger Robertson Representing: Chesterfield County

Mailing Address: P.O. Box 40, 9800 Government Center Parkway, Chesterfield, VA 23832

Email Address: robertsonr@chesterfield.gov Telephone Number: 804-751-4749

Proposal Information

Code(s) and Section(s): Virginia Construction Code part I, section 903.2.7

Proposed Change (including all relevant section numbers, if multiple sections):
903.2.7 Group M. An automatic sprinkler system shall be provided throughout buildings containing a group M occupancy where one of the following conditions exists:
1. A group M fire area exceeds 12,000 square feet.
2. A group M fire area is located more than three stories above grade plane.
3. The combined area of all group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet.
4. ~~A Group M occupancy is used for the display and sale of upholstered furniture.~~

Supporting Statement (including intent, need, and impact of the proposal): To treat furniture stores as other M occupancies and return the sprinkler threshold to 12,000 square feet. The existing item 4 leads to non-uniform enforcement since it could be interpreted to apply to any small M occupancy that has a single chair for sale or sells office furniture. The existing language in item 4 invites inconsistency through its lack of more specific description of its intent.

Submittal Information

Date Submitted: January 25, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-903.2.8**

Nature of Change:

To delete the current USBC amendment to the IBC which permits new apartments to be constructed without sprinklers if the necessary water pressure and volume is not available at a site.

Proponent: Robby Dawson, representing the Virginia Fire Services Board

Staff Comments:

The proposal was not received in time to be vetted through the workgroup process. The state amendment has been in place since the legacy code (the BOCA Code) required sprinklers in all Group R buildings. The amendment was based on an exceptions present in the BOCA Code which equated the added separation of dwelling units to the use of a sprinkler system; however, the state amendment limited its application to only those areas without adequate water supply. Staff has gotten indications from apartment builders on the outskirts of the Tidewater area that the exceptions are still being used, but it is not known whether the exceptions are being utilized statewide.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-903.2.8

Proponent Information

(Check one): Individual Government Entity Company

Name: Robby Dawson

Representing: Virginia Fire Services Board

Mailing Address: 1005 Technology Park Drive, Glen Allen, VA 23059

Email Address: dawsonj@chesterfield.gov

Telephone Number: 804-717-6838

Proposal Information

Code(s) and Section(s): USBC 903.2.8

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 903.2.7 (903.2.8) of the USBC to read:

903.2.7 Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area, ~~except in the following R-2 occupancies when the necessary water pressure or volume, or both, for the system is not available:~~

Exceptions:

- ~~1. Buildings which do not exceed two stories, including basements which are not considered as a story above grade, and with a maximum of 16 dwelling units per fire area. Each dwelling unit shall have at least one door opening to an exterior exit access that leads directly to the exits required to serve that dwelling unit.~~
- ~~2. Buildings where all dwelling units are not more than two stories above the lowest level of exit discharge and not more than one story below the highest level of exit discharge of exits serving the dwelling unit and a two-hour fire barrier is provided between each pair of dwelling units. Each bedroom of a dormitory or boarding house shall be considered a dwelling unit under this exception.~~

Supporting Statement (including intent, need, and impact of the proposal):

With the advancement of technology and methodology associated with residential sprinkler systems now being a justified requirement in the IRC, it stands to reason the same justification is in place for R-2 occupancies and the current exception for excluding sprinklers is not present in the IRC and it should also not be included in the USBC.

Ultimately it's a fire safety benefit to the occupants R-2's in those areas with low water supplies. The least amount of water will be applied during the initial phases of a fire through the sprinkler systems as opposed to the amounts of water needed for more involved structure fires that do not have benefit of a sprinkler system. Some of the water supply issues may include small mains that are sized to small to supply fire department pumpers but would be sufficient to supply the lower demand of a sprinkler system. If a municipal system is not in place, the fire department may have to locate a water supply and then shuttle water to the scene. Having a sprinkler system translates into lower amounts of property damage, content damage and a lessening of having to relocate residents other than possibly those in the apartment where the fire originated.

In addition, there's less strain being placed on the local fire service. And in the case of volunteer departments, there's the additional strain of finding, recruiting, training and retaining sufficient volunteer staffing. Then there's the factor of

response times. With increased response times being realized in some areas, particularly more rural areas with a volunteer fire service, having sprinkler systems in these buildings can help mitigate the effects. Basically, having a sprinkler system equates to having a firefighter on duty 24/7.

Submittal Information

Date Submitted: 12/16/09

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-906**

Nature of Change:

To add a requirement for fire extinguishers to be provided in Group R-2 buildings and to delete an allowance for fire extinguishers to be omitted from Group A, B and E occupancies when quick response sprinklers are present.

Proponent: Robby Dawson, representing the Virginia Fire Services Board

Staff Comments:

The proposal was not received in time to be vetted through the workgroup process. Fire extinguishers were never required in Virginia for Group R-2 occupancies because of the potential for tampering or causing damage, therefore when the International Codes were adopted, the Group R-2 requirement was deleted through a state amendment. It is unknown whether the quick response exception in the International Codes (which is not a state amendment) is being used in Virginia extensively enough to warrant action.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-906

Proponent Information (Check one): Individual Government Entity Company

Name: Robby Dawson Representing: Virginia Fire Services Board

Mailing Address: 1005 Technology Park Drive, Glen Allen, VA 23059

Email Address: dawsonj@chesterfield.gov Telephone Number: 804-717-6838

Proposal Information

Code(s) and Section(s): USBC and SFPC Section 906

Proposed Change (including all relevant section numbers, if multiple sections):

906.1 Where required.

Portable fire extinguishers shall be installed in the following locations.

1. In new and existing Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.

~~Exception: In new and existing Group 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.~~

Supporting Statement (including intent, need, and impact of the proposal):

Fire extinguishers have historically been the first line of defense for small, controllable fires. They are intended to be used for fires of limited size and easily controlled. If a fire is discovered in its early stages the most effective means of protecting life and preventing property loss is to sound an alarm and then to control and/or extinguish the incipient stage fire with a portable fire extinguisher. To simply wait for the fire to grow to size large enough for a sprinkler head to activate is contrary to lessons and guidance from the fire service and fire protection professionals. Since fire extinguishers provide a first line of defense vs. sprinklers, it remains unclear as to the justification for this exception. In that light, the Exception 1 to Section 906.1 should be deleted.

This exception was not in the original draft of the International Fire Code and it did not exist in any of the legacy fire codes. It currently does not exist in NFPA 1 Uniform Fire Code, NFPA 10 Standard for Portable Fire Extinguishers or NFPA 5000 Building Construction and Safety Code. It first appeared in the Final Draft of the 2000 editions of the IFC/IBC. Since the first publication of the International Fire Code, some Virginia fire service and fire protection professionals have expressed concern over the inclusion of an exception.

As a result a number of states have deleted the exception upon adoption of the IFC/IBC.

- 12 States plus Washington D.C. and New York City have Deleted Line 1 Exception.
- 2 States have amended Section 906.1 and the exception to require more extinguishers
- 2 States use both NFPA 1 and the IFC with more stringent code applicable.
- 17 additional States have adopted NFPA 1 as their fire code instead of the IFC.

A total of 33 State jurisdictions and an unknown number of local jurisdictions have chosen to delete the exception in favor of providing the ability to control a fire at its earliest stages.

There are other issues with this exception that have arisen since states have now been adopting the IFC and enforcing it within their state. Some examples are:

- The exception is not being interpreted correctly and as a result is not being limited to occupancies with "QUICK RESPONSE" sprinklers installed. Instead, it is being applied in all cases where "REGULAR" sprinklers are installed.
- When an occupancy is being renovated and the sprinkler system is updated, presently installed extinguishers are being removed, lessening the level of protection available.
- Fire code officials do not all see hazard areas the same and as a result Section 906.1, Item 6 is not consistently applied jurisdiction to jurisdiction.
- Some officials are exempting all extinguishers from being required thereby placing the occupants in danger at the time of a fire.

An added detriment is that if a building is occupied without fire extinguishers the ability of the building owner to properly and effectively place fire extinguishers is negatively impacted by the practical difficulty of installing fire extinguisher cabinets. Walls may not be thick enough for recessing the cabinets to keep the fire extinguishers from being obstructions to travel or from being hit and damaged themselves. If the walls and partitions can handle the recessed cabinets, design drawings and permits may be required to modify the walls and partitions.

The inclusion of R-2 occupancies is in keeping with the national model code.

This proposal will eliminate the exception and provide for the proper placement of an important incipient firefighting tool.

This proposed change, designated as F94-09/10, was accepted by the ICC Fire Code Committee at the recent Code Change hearings held in Baltimore. The Committee vote was 8 to 3 in favor of "As Submitted".

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-907.2.3**

Nature of Change:

To add requirements for an emergency voice/alarm communication system in schools and to increase the required rating of school corridors.

Proponent: Robby Dawson, representing the Virginia Fire Services Board Code Committee

Staff Comments:

The proposal was not received in time to be vetted through the workgroup process. It is based on a proposal which was approved in the first round of hearings at ICC for the 2012 IBC. It is not known at this time whether public comment has been received at the national level to challenge the requirement. The voice/alarm communication system is what is already required for large Group A (assembly) occupancies. The change to the corridor rating requirement is to require a one-hour rated corridor regardless of whether a sprinkler system is installed.

Codes and Standards Committee Action:

Approve as presented.

Disapprove.

Approve as modified (specify):

Carry over to next cycle.

Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-907.2.3

Proponent Information

(Check one): Individual Government Entity Company

Name: Robby Dawson

Representing: Virginia Fire Services Board Code Committee

Mailing Address: 1005 Technology Park Drive, Glen Allen, VA 23059

Email Address: dawsonj@chesterfield.gov

Telephone Number: 804-717-6838

Proposal Information

Code(s) and Section(s): USBC Section 907.2.3 and Table 1018.1 with corresponding changes to SFPC

Proposed Change (including all relevant section numbers, if multiple sections):

1. Revise as follows:

907.2.3 Group E. A manual fire alarm system that ~~activates~~ initiates the occupant notification signal utilizing an emergency voice/alarm communications system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E occupancies. When automatic sprinkler systems or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system.

Exceptions:

1. A manual fire alarm system is not required in Group E occupancies with an occupant load of ~~less than 50~~ 30 or less.

2. Manual fire alarm boxes are not required in Group E occupancies where all of the following apply:

2.1. Interior corridors are protected by smoke detectors.

2.2. Auditoriums, cafeterias, gymnasiums and similar areas are protected by heat detectors or other approved detection devices.

2.3. Shops and laboratories involving dusts or vapors are protected by heat detectors or other approved detection devices.

~~2.4. The capability to activate the evacuation signal from a central point is provided.~~

~~2.5. In buildings where normally occupied spaces are provided with a two-way communication system between such spaces and a constantly attended receiving station from where a general evacuation alarm can be sounded, except in locations specifically designated by the fire code official.~~

3. Manual fire alarm boxes shall not be required in Group E occupancies where the building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, the ~~notification appliances~~ emergency voice/alarm communications system will activate on sprinkler waterflow and manual activation is provided from a normally occupied location.

2. Revise table as follows:

**TABLE 1018.1
CORRIDOR FIRE-RESISTANCE RATING**

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING (HOURS)	
		Without sprinkler system	With sprinkler system ^c
H-1, H-2, H-3	All	Not Permitted	1
H-4, H-5	Greater than 30	Not Permitted	1
A, B, E, F, M, S, U	Greater than 30	1	0
E	<u>Greater than 30</u>	<u>1</u>	<u>1</u>
R	Greater than 30	Not Permitted	0.5
I-2 ^a , I-4	All	Not Permitted	0
I-1, I-3	All	Not Permitted	1 ^b

- a. For requirements for occupancies in Group I-2, see sections 407.2 and 407.3.
- b. For a reduction in the fire-resistance rating for occupancies in Group I-3, see Section 408.8.
- c. Building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.1.2 where allowed.

Supporting Statement (including intent, need, and impact of the proposal):

This proposed change, designated as F107-09/10, was accepted by the ICC Fire Code Committee at the recent Code Change hearings held in Baltimore. The Committee vote was 11 to 0 in favor of "As Submitted".

This code change was proposed by several parties in a previous ICC development cycle as E117-07/08. Although half the Committee supported its adoption, the Chair broke a tie vote in favor of a recommendation of disapproval. At the Final Action Hearings, the Committee's recommendation was overturned, but a motion to "approve as submitted" failed to secure the 2/3 majority needed for adoption. The ICC Membership voted 55% in favor of adoption.

There are good reasons that a solid majority of the ICC Membership favored adopting this proposal. First, the E occupancies at issue represent structures built to house a dense population of children ranging from ages 4 through early teens. E occupancies typically have paper and other flammables hung from ceilings to floors throughout. Classrooms are filled with desks containing books, papers and other flammables. Science labs use chemicals and accelerants. Lunch rooms have stoves, ovens and trash cans spread throughout loaded with waste paper and other flammables. Theaters house clothing, wooden and cardboard props and paper banners strung from one end of the room to the other. Lockers contain books and hide things that are not easily monitored. Janitorial closets house cleaning solutions and solvents. Many E occupancies are multi-story buildings with classrooms on several floors.

E occupancies mix a high concentration of children with fuel loads on a daily basis. As budgets shrink, so do the number of adult supervisors. Our children are in schools because they are required to be there. We owe them a duty to ensure they are safe from the risk of fire while in school. We simply cannot wait for a catastrophe to protect children while at school.

Unfortunately the world of elementary, secondary and higher education learning has gone through tremendous changes in security measures undertaken, both operationally and hardware installations, due to the threat of violent acts committed against students and staff. Where we had educational facilities with highly effective fire drill evacuation procedures and actions during system activation, we now have written plans and training in place to ignore the activation of the fire alarm system if a "lockdown" has been declared because the activation of the fire alarm system may be a diversion to bring staff and students out into the open to serve as victims.

This is not a possible situation. This is a very real situation that occurs throughout the country in response to the acts of violence that have occurred at educational facilities. Though the exact procedure may vary site to site, the main premise of a "lockdown" is to gather staff and students into classrooms and offices and to lock the doors, preventing intruders from getting into the room and preventing staff and students from leaving the rooms until an all clear is

announced. The staff and students are trained to ignore a fire alarm activation during a lockdown until they are ordered to evacuate after someone in authority, (could be a Principal or could be a Police Commander), makes a determination that the fire threat is real and that they must evacuate to survive the fire.

We have two main concerns. Once the students and staff ignore the fire alarm, there needs to be a reliable method of communicating the message that now is the time to evacuate. PA systems that do not meet appropriate standards of care for installation or maintenance related to reliability at the time of a fire emergency do not satisfy that need. To address this issue this proposal would require the installation of an emergency voice/alarm communications system installed in accordance with the code and referenced standards. Recognizing that there is a related increase in the cost of construction Section 907.5.2.2 allows that system to be used for other announcements to eliminate the need for a public address system for that purpose.

Section 907.2.3, Exception one has been modified to correlate the occupant load triggers, Items 2.4 and 2.5 would be redundant since the emergency voice/alarm communications system would meet those two requirements and Exception 3 was modified to correlate with the new language in 907.2.3.

Because the students and staff will delay their evacuation while a fire is attacking the structure and potentially cutting off escape routes where corridors are not protected, this code change proposal will also require all corridors serving an occupant load greater than 30 in group E educational occupancies to have 1 hour fire resistant rating except as allowed by Exception 1 to section 1018.1.

Exception 1 to Section 1018.1 is a legitimate exception for the one hour corridor fire resistant rating requirement, since it requires every classroom to have at least one door directly to the exterior and rooms used for assembly purposes have at least ½ of the required means of egress directly to the exterior as well. Under those conditions, there is no need for the students and other occupants to rely on exiting the building through the corridors since they can go directly to the exterior and move to a safe area of refuge. Once the announcement to evacuate occurs they can exit without being exposed to the fire threat potentially extended into the unprotected corridor.

However, if this is not the case, then the students, teachers, and other occupants of the educational occupancy must rely on the corridor system to exit safely from the building. In that case the paths of travel to get out of the building are restricted and the occupants may be exposed to the room of fire origin while trying to evacuate. Certainly, the basis for 1 hour fire resistive protection for corridors when the occupant load exceeds 30 is to provide for a reasonable level of protection for the occupants as they exit the building without having them unduly be exposed to a fire condition, water, and smoke which may impede their egress because they have delayed their evacuation due to a "lockdown".

It has been reported that there is an annual average of 14,700 fires in educational properties in the United States. The estimated average property loss from these fires is \$85 million per year, and caused approximately 100 injuries. The costs of bussing students to alternate facilities, the impact of double sessions in schools to accommodate displaced students, and the mental aspect of the children who fell victim to the fires is less than construction costs of a 1 hour fire resistant corridor.

Nearly half (49.7 %) of these fires were incendiary or suspicious in nature. Structure fires can start in a wide variety of different areas. During 1999-2001, 23% of the fire origins were in bathrooms/locker rooms, 13% started in the kitchen area, 7% in the classrooms, and another 7% started in corridors. Even more disturbing are findings indicating that injuries per school fires are higher than those of ALL non-residential structure fires. Certainly, the fact that more than 70% of fires occur between 0800 and 1600, the hours students are most likely to be in school, and 16% of fires occur between 1700 and 2400; 12% occur between 2400 and 0800 shows that the threat of a fire occurring while children are present is real.

Currently, the USBC allows the 1-hour fire –resistance rated corridor to be omitted where the building is protected by an automatic sprinkler system. We don't believe that such a "trade-off" is appropriate, especially in an educational occupancy where there are large numbers of children at relatively high density who are placed at risk in a fire situation. We believe that due to the expanding use of "lockdown" procedures a balanced design approach to providing life safety in educational occupancies is prudent so that the 1-hour fire resistance rated corridors can work in conjunction with the automatic sprinkler system to assure the level of life safety for the building's occupants intended by the code.

Note that an I-3 occupancy, (correctional centers, detention centers, jails, prerelease centers, prisons, and reformatories), requires the corridors to have 1 hour fire-resistance ratings when the occupancy is protected by a fire suppression system, regardless of the number of occupants. When a "lockdown" occurs in a school the staff and students are prisoners. They are prohibited from leaving the rooms or areas of protection until given permission (ordered) to do so, or because they are being held hostage. For consistency purposes the staff and students in educational occupancies deserve the same level of protection we provide to inmates. A comparison to the other I groups where evacuation of the occupants may be delayed or prevented because they are incapable of self

preservation is also appropriate and substantiates a need to increase the protection level for corridors in the education group occupancies since in the case of "lockdowns" the staff and students are prevented from taking self preservation actions when the fire alarm activates until authorized, (ordered), to evacuate after an undetermined delay in time.

Other points to consider are the construction modifications made due to high-profile events and fuel loads in our schools. Events as the Columbine High School shootings, the need of school security can sometimes conflict with the requirements of fire safety. For example, exits may be restricted for security reasons preventing escape should a fire occur. Today's structures are unquestionably safer, yet the contents of today's classrooms are more combustible. Evidence suggests that fires in schools can spread far more rapidly due to the fuel load in the school buildings.

An additional benefit of the 1-hour fire resistance rated corridor is that it can assist fire fighters and tactical response team members in doing their job by providing a protected means of access to the interior of the building where they can perform their search and rescue missions, as well as fire fighting operations, in relative safety. Fire resistant corridors provide fire fighters and tactical response team members with additional time to conduct their life safety operations more effectively and safely.

From an economic perspective, fires rank as a major national problem, and since no individual safety measure is reliable all of the time, fire protection should and must be redundant. We are concerned that the compounding effect of sprinkler trade-offs could lead to greater risk to the life safety of the building occupants, especially if combined with the reduction in or the elimination of the 1 hour fire resistance rated corridors providing access to the exits or exit stairwells in an occupancy that routinely has staff and students drill and respond in real events to ignore fire alarm system activations.

Submittal Information

Date Submitted: _____

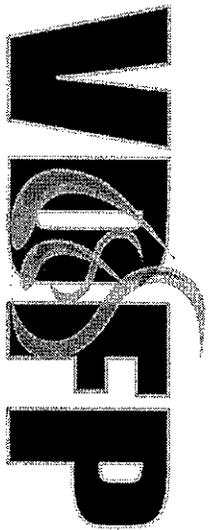
The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150





Virginia Department of Fire Programs

Structural Fires with Educational Property Use Summary, Virginia, 2004 - 2009 *

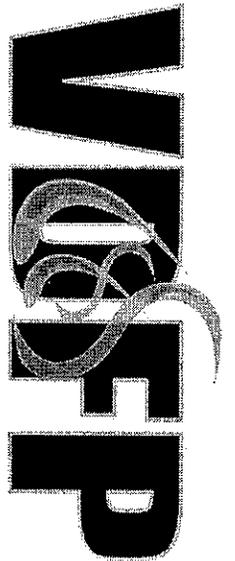
Year	Total	Percent	Total Property Loss	Total Contents Loss	Total Fire Dollar Loss	Civilian Fire Injuries	Civilian Fire Deaths	Fire Service Injuries	Fire Service Deaths
2004	28	12.5%	\$133,601	\$69,301	\$202,902	1	0	0	0
2005	48	21.4%	\$289,811	\$320,781	\$610,692	0	0	0	0
2006	33	14.7%	\$837,725	\$253,733	\$1,091,458	0	0	2	0
2007	49	21.9%	\$3,486,738	\$1,502,699	\$4,989,437	0	1	0	0
2008	41	18.3%	\$644,304	\$279,899	\$924,203	0	0	0	0
2009 *	25	11.2%	\$1,056,110	\$515,165	\$1,571,275	8	0	1	0
Grand Total	224	100.0%	\$6,446,289	\$2,941,478	\$9,389,767	9	1	3	0

Structural Fires with Educational Property Use By Automatic Extinguishing System (AES) Presence, Virginia, 2004 - 2009 *

Year	Present	None Present	Unknown or Not Reported	Grand Total	Percent
2004	6	21	1	28	12.5%
2005	16	29	3	48	21.4%
2006	11	19	3	33	14.7%
2007	14	30	5	49	21.9%
2008	15	22	4	41	18.3%
2009 *	10	13	2	25	11.2%
Grand Total	72	134	18	224	100.0%
Percent	32.1%	59.8%	8.0%	100.0%	

Note: Data is compiled from all fire incidents reported to the Virginia Fire Incident Reporting System (VFIRS) for 2004-2008 as of 04/06/2009, and 2009 as of 02/08/2010. Data for 2009 is still considered preliminary. Aid given (mutual or automatic) incidents were excluded and fire exposure incidents were included with the numbers. Structure fires include incidents with incident type coded as 110, 111, 120-123 and with structure type codes as 1 or 2. Educational includes all incidents coded with educational property use (Series 2).

* Data for 2009 is considered preliminary since we are still receiving reports from fire departments and the data is not final. Caution should be exercised in releasing and comparing the numbers.



Virginia Department of Fire Programs

Structural Fires with Nursing Homes Summary, Virginia, 2004 - 2009 *

Year	Total	Percent	Total Property Loss	Total Contents Loss	Total Fire Dollar Loss	Civilian Fire Injuries	Civilian Fire Deaths	Fire Service Injuries	Fire Service Deaths
2004	14	16.7%	\$206,501	\$45,001	\$251,502	5	0	0	0
2005	14	16.7%	\$50,301	\$3,951	\$54,252	0	0	0	0
2006	19	22.6%	\$3,219,651	\$416,071	\$3,635,722	1	1	0	0
2007	7	8.3%	\$15,601	\$7,500	\$23,101	2	0	0	0
2008	17	20.2%	\$26,525	\$4,530	\$31,055	1	0	0	0
2009 *	13	15.5%	\$14,700	\$3,400	\$18,100	1	0	0	0
Grand Total	84	100.0%	\$3,533,279	\$480,453	\$4,013,732	10	1	0	0

Structural Fires with Nursing Homes By Automatic Extinguishing System (AES) Presence, Virginia, 2004 - 2009 *

Year	Present	None Present	Unknown or Not Reported	Grand Total	Percent
2004	11	2	1	14	16.7%
2005	12	2		14	16.7%
2006	12	4	3	19	22.6%
2007	7			7	8.3%
2008	12	4	1	17	20.2%
2009 *	12		1	13	15.5%
Grand Total	66	12	6	84	100.0%
Percent	78.6%	14.3%	7.1%	100.0%	

Note: Data is compiled from all fire incidents reported to the Virginia Fire Incident Reporting System (VFIRS) for 2004-2008 as of 04/06/2009, and 2009 as of 02/08/2010. Data for 2009 is still considered preliminary. Aid given (mutual or automatic) incidents were excluded and fire exposure incidents were included with the numbers. Structure fires include incidents with incident type coded as 110, 111, 120-123 and with structure type codes as 1 or 2; Nursing Homes include all incidents with property use coded as 311 (Nursing homes licensed by the state, providing 24-hour nursing care for four or more persons).

* Data for 2009 is considered preliminary since we are still receiving reports from fire departments and the data is not final. Caution should be exercised in releasing and comparing the numbers.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-908.1**

Nature of Change:

To add requirements for carbon monoxide alarms in Groups I and R to the IBC as well as installation and design standards.

Proponent: Chief James A Gray, representing the Virginia Fire Chiefs Association, Inc.

Staff Comments:

The proposal was received in time to be considered through the workgroup process with no consensus for approval achieved. Issues discussed were that the proposal is for all Group I occupancies, which would include jails and prisons and the Group R occupancies have been considered by the Virginia Housing Commission without a recommendation for implementation. It was agreed that Group R-2 occupancies are of higher risk and are where reports of exposures are dominant. Staff notes that the use of two new standards are included in the proposal, yet no copies of the standards were provided.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-908.1

Proponent Information (Check one): Individual Government Entity Company

Name: Chief James A. Gray Representing: Virginia Fire Chiefs Association, Inc

Mailing Address: Hampton Division of Fire & Rescue 22 Lincoln Street Hampton, VA 23669

Email Address: igray@hampton.gov Telephone Number: 757-727-6580

Proposal Information

Code(s) and Section(s): USBC 908.1

Proposed Change (including all relevant section numbers, if multiple sections):

Add New USBC

SECTION 908 CARBON MONOXIDE ALARMS

908.1 Carbon monoxide alarms. Group I or R occupancies in a building containing fuel burning appliances or a building which has an attached garage shall be provided with single station carbon monoxide alarms. The carbon monoxide alarms shall be single or multiple station carbon monoxide alarms complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and manufacturer's instructions. An open parking structure, as defined in the International Building Code, shall not be deemed to be an attached garage. shall be provided in accordance with this section.

Exception: Guestrooms or dwelling units which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be provided with single station carbon monoxide alarms, provided that:

1. The guestroom or dwelling unit is located more than one story above or below any story which contains a fuel-burning appliance or an attached garage;
2. The guestroom or dwelling unit is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and
3. The building is provided with a common area carbon monoxide alarm system.

908.2 Group R-1 and R-2. Single or multiple station carbon monoxide alarms shall be installed in all sleeping units in Group R-1 and R-2 equipped with fuel fired appliance(s) in the following locations:

1. In each story within a dwelling unit.
2. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of the bedrooms.

908.3 Groups R-3 and R-4. Single or multiple station carbon monoxide alarms shall be installed in Groups R-3 and R-4 dwelling units equipped with fuel fired appliance(s) in the following locations:

1. In each story within a dwelling unit.
2. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of the bedrooms.

908.4 Maintenance. Required carbon monoxide alarms shall be maintained in accordance with the Statewide Fire Prevention Code.

(Renumber subsequent sections)

Add New SFPC

908.7 Carbon monoxide alarms. Carbon monoxide alarms shall be maintained as approved when required by the USBC.

Supporting Statement (including intent, need, and impact of the proposal):

Carbon monoxide detectors available in today's market meet the updated requirements which have eliminated the false positives that are an issue with those opposed previously to carbon monoxide detectors installation requirements.

Prior to the strong support of the fire service and others, 21 individuals were treated and 5 hospitalized because of carbon monoxide fumes in a student apartment in Blacksburg. In Salem the year before, there was a fatality resulting from carbon monoxide fumes at Roanoke College. Now, according to the Journal of the American Medical Association (JAMA), those who sustained heart muscle injury due to their exposure to carbon monoxide had an increased risk of death during a mid-point follow-up period of 7.6 years compared to those without injury to the heart. Despite a decline in the annual death rate from carbon monoxide (CO) poisoning, CO remains the most common type of accidental poisoning in the United States, contributing to 40,000 or more emergency department visits each year, according to background information. The only way to protect citizens from an odorless, tasteless and colorless gas, which are products of combustion, is to install carbon monoxide detectors around sleeping quarters, in basements and other areas where the gas may settle. Carbon monoxide poisoning mimics many common illnesses such as the flu and food poisoning.

In 2008, the Virginia Department of Fire Programs implemented a grant program where carbon monoxide detectors were given to families in the Martinsville / Henry County area who met certain requirements relating to heating assistance. Within three days of installation, a family of 4 evacuated their house because the alarm sounded. It was found that piping in the heating system had numerous holes thus causing the accumulation of gas in the home they were renting. Four people are alive today because of a carbon monoxide detector. In 2005, there were six deaths attributed to carbon monoxide poisoning and in 2006 there were 635 incidents in which fire departments responded. In April 2009, two children were overcome by carbon monoxide in an apartment, but survived. The 5 condo building in Fairfax County, all received the gas from a generator being used inside a utility room.

Carbon monoxide detectors undeniably save lives and need to be installed where there are fossil fuel appliances in close proximity, i.e. attached garages or fireplaces. As stated previously, carbon monoxide is an odorless, tasteless and colorless gas, which is product of combustion and can make an individual extremely ill or can be fatal.

This is for new construction only.

Submittal Information

Date Submitted: 5/19/09

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-915.1**

Nature of Change:

Minor and clarification changes to the emergency communication equipment requirements.

Proponent: J. Kenneth Payne, Jr., AIA, representing VSAIA

Staff Comments:

The proposal stems from discussions at the workgroup meetings and from an inquiry to the State Building Code Technical Review Board concerning the application of the emergency communication equipment requirements implemented in the 2006 USBC and SFPC. While the proposal was not drafted until after discussions, the change appears to be in line with discussions and would simply clarify the application of the current provisions.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-915.1

Proponent Information

(Check one): Individual Government Entity Company

Name: J. Kenneth Payne, Jr., AIA

Representing: VSAIA

Mailing Address: 3200 Norfolk Street, Richmond, Virginia 23230

Email Address: kpayne@moseleyarchitects.com

Telephone Number: 804-794-7555

Proposal Information

Code(s) and Section(s): 2009 VCC Section 915.0 – In-Building Emergency Communications Coverage

Proposed Change (including all relevant section numbers, if multiple sections):

915.1 General. For localities utilizing public safety wireless communications, dedicated infrastructure to accommodate and perpetuate continuous in-building emergency communication equipment to allow emergency public safety personnel to send and receive emergency communications shall be provided in new buildings and structures in accordance with this section.

Exceptions:

1. Buildings of Use Groups A-5, I-4, within dwelling units of R-2, R-3, R-4, R-5, and U.
2. Buildings of Type IV and V construction without basements, that are not considered unlimited area buildings in accordance with Section 507.
3. Above grade single story buildings of less than 20,000 square feet.
4. Buildings or leased spaces occupied by federal, state, or local governments, or the contractors thereof, with security requirements where the building official has approved an alternative method to provide emergency communication equipment for emergency public safety personnel.
5. Where the owner provides technological documentation from a qualified individual that the structure or portion thereof does not impede emergency communication signals.
6. Buildings and structures located in localities that do not provide the necessary equipment to connect to the radiating cable to make an in-building emergency communication system functional.

915.2 Where required. ~~For localities utilizing public safety wireless communications, new buildings and structures shall be equipped throughout with dedicated infrastructure to accommodate and perpetuate continuous emergency communication.~~

915.2.1.1 Installation. The building owner shall install radiating cable systems, such as coaxial cable or equivalent. The radiating cable shall be installed in dedicated conduits, raceways, plenums, attics, or roofs, compatible for these specific installations as well as other applicable provisions of this code. The locality shall be responsible for the installation of any additional communication equipment required for the operation of the system.

915.2.1.2 Operations. The locality will assume all responsibilities for the installation operation and maintenance of additional the emergency communication equipment. The building owner shall provide sufficient operational space within the building to allow the locality access to and the ability to operate in-building emergency communication equipment. ~~To allow the locality access to and the ability to operate such equipment, sufficient space within the building shall be provided.~~

915.2.1.3 Inspection. In accordance with Section 113.3, all installations shall be inspected prior to concealment.

915.2.3 Acceptance test. Upon completion of installation, after providing reasonable notice to the owner or their representative, emergency public safety personnel 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. Any noted deficiencies in the installation of the radiating cable or operational space shall be provided in an inspection report to the owner to the owner or the owner's representative.

Supporting Statement (including intent, need, and impact of the proposal):

The proposed language will prevent the use of exception #2 for buildings of Type IV and V construction when the building is constructed as unlimited area. Due to the changes regarding unlimited area buildings that allow type IV and V construction to use the unlimited area provisions the change has become necessary.

It is believed the intent of Exception #2 was to exempt wood frame buildings; however, it is believed it was not the intent to allow unlimited area buildings to be exempt (e.g., "big-box" buildings like Target, Wal-Mart, etc.), especially those of Type IV and V construction. Construction Types IV and V are usually constructed out of wood (which does *not* tend to affect the communication equipment); however, those types of construction could also be constructed out of steel and/or concrete/CMU (which *do* tend to affect the communication equipment). Those types of buildings could make the communications malfunction.

The proposed language also clarifies that the *locality* is responsible for supplying the equipment. It also includes an exception for localities that do not have the money or desire to buy and install the extra equipment necessary to make the system fully functional.

Submittal Information

Date Submitted: January 20, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-1005.1(a), (b) and (c)**

Nature of Change:

Three proposals to re-establish the lesser egress width requirements when a sprinkler system is utilized.

Proponent: J. Kenneth Payne, Jr., AIA, representing VSAIA (C-1005.1(a)), Ray Grill, representing Arup Architects/Engineers (C-1005.1(b)) and Shaun Pharr, representing the Apartment and Office Building Association of Metropolitan Washington DC and the Virginia Apartment Management Association (C-1005.1(c))

Staff Comments:

The issue was identified by staff as a significant difference between the 2006 and 2009 IBC and was discussed as such at the workgroup meetings. The proposals were not received in time for review by the workgroups; however, they are based on the discussions. All three proposals would reinstate the lower egress width multiplier for sprinklered buildings. Mr. Grill's proposal was approved in the first round of hearings for the 2012 IBC and would provide the additional requirement of an emergency voice/alarm system for those buildings taking the sprinkler incentive. The other correlations in Mr. Grill's proposal for the IEBC and the IFC are not necessary under the Virginia scheme for the use of the International Codes.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1005.1(a)

Proponent Information (Check one): Individual Government Entity Company

Name: J. Kenneth Payne, Jr., AIA Representing: VSAIA

Mailing Address: 3200 Norfolk Street, Richmond, Virginia 23230

Email Address: kpayne@moseleyarchitects.com Telephone Number: 804-794-7555

Proposal Information

Code(s) and Section(s): 2009 IBC Section 1005.1 – Minimum required egress width

Proposed Change (including all relevant section numbers, if multiple sections):

1005.1 Minimum required egress width. The *means of egress* width shall not be less than required by this section. The total width of *means of egress* in inches (mm) shall not be less than the total *occupant load* served by the *means of egress* multiplied by 0.3 inches (7.62 mm) per occupant for stairways and by 0.2 inches (5.08 mm) per occupant for other egress components. The width shall not be less than specified elsewhere in this code. Multiple *means of egress* shall be sized such that the loss of any one *means of egress* shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any *story* of a building shall be maintained to the termination of the *means of egress*.

Exceptions:

1. *Means of egress* complying with Section 1028.
2. For occupancies other than H-1, H-2, H-3, H-4, and I-2 in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by 0.2 inches (5.08 mm) per occupant for stairways and by 0.15 inches (3.81 mm) per occupant for other egress components.

Supporting Statement (including intent, need, and impact of the proposal):

The proposed change retains the sprinkler incentive that Virginia has implemented from the 1980's (which is rapidly disappearing in the model building codes, even without empirical data supporting the 2009 change from 2006). To my knowledge, the empirical data does not justify deleting the incentive. Sprinklered buildings in Virginia also have an exceptional life safety record in sprinkled buildings.

The change is formatted to avoid adding back the "table" that then would need to be referenced throughout the rest of the code. By dealing with the change as an exception, all of the other references to this code section would not need to be revised.

The deletion of the sprinkler incentive will potentially increase the cost of all new buildings, by requiring wider corridors, wider doors and/or more doors, and wider stairs and/or more stairs. Refer to the examples below:

Doors: Assume a nominal 3'-0" wide door provides 33" of *clear* width. Under the 2006 (and earlier) code, this door in a sprinkled building would accommodate 220 occupants (33 divided by 0.15). Under the 2009 code, this same door *in a sprinkled building* would accommodate only 165 occupants (33 divided by 0.20). This represents a 25% reduction in occupant load capacity for no other reason than to eliminate sprinkler trade-offs. This will require more doors or wider doors (however, 4'-0" wide doors are the widest that are tested) to accommodate the same number of occupants.

Stairs: Assume a 4'-0" clear width stair provides 48" of *clear* width. Under the 2006 (and earlier) code, this stair in a sprinkled building would accommodate 240 occupants (48 divided by 0.20). Under the 2009 code, this same stair *in a sprinkled building* would accommodate only 160 occupants (48 divided by 0.30). This represents a 33% reduction in occupant load capacity for no other reason than to eliminate sprinkler trade-offs. This will require more stairs or wider stairs to accommodate the same number of occupants.

Corridors: Assume a 5'-0" clear width corridor provides 60" of *clear* width. Under the 2006 (and earlier) code, this corridor in a sprinkled building would accommodate 400 occupants (60 divided by 0.15). Under the 2009 code, this same corridor *in a sprinkled building* would accommodate only 300 occupants (60 divided by 0.20). This represents a 25% reduction in occupant load capacity for no other reason than to eliminate sprinkler trade-offs. This will require wider corridors to accommodate the same number of occupants.

All of the above examples (and this would apply to all means of egress elements) would add costs to all projects, reduce rentable space (wider corridors, wider stairs, more stairs), and thus reduce revenue for the Commonwealth of Virginia.

If we continue to allow the model codes to strip the sprinkler incentives, we may end up with unanticipated consequences of limited buildings with sprinkler systems, as owners might choose to forego the costs of sprinkler systems to offset the additional construction costs of all of the increased egress requirements and reduced rental income.

Submittal Information

Date Submitted: January 19, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



Code Change Number: C-1005.1(b)

Our ref VSUBC/RG

Date December 31, 2009

BY EMAIL

1775 K Street, NW
Suite 220
Washington, DC 20006
Tel +1 202 729 8230

Ray.Grill@arup.com

www.arup.com

Mr. Stephen W. Calhoun
Department of Housing and Community Development
600 East Main Street
Richmond, VA 23219

ARUP

**Proposed Change to the Uniform Statewide Building Code
Section 1005.1 of the 2009 Edition of the IBC**

Dear Mr. Calhoun,

I am writing to propose an amendment to the 2009 IBC for inclusion in the Uniform Statewide Building Code. I've attached proposed code change E21 (Attachment 1) which I submitted to the ICC for incorporation into the 2012 edition of the IBC. I propose that the changes in E21 be included in the Uniform Statewide Building Code.

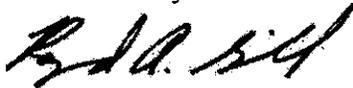
In way of summary, the proposal reinstates the egress width factors that were allowed in the code for sprinklered buildings prior to the 2009 edition of the IBC with the added requirement of an Emergency Voice Evacuation System.

The code change proposal was heard by the Egress Committee of ICC and the proposal was recommended for approval as submitted. I have also attached the Report of Hearings for E21 (Attachment 2) which has recently been published by ICC. The proposal which I have attached provides the rationale for acceptance and the committee's statement in the Report of Hearings reinforces the rationale for approval.

I am a resident of Virginia and licensed as an engineer in the Commonwealth. I may be attending the public hearings on January 25th. Do I need to register in advance to speak to this proposal? If there are any requirements in that regard, I would appreciate it if you could direct me to them.

Thank you for your consideration of this proposal.

Yours sincerely



Raymond A. Grill, P.E., LEED AP
Principal

Enc

While this undoubtedly is true, there is no record, nor were any offered as part of the supporting information for this change for any event or series of events causing a loss of life due to this modification to the fundamental capacity of each element of the means of egress. On the contrary, the record of life loss in buildings which are protected by fire suppression is remarkable.

Events such as earthquakes, and tornados and even terrorist attacks are not events that can be planned for. Hurricanes and floods are typically fairly well understood and can be planned for allowing persons to leave in an orderly fashion. However, these events pose little immediate threat to building occupants. Even though the WTC was attacked by airplanes, the NIST report states:

During the last 20 minutes before each building collapsed, the evacuation rate in both buildings had slowed to about one-fifth the immediately prior evacuation rate. This suggests that for those seeking and able to reach and use undamaged exits and stairways, the egress capacity (number and width of exits and stairways) was adequate to accommodate survivors.

In the same NIST report it states that the building design was modified such that it:

Reduced the number of required stairwells from 6 to 3, and the size of doors leading to the stairs from 44 inches to 36 inches;

These changes were due to the change to the 1968 Port Authority Code allowing the same changes to the width of the stairs just removed from the IBC. Even under the most dire of circumstances, the reduced width of the elements of the means of egress in the WTC allowed "those seeking and able to reach and use undamaged exits and stairways, the egress capacity (number and width of exits and stairways) was adequate to accommodate survivors."

The impact of this change on buildings and building design is enormous, and couldn't have happened at a worse time for the construction industry. Standard elements of the means of egress which were typically modified to allow the sprinkler increases are now restricted as follows:

Sprinklered Doors – 36" 34" clear 226 capacity
 Unsprinklered Doors – 36" 34" clear 179 capacity

Sprinklered Stairs – 44" 220 capacity
 Unsprinklered Stairs – 44" 146 capacity

Speculative office buildings which would have a single corridor, or open space and two exit stairs would have been allowed to serve a total capacity of 440 occupants; based on 100 sf. per occupant, the building could be built 44,000 sf. in area with a fire suppression system based strictly on means of egress capacity. Using the same scenario under the current IBC, the maximum occupant load served by the same door and stairs would be limited to 292 occupants; which would serve a total building area of 29,200 sf.

The result of this change will likely be less fire suppression in such office buildings as well, resulting in the following scenarios:

Office building

2009 IBC		2006 IBC	
2 exits 29,200 sf. in area	3 exits 43,800 sf. in area	2 exits 44,000 sf. in area	3 exits 66,000 sf. in area
3 stories Type IIB No fire suppression	3 stories Type IIB No fire suppression	4 stories Type IIB Fire suppression	4 stories Type IIB Fire suppression
3 stories Type IIIB No fire suppression	3 stories Type IIIA No fire suppression	4 stories Type IIIB Fire suppression	4 stories Type IIIA Fire suppression
5 stories Type IV No fire suppression	5 stories Type IV No fire suppression	6 stories Type IV Fire suppression	6 stories Type IV Fire suppression
3 stories Type VA No fire suppression	NP	4 stories Type VA Fire suppression	NP

In every case, the reductions from what was allowed in 2006 are marginal compared to what is allowed without fire suppression. 15,000 sf per floor of leasable space for Types IIB, IIIB, IV and VA construction has been traded for fire suppression. These smaller buildings are less economically viable and will not be built, and yet we know that with the incentives for use of sprinklers they are a rational and safe way to build. Today, they would be required to add a third stair to achieve the same leasable building area or widen the two stairs, which would also reduce the leasable space.

I believe approving this code change will undo what is a very regressive position for the IBC. We are penalizing the users and designers by removing the one life safety system we know works virtually every time, causing undue economic pressure on development at a time when it can least afford it.

Fewer and fewer states are seeing the economic advantage of tri-annual adoption of the ICC codes for various reasons. This is an unfortunate trend that is likely to cause an undoing of the joint efforts by industry and code officials to assure as much as possible a uniform set of standards for construction in the United States. This change forges a stand that indicates a more balanced and rational approach to safety in buildings. It recognizes the overwhelming benefits of fire safety protection as part of the design and operation of buildings.

Cost: This code change will reduce the cost of construction.

PART I – IBC MEANS OF EGRESS

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

PART II – IFC

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

ICCFILENAME:Collins-E7-1005.1

E21-09/10

1005.1 (IFC [B] 1005.1); 3404.6, 3412.6.11, Table 3412.6.11(1) [IEBC [B] 303.6, 1301.6.11, Table 1301.6.11(1)]; IFC 4604.7, Table 4604.7

Proponent: Ray Grill, Arup, representing self

THIS IS A 2 PART CODE CHANGE. BOTH PARTS WILL BE HEARD BY THE MEANS OF EGRESS COMMITTEE AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

PART I – IBC MEANS OF EGRESS

Revise as follows:

1005.1 (IFC [B] 1005.1) Minimum required egress width. The means of egress width shall not be less than required by this section. The total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by 0.3 inches (7.62 mm) per occupant for stairways and by 0.2 inches (5.08 mm) per occupant for other egress components. The width shall not be less than specified elsewhere in this code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.

Exception Exceptions:

1. Means of egress complying with Section 1028.
2. For other than H and I-2 occupancies, the total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by 0.2 inches (5.1 mm) per occupant for stairways and by 0.15 inches (3.8 mm) per occupant for other egress components in buildings that are provided with sprinkler protection in accordance with 903.3.1.1 or 903.3.1.2 and an emergency voice/alarm communication system in accordance with 907.5.2.2.

~~**3404.6 (IEBC [B] 303.6) Means of egress capacity factors.** Alterations to any existing building or structure shall not be subject to the egress width factors in Section 1005.1 of the International Building Code for new construction in determining the minimum egress widths or the minimum number of exits in an existing building or structure. The minimum egress widths for the components of the means of egress shall be based on the means of egress width factors in the building code under which the building was constructed, and shall be considered as complying means of egress for any alteration if, in the opinion of the code official, they do not constitute a distinct hazard to life.~~

3412.6.11(IEBC [B] 1301.6.11) Means of egress capacity and number. Evaluate the means of egress capacity and the number of exits available to the building occupants. In applying this section, the means of egress are required to conform to the following sections of this code: 1003.7, 1004, 1005.1, 1014.2, 1014.3, 1015.2, 1021, 1024.1, 1027.2, 1027.6, 1028.2, 1028.3, 1028.4 and 1029 [except that the minimum width required by this section shall be determined solely by the width for the required capacity in accordance with Table 3412.6.11(1)]. The number of exits credited is the number that is available to each occupant of the area being evaluated. Existing fire escapes shall be accepted as a component in the means of egress when conforming to Section 3406.

Under the categories and occupancies in Table 3412.6.11(2), determine the appropriate value and enter that value into Table 3412.7 under Safety Parameter 3412.6.11, Means of Egress Capacity, for means of egress and general safety.

2. Delete without substitution:

**TABLE 3412.6.11(1) (IEBC [B] 1301.6.11(1))
EGRESS WIDTH PER OCCUPANT SERVED**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM		WITH SPRINKLER SYSTEM ^a	
	Stairways (inches per occupant)	Other egress components (inches per occupant)	Stairways (inches per occupant)	Other egress components (inches per occupant)
Occupancies other than those listed below	0.3	0.2	0.2	0.15
Hazardous: H-1, H-2, H-3 and H-4	0.7	0.4	0.3	0.2
Institutional: I-2	NA	NA	0.3	0.2

For SI: 1 inch = 25.4 mm. NA = Not applicable.

a. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

Revise as follows:

**TABLE 3412.6.11(2) (IEBC [B] TABLE 1301.6.11(2))
MEANS OF EGRESS VALUES
(No change to table)**

PART II – IFC

Delete without substitution:

~~**4604.7 Minimum required egress width.** The means of egress width shall not be less than as required by the code under which constructed but not less than as required by this section. The total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by the factors in Table 4604.7 and not less than specified elsewhere in this section. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.~~

**TABLE 4604.7
EGRESS WIDTH PER OCCUPANT SERVED**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM		WITH SPRINKLER SYSTEM ^a	
	Stairways (inches per occupant)	Other egress components (inches per occupant)	Stairways (inches per occupant)	Other egress components (inches per occupant)
Occupancies other than those listed below	0.3	0.2	0.2	0.15
Hazardous: H-1, H-2, H-3 and H-4	0.7	0.4	0.3	0.2
Institutional: I-2	NA	NA	0.3	0.2

For SI: 1 inch = 25.4 mm. NA = Not applicable.

a. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

(Renumber subsequent sections)

Reason: The egress factors for sprinklered buildings were eliminated during the last cycle with no technical justification. The exception reinstates the egress factors for sprinklers buildings but also would require an emergency voice/alarm communication system (EVAC) to be provided.

The EVAC system provides the ability to communicate instructions to occupants that would facilitate evacuation or relocation that may be necessary in fire or other emergencies. This would also lead to more efficient use of the egress system.

The original submitter of this code change had also submitted a code change (E17-07/08) to reduce the occupant load in office buildings by changing the occupant load factor from 1/100 sq.ft. to 1/175 sq.ft. The change in occupant load factor was rejected even though that proposal had a scientific study published by NIST to back the proposal.

Cost Impact: The code change proposal will not increase the cost of construction.

PART I – IBC MEANS OF EGRESS

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

PART II – IFC

Public Hearing: Committee: AS AM D
 Assembly: ASF AMF DF

ICCFILENAME:GrII-E1-1005.1

E22-09/10

Exceptions:

1. For areas not confined by barriers, the path of egress travel from the outdoor areas are permitted to pass through the building. Means of egress requirements for the building shall be based on the sum of the occupant loads of the building plus the outdoor areas.
2. Outdoor areas used exclusively for service of the building need only have one means of egress.
3. Both outdoor areas associated with Group R-3 and individual dwelling units of Group R-2.

Committee Reason: The proposal is not clear in what would be considered a barrier. The code should allow for egress back through the building from areas such as balconies, central court yards and occupied roofs. There is a conflict in the text in that if there is a barrier you cannot egress through the building, but if there is not a barrier you can egress through the building. There are no allowances for exterior stairways for egress.

Assembly Action: **None**

E20-09/10

This is a 2 part code change. Both parts were heard by the IBC Means of Egress Code Development Committee.

**PART I- IBC MEANS OF EGRESS
Committee Action:**

Disapproved

Committee Reason: The proponent's reason statement mentioned the NIST study for the World Trade Center. Because there was an election that day, the building was not fully occupied. This report does not cover if the building was fully occupied. If the building had been fully occupied many people would not have gotten out. In the towers there were three means of egress, however, two of the stairways were compromised that day, so we do need a third staircase. Another committee member clarified that the official findings were not as indicated in the reason statement, but if the building had been fully occupied, it was predicated that possibly 14,000 people would have died.

Assembly Action: **None**

**PART II- IFC
Committee Action:**

Disapproved

Committee Reason: With the disapproval of Part I, the text in the IFC needs to remain for corridor width in existing buildings.

Assembly Action: **None**

E21-09/10

This is a 2 part code change. Both parts were heard by the IBC Means of Egress Code Development Committee.

**PART I IBC MEANS OF EGRESS
Committee Action:**

Approved as Submitted

Committee Reason: Studies have shown that most people do not react to an initial alarm, therefore, requiring a voice alarm will increase safety by providing occupants with additional information about the emergency and evacuation. The current egress width requirement will mostly affect buildings with high occupant loads that are not highrise buildings. With the addition of many safety features to highrise buildings, such as the fire service access elevators, and occupant evacuation elevators, highrise buildings will be much safer. One of the other concerns in the NIST report was counter flow in the stairways. That has also been addressed through the new highrise requirements. No technical justification for the increased width for means of egress was provided in the original change in the last cycle. The additional width requirements for all buildings went too far. This is a good compromise.

Assembly Action: **None**

**PART II- IFC
Committee Action:**

Approved as Submitted

Committee Reason: Part II was approved for consistency with the committee's action on Part I.

Assembly Action: **None**

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1005.1(c)

Proponent Information

(Check one): Individual Government Entity Company

Name: W. Shaun Pharr

Representing: The Apartment and Office Building Assn. of Metropolitan Washington DC and the Virginia Apartment Management Association

Mailing Address: 1050 17th Street NW Suite 300 Washington, DC 20036

Email Address: spharr@aoba-metro.org

Telephone Number: (202) 296-3390

Proposal Information

Code(s) and Section(s): IBC Sec. 1005.1 and Table 1005.1 - width per occupant

Proposed Change (including all relevant section numbers, if multiple sections):

Revise so as to retain the 0.15 inches provision for sprinklered buildings, per pp. 54-57 of Agenda Package for 1/12/2010 Code Update Meeting.

Supporting Statement (including intent, need, and impact of the proposal):

No compelling policy or other reason exists for the Commonwealth to abandon this long-standing provision-- it acts as an incentive to sprinkler buildings and should be retained.

Submittal Information

Date Submitted: January 25, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 E. Main St., Suite 300

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-1007.7**

Nature of Change:

To clarify the requirements of the IBC for exterior areas for assisted rescue.

Proponent: Ron Clements, representing the Chesterfield County Building Department

Staff Comments:

The proposal was submitted in time for review by several of the workgroups and no opposition was voiced. The proposal has also been submitted to the ICC process and was successful in the first round of hearings for the 2012 IBC.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1007.7

Proponent Information (Check one): Individual Government Entity Company

Name: Ron Clements Representing: Chesterfield County Building Inspection Dept.

Mailing Address: 9800 Government Center Parkway

Email Address: clementstro@chesterfield.gov Telephone Number: (804) 751-4163

Proposal Information

Code(s) and Section(s): IBC 1007.7

Proposed Change (including all relevant section numbers, if multiple sections):

Revise as follows:

1007.7 (IFC 1007.7) Exterior area for assisted rescue. ~~The exterior area for assisted rescue must be open to the outside air and shall be an area provided on the exterior landing serving an exit door on an accessible route. The exterior area of assisted rescue shall meet the size and access requirements of Section 1007.6.1. Separation walls shall comply with the requirements of Section 704 for exterior walls. Where walls or openings are between the area for assisted rescue and the interior of the building, the building exterior walls within 10 feet (3048 mm) horizontally of a nonrated wall or unprotected opening shall have a fire resistance rating of not less than 1 hour. Exterior walls separating the exterior area of assisted rescue from the interior of the building shall have a minimum fire resistance rating of 1 hour, rated for exposure to fire from the inside. The fire resistance rated exterior wall construction shall extend horizontally 10 feet (3048mm) beyond the landing on either side of the landing or equivalent fire resistance rated construction is permitted to extend out perpendicular to the exterior wall 4 feet(1220 mm) minimum on the side of the landing. The fire resistance rated construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the floor level of the area for assisted rescue or to the roof line, whichever is lower. Openings within such fire resistance rated exterior walls shall be protected in accordance with section 715 by opening protectives having a fire protection rating of not less than 3/4 hour. This construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the floor level of the area for assisted rescue or to the roof line, whichever is lower.~~

1007.7.1 (IFC 1007.7.1) Openness. The exterior area for assisted rescue shall be at least 50 percent open, and the open area above the guards shall be so distributed as to minimize the accumulation of smoke or toxic gases.

1007.7.2 (IFC 1007.7.2) Exterior exit stairway. Exterior exit stairways that are part of the means of egress for the exterior area for assisted rescue shall provide a clear width of 48 inches (1219 mm) between handrails.

Supporting Statement (including intent, need, and impact of the proposal):

The first text strike-through removed redundant language regarding openness to the exterior. The requirement for openness is provided in detail in section 1007.7.1 therefore the statement is redundant in the first sentence of 1007.7. The added text to the first sentence clearly states that the exterior area for assisted rescue is an area on an exterior landing serving an exit door on an accessible route. This clarifies that the area is on an exterior landing, that it is served by an exit door therefore this is part of the exit discharge and that it is on an accessible route, which guarantees that there is an accessible route to get to the exterior area for assisted rescue. The current language is ambiguous about exactly how the exterior area for assisted rescue fits into the overall means of egress system. The second strike text strike-through removes confusing text that states "building exterior walls within 10 feet (3048 mm) horizontally of a nonrated wall or unprotected opening shall have a fire-resistance rating". That language suggests that some portion of

the separation wall is non rated but the wall beyond the non rated portion is to be rated? It is very confusing text that is corrected in the following new text proposed. The new text attempts to capture the basic technical requirements of the current section with two technical changes. The first was the added text that allows the rated construction to extend out perpendicular from the building on the end of the landing. This is a method that we have used to protect exterior areas for assisted rescue adjacent to, and within 10 feet of, loading dock doors to avoid having to provide a ¾ hour protected opening at the loading dock door. The 4 foot minimum dimension is based on the 4 foot protection required for similar types of exposure protection specified in sections 706.5 Exception #2 and 3, and 706.5.1 exception #1. The second technical change is the requirement for the rating to be for inside exposure. This is based on the current method for prescribing exterior wall fire ratings in section 705.5. Inside exposure is specified in this case since the protection intended is from a fire inside the building. The last change to section 1007.7 is to refer opening protection of the fire rated construction to section 715. Section 715 has the complete opening protection provisions necessary to properly protect the openings. Having the opening protection specification in section 1007.7 without all of the supporting sections provided in section 715 is technically inaccurate. Table 715.4 requires ¾ hour protection in exterior walls so no amendment to the table is required and additionally the current text could be mis-applied to allow ¾ hour opening protection when the wall had a higher fire rating for another purpose, which would not occur with a direct reference to section 715.

Section 1007.7.1 has the text "above the guards" removed because the text accomplishes the performance requirement intended without that text. Additionally an exterior area for assisted rescue could be constructed without a guardrail in some circumstances such as a grade level landing that connects to the public way with a stair in the exit discharge. Lastly "guard" is not a defined term.

Section 1007.7.2 uses the term exterior "exit" stair. Exterior exit stairs are regulated by section 1026 and are an exit component. The exterior stair serving an exterior area for assisted rescue is typically an exit discharge component. If a true section 1026 exit stair is used to serve an exterior area for assisted rescue per 1007.2 exception #2 removal of the work "exit" would not pose a problem because the more generic term "exterior stair" could be applied to an exit stair. Based on these points "exit" is proposed to be deleted from 1007.7.2.

Submittal Information

Date Submitted: _____

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-1018.2**

Nature of Change:

To add exceptions to the minimum egress width requirements for assisted living facilities.

Proponent: Ed Altizer, State Fire Marshal, representing the Virginia State Fire Marshal's Office

Staff Comments:

The proposal was submitted based on discussions at the sub-workgroup meetings for assisted living facilities. The proposal has not been vetted through the full workgroups. Staff notes that the provision should not use the term "Assisted Living Facility" as that is a state specific term to the Virginia Department of Social Services and would be confusing in the USBC. Staff further notes that it would be possible to read the proposal as a more restrictive requirement than the current code as exception numbers two and three of the current provision typically apply to assisted living facilities.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION
Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1018.2

Proponent Information

(Check one): Individual Government Entity Company

Name: Ed Altizer

Representing: Virginia State Fire Marshal's Office

Mailing Address: 1005 Technology Park Drive , Glen Allen, VA 23059

Email Address: ed.altizer@vdfp.virginia.gov

Telephone Number: 804-612-7267

Proposal Information

Code(s) and Section(s): 2009USBC and proposed referenced 2009 IBC 1018.2

Proposed Change (including all relevant section numbers, if multiple sections)

1018.2 Corridor width. The minimum corridor width shall be as determined in Section 1005.1, but not less than 44 inches (1118 mm).

Exceptions:

1. Twenty-four inches (610 mm)—For access to and utilization of electrical, mechanical or plumbing systems or equipment.
2. Thirty-six inches (914 mm)—With a required occupant capacity of less than 50.
3. Thirty-six inches (914 mm)—within a dwelling unit.
4. Seventy-two inches (1829 mm)—In Group E with a corridor having a required capacity of 100 or more.
5. Seventy-two inches (1829 mm)—In corridors and areas serving gurney traffic in occupancies where patients receive outpatient medical care, which causes the patient to be not capable of self-reservation.
6. Ninety-six inches (2438 mm)—In Group I-2 in areas where required for bed movement.
7. Seventy-two inches (1829 mm)—In Group I-2 Assisted Living Facilities in corridors serving areas with wheelchair, walker, and gurney traffic in I-2 occupancies where residents are capable of self preservation.
8. Forty Four inches (1118 mm) – In corridors in Assisted Living Facility serving resident rooms with a means of egress door leading directly to the outside.

Supporting Statement (including intent, need, and impact of the proposal): Justification:

This is to clarify an often misconception that all I-2 facilities must have 8 foot corridors for patient use. Some ALFs with residents who are not capable of self preservation may not require movement of beds for evacuation but would otherwise require some assistance and thus a 6 foot corridor that allow wheelchairs, gurneys, walkers and other devices to pass would be sufficient width.

Cost Impact: Will lessen costs on facilities affected.

Submittal Information

Date Submitted: November 20, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-1020.1.6**

Nature of Change:

To require stairways to be numbered in new buildings.

Proponent: John Catlett, Building Official for the City of Alexandria, representing himself

Staff Comments:

This proposal was tentatively approved at the Codes and Standards Committee meeting of December 14, 2009 unless public comment is received during the Compilation Document comment period.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

DEPT. OF HOUSING AND COMMUNITY DEVELOPMENT REGULATORY CHANGE FORM
(Use this form to submit changes to building and fire codes)

<p>Address to submit to:</p> <p>DHCD, the Jackson Center 501 North Second Street Richmond, VA 23219-1321</p> <p>Tel. No. (804) 371 – 7150 Fax No. (804) 371 – 7092 Email: bhcd@dhcd.state.va.us</p>		<p>Document No. <u>C-1020.1.6</u></p> <p>Committee Action: _____</p> <p>BHCD Action: _____</p>
<p>Submitted by: <u>John Catlett</u> Representing: <u>City of Alexandria</u></p> <p>Address: <u>301 King Street, Alexandria, Va, 22314</u> Phone No.: <u>(703.838.4360)</u></p> <p>Regulation Title: <u>Virginia New Construction Code</u> Section No(s): <u>IBC Section 1020.1.6</u></p>		
<p>Proposed Change:</p> <p>1020.1.6 Stairway <u>identification and floor number signs</u>. A sign shall be provided at <u>identifying the location</u> and at each floor landing in interior exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the stair enclosure and the <u>stair identification by a letter of the alphabet of the stair</u>. The signage shall also state the story of, and the direction to the exit discharge and the availability of roof access from the stairway for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions.</p>		
<p>Supporting Statement: The code currently requires that a stairway be identified. This is so that an occupant can report their location in an emergency and the fire department can locate the appropriate stairway. Currently, there is no standardized method of identification. Some localities have misunderstood that both the floor and stair location should be designated by number. This code change will provide standardized guidance that the stair shall be identified by a letter and the floor designation by number.</p>		

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-1021.2**

Nature of Change:

To delete problematic language in the single exit building provision of the IBC.

Proponent: Dan K. Williams, representing the Fairfax County Building Department

Staff Comments:

The proposal was not received in time to be vetted through the workgroup process. The proponent believes that the provision was modified at the national level to permit a potentially unsafe situation of a single exit in a multiple story building to discharge into a floor below. Staff notes that the provision is limited to only two or three story buildings with the third story only being applicable to Group R-2 and even the second story limited to only Groups B, F, M and S. Staff further notes that the current (2006 IBC) table is difficult to apply to mixed use buildings and staff believes that was the impetus for the change at the national level.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

H:\My Documents\2009 Va-2009 International Codes\Code changes\2009 VCC 1021.2 and T1021.2.doc

Code Change Number: C-1021.2

Proponent Information (Check one): Individual Government Entity Company

Name: Dan K. Williams Representing: Fairfax County

Mailing Address: 12055 Government Center Parkway, Suite 316 Fairfax, VA 22035

Email Address: Dan.Williams@fairfaxcounty.gov Telephone Number: 703-324-1060

Proposal Information

Code(s) and Section(s): 2009 Virginia Construction Code Section No(s): VCC Section 1021.2 and Table 1021.2

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 1021.2 of the IBC to read:

1021.2 Buildings with single exits. Only one exit shall be required from Group R-3 occupancy buildings or from stories of other buildings as indicated in Table 1021.2. Occupancies shall be permitted to have a single exit in buildings otherwise required to have more than one exit if the areas served by the single exit do not exceed the limitations of Table 1021.2. Mixed occupancies shall be permitted to be served by single exits provided each individual occupancy complies with the applicable requirements of Table 1021.2 for that occupancy. Where applicable, cumulative occupant loads from adjacent occupancies shall be considered in determining the number of exits required for each story, accordance with the provisions of Section 1004.1. Basements with a single exit shall not be located more than one story below grade plane.

**TABLE 1021.2
STORIES BUILDINGS WITH ONE EXIT**

<u>STORY MAXIMUM HEIGHT OF BUILDING ABOVE GRADE PLANE</u>	<u>OCCUPANCY</u>	<u>MAXIMUM OCCUPANTS (OR DWELLING UNITS) PER FLOOR AND TRAVEL DISTANCE</u>
First story or basement	A, B ^d , E ^e , F ^d , M, U, S ^d	49 occupants and 75 feet travel distance
	H-2, H-3	3 occupants and 25 feet travel distance
	H-4, H-5, I, R	10 occupants and 75 feet travel distance
	S ^a	29 occupants and 100 feet travel distance
Second story	B ^b , F, M, S ^a	29 occupants and 75 feet travel distance
	R-2	4 dwelling units and 50 feet travel distance
Third story	R-2 ^c	4 dwelling units and 50 feet travel distance

For SI: 1 foot = 304.8 mm.

- a. For the required number of exits for parking structures, see Section 1021.1.2.
- b. For the required number of exits for air traffic control towers, see Section 412.3.
- c. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance

with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1029.

d. Group B, F and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall have a maximum travel distance of 100 feet.

e. Day care occupancies shall have a maximum occupant load of 10.

Supporting Statement (including intent, need, and impact of the proposal):

1021.2 Single exits & Table 1021.2 Stories with one exit. A code change was approved in the 2009 IBC: single exits from upper levels in a multi-story building would be permitted, on a "portion by portion" basis. This is dangerous, with major impacts that are negative to life safety.

In existing buildings, new tenants could block exit access paths to stairways, or "reserve them", by constructing walls or installing locks on doors, denying the emergency use of a stairway to the other tenants.

Similarly, new buildings could be constructed with the same inherent dangers. Conceivably, four (or more) tenant spaces on a floor could empty into a single exit access to a single stairway. Or, if the building was originally constructed with occupant limitations, it could be extremely difficult, if not impossible, to alter it in the future for any new occupancies.

Group R-2 buildings, when considered in conjunction with their increases in size under the 2009 IBC, might have up to 80 residents trying to access a single stair. Again, this is counter to considerations for their well-being.

This is counter to all previous history of fire and life safety.

The language above is that of IBC Section 1021.2 and Table 1021.2 (with modifications). These modifications maintain the concept of "single exit buildings" for limited occupants, but remove the "single exit story". This is imperative to the safety of the building occupants.

Submittal Information

Date Submitted: January 25, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-1024.1(a) and (b)**

Nature of Change:

Two proposals to limit the new exit marking requirements in the 2009 IBC.

Proponent: J. Kenneth Payne, Jr., AIA, representing VSAIA (C-1024.1(a)) and Shaun Pharr, representing the Apartment and Office Building Association of Metropolitan Washington DC and the Virginia Apartment Management Association (C-1024.1(b))

Staff Comments:

This issue was identified as a significant change between the 2006 and 2009 IBC for the workgroups. While the proposals were not received in time to be reviewed by the workgroups, there was general comment that the new provisions may not be warranted. Mr. Payne's proposal would limit the application of the new requirements to only super-high-rise buildings and Mr. Pharr's proposal would retain the current 2006 exiting requirements.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1024.1(a)

Proponent Information (Check one): Individual Government Entity Company

Name: J. Kenneth Payne, Jr., AIA Representing: VSAIA

Mailing Address: 3200 Norfolk Street, Richmond, Virginia 23230

Email Address: kpayne@moseleyarchitects.com Telephone Number: 804-794-7555

Proposal Information

Code(s) and Section(s): 2009 IBC Section 1024.1 – General (Luminous Egress Path Markings)

Proposed Change (including all relevant section numbers, if multiple sections):

1024.1 General. *Approved* luminous egress path markings delineating the exit path shall be provided in buildings of Groups A, B, E, I, M and R-1 having occupied floors located more than ~~75~~ 420 feet (~~22 860~~ 128 016 mm) above the lowest level of fire department vehicle access in accordance with Sections 1024.1 through 1024.5.

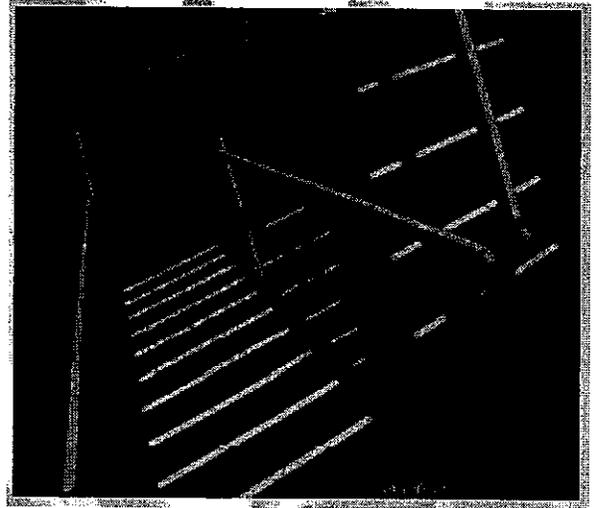
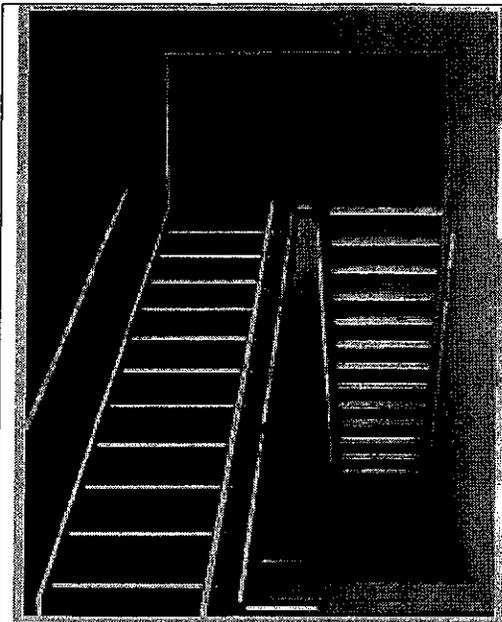
Supporting Statement (including intent, need, and impact of the proposal):

It is my understanding that this new code section was included as a result of the 9/11 reports and/or recommendations. Given that the loss of life that day mostly involved "super" high rises, it appears this section is more suited to much taller buildings. Given the definition of a "high rise," these requirements could potentially be required for a *five-story* building, which is a far cry from those buildings affected on 9/11.

However, the biggest concern is the durability of the required markings and the continued maintenance (and associated costs) involved for what could ultimately affect numerous multi-story buildings throughout the Commonwealth. It seems inevitable that the markings on the edge of the steps, edge of the landings, and almost certainly the markings applied to the *top* of the handrails, will fail or wear off those surfaces, and will require constant repair or replacement. Worse – nothing is done to repair or replace the defective markings – which could lead to unanticipated consequences (e.g., tripping over loose markings, or getting a person's hand stuck on the markings that become loose on the handrails).

Requiring markings for "super" high rises seems more appropriate (and thus, its impact in Virginia very limited, if at all) where the egress travel distances are much longer and arduous. The 420 feet comports with Section 403 as the delineation between high rises and "super" high rises.

We can only assume the addition of the markings on the top surface of the handrails have been coordinated with ICC/ANSI A117.1 and 2004 ADAAG, relative to smooth surfaces for handrails. If not, then the application on the handrails could cause rejection under the accessibility standard and/or regulation.



Submittal Information

Date Submitted: January 19, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1024.1(b)

Proponent Information

(Check one): Individual Government Entity Company

Name: W. Shaun Pharr

Representing: The Apartment and Office Building Assn. of
Metropolitan Washington DC

Mailing Address: 1050 17th Street NW Suite 300 Washington, DC 20036

Email Address: spharr@aoba-metro.org

Telephone Number: (202) 296-3390

Proposal Information

Code(s) and Section(s): IBC Sec. 1024

Proposed Change (including all relevant section numbers, if multiple sections):

Delete section

Supporting Statement (including intent, need, and impact of the proposal):

This new section in the IBC would require luminous egress path markings in several building groups, including B, with occupied floors more than 75 feet. Its adoption in the IBC was driven largely in response to the NIST post-9/11 study; while its necessity and/or utility may be demonstrable in super high-rise buildings, these are not at all clear in regard to the buildings of much lower height which are likely to be built in the Commonwealth in the next several years. Rather than impose the initial installation and subsequent maintenance burdens of such a requirement, Virginia can and should wait for more persuasive evidence that such measures beyond those already required in the VSBC are also necessary.

Submittal Information

Date Submitted: January 25, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center

Email Address: tsu@dhcd.virginia.gov

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-1103.2.7**

Nature of Change:

To modify an accessibility provision approved for the proposed 2009 USBC.

Proponent: Dan K. Williams, representing the Fairfax County Building Department

Staff Comments

The proposal was not received in time to be vetted through the workgroup process. The proponent believes that the exception approved by the Board for the proposed 2009 USBC contains problematic language. New language is suggested. Staff notes that the new language is more restrictive than the language approved for the proposed regulation as it limits the exception to only two-occupant or less areas. The proponent's language would require a ramp to a choir loft.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

H:\My Documents\2009 Va-2009 International Codes\Code changes\2009 VCC 1103.2.7 and 1103.2.16.doc

Code Change Number: C-1103.2.7

Proponent Information (Check one): Individual Government Entity Company

Name: Dan K. Williams Representing: Fairfax County

Mailing Address: 12055 Government Center Parkway, Suite 316 Fairfax, VA 22035

Email Address: Dan.Williams@fairfaxcounty.gov Telephone Number: 703-324-1060

Proposal Information

Code(s) and Section(s): 2009 Virginia Construction Code Section No(s): VCC Section 1103.2.7 and 1103.2.16

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 1103.2.7 of the IBC to read:

1103.2.7 Raised areas. Raised areas used primarily for purposes of security, life safety or fire safety including, but not limited to, observation galleries, prison guard towers, fire towers or lifeguard stands, and raised areas used primarily for religious ceremonies in a place of religious worship are not required to be accessible or to be served by an accessible route.

Add Section 1103.2.16 to the IBC to read:

1103.2.16 Places of religious worship. Limited-occupant, raised or depressed areas in a place of religious worship are not required to be accessible or to be served by an accessible route. Such limited-occupant areas shall be limited to two occupants or less, and include, but are not limited to, raised rostrums, and depressed or raised areas for performance of musical instruments such as pianos or organs.

Supporting Statement (including intent, need, and impact of the proposal):

1103.2.7 Raised areas. As written, VCC Section 1103.2.7 added “raised areas used primarily for religious ceremonies in a place of religious worship” to the list of areas used for security, life safety, or fire safety, that do not require accessibility, nor an accessible route.

Absent specific limitations (such as a single-occupant rostrum), this change is not in the best interests of the public, and should not be in the code. It could be construed to exclude an entire place of religious worship from any and all accessibility provisions (even a way to enter the building, since the building itself might be elevated above its surrounding land area, and is “used primarily for religious ceremonies”). Why, of all possible groups and uses, should the VCC deny accessibility to that population that might most need or expect it, the worshipers and users of the facility? If the VCC intent is for “raised rostrums”, or “organs located in a depressed pit”, or similar (limited occupancy) areas to be exempted, let it say so, but not with such sweeping generality.

Also, the phrase “...used primarily for religious ceremonies...” is subjective and open to wide misinterpretation.

Further, the VCC language as written might contradict the “conversion of occupancy”

requirements wherein “accessibility” is being emphasized (see VCC Section 103.3).

This code change, as presented, results in no modifications to IBC Section 1103.2.7 (and therefore that VCC change is removed), but instead provides a separate new Section 1103.2.16 for such exempted limited-occupant, specific-use areas in places of religious worship. It maintains the presumed intent of the VCC, yet also maintains accessibility requirements for the worshipers and users of the facility. The exempted areas have a specific limitation to two occupants or fewer. The subjective phrase, “...used primarily for religious ceremonies...” has been removed.

Submittal Information

Date Submitted: January 25, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-1301(401.3)**

Nature of Change:

To delete the requirement for an energy certificate in the 2009 IRC and 2009 IECC.

Proponent: Guy Tomberlin, Fairfax County Building Department, representing VPMIA and VBCOA's Plumbing/Mechanical/Fuel Gas Committees

Staff Comments:

This proposal was tentatively approved at the Codes and Standards Committee meeting of December 14, 2009 unless public comment is received during the Compilation Document comment period.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1301 (401.3)

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association Plumbing/Mechanical/Fuel Gas Committees

Mailing Address: 12055 Government Center Parkway, Suite 630
Fairfax, VA 22035

Email Address: guy.tomberlin@fairfaxcounty.gov

Telephone Number: 703-324-1611

Proposal Information

Code(s) and Section(s): IECC Section 401.3 Certificate. And IRC Section N1101.9 Certificate.

Proposed Change (including all relevant section numbers; if multiple sections): Delete IECC Section 401.3 Certificate, and IRC Section N1101.9 Certificate, in their entirety.

Supporting Statement (including intent, need, and impact of the proposal):

Technically these two sections are currently unenforceable as they can be classified as Administrative functions. The two submitting code committees agreed that these provisions added absolutely no value to increased energy efficiency. This section requires a certificate be placed on the electrical panel stating certain energy related building components such as R-values, U-factors etc... Unfortunately this is nothing more than a good idea with no energy conserving benefit what so ever. This information is no more useful than if the builder were required to place a label on the panel stating the joist size, framing wall sizes, etc or the type of plumbing and electrical fixtures. Yes it's nice to know but does it lend itself in anyway to increased energy conservation or enhanced building safety, no. In fact it will be create problems throughout the life of the building. For example what if the owner changes some components without the benefit of permits and inspections, then sells the building and the next owner comes in years later to make adjustments and finds that the building is not what the certificate says it was? It may be better, what then? What does the code official do when the label contains the wrong information? Do they reject occupancy from someone moving into their new home? Lets face it when a building component needs to be replaced it is almost always financial economics and market availability that drives the decision on replacement items, not a certificate that was posted years prior. The certificate is completely useless for any and all practical purpose. In fact, it could easily cause a chaotic exercise that builders would have to deal with in the 11th hour. Final inspections and occupancy are being withheld because this label may have not been posted. Lets not endorse rules and practice just because they are good ideas lets stay with the long standing fundamentals that the code is a minimum standard set in place to assure safety and uphold the concepts of energy conservation.

Submittal Information

Date Submitted: July 2, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-1301(402.1.1)**

Nature of Change:

To reference an alternative standard for log wall construction and to specify greater window energy requirements for such installations.

Proponent: Michael E. Loy, representing the Log Homes Council

Staff Comments:

The proposal was not received in time to be fully vetted through the workgroup process; however, it was discussed at several client group meetings. The proposal references an ICC standard for log homes. Staff does have a copy of the standard. Staff notes that the proposal is from the Log Homes Council, yet the proposal is for the IECC and not the energy provisions of the IRC. Most log homes would be constructed to comply with the IRC.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1301 (402.1.1)

Proponent Information

(Check one): Individual Government Entity Company

Name: Michael E. Loy

Representing: Log Homes Council

Mailing Address: PO Box 1668, Irmo, SC 29063

Email Address: mloy@southlandloghomes.com

Telephone Number: 803-407-4601

Proposal Information

Code(s) and Section(s): IECC Table 402.1.1 Insulation and Fenestration Requirements by Component

Proposed Change (including all relevant section numbers, if multiple sections):
Add footnote "k" to the Mass Wall R-value column of IECC Table 402.1.1 "Insulation and Fenestration Requirements by Component"

Footnote "k" to read as follows : k Log walls complying with ICC400 and with a minimum average wall thickness of 5" or greater shall be permitted in Zone 4 when overall window glazing is .32 U-factor or lower and all other component requirements are met.

Supporting Statement (including intent, need, and impact of the proposal):

To direct users to the consensus standard on log construction, the footnote references ICC400. This amendment would provide a prescriptive method that code officials and design professionals can apply to log homes. It simplifies administration of the codes for log construction for all parties involved. Log construction would be held to a higher requirement for window glazing.

Submittal Information

Date Submitted: 11/3/09

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-1301(402.4.2)(a), (b) and (c)**

Nature of Change:

Three proposals to address the duct and blower door testing requirements in the 2009 IECC and IRC.

Proponent: Mike Toalson, representing Home Builders Association of Virginia (C-1301(402.4.2)(a)) and Guy Tomberlin, representing VPMIA and VBCOA's Plumbing/Mechanical/Fuel Gas Committees (C-1301(402.4.2)(b) and (c))

Staff Comments:

This issue was identified as a significant change between the 2006 and 2009 IECC and IRC for the workgroups and by the energy sub-workgroup. While the proposals were not received in time to be reviewed by the workgroups, there was general comment that alternatives should be provided to the requirements for duct and blower door testing. Mr. Toalson's proposal would permit random testing not to be less than one home for every seven constructed and Mr. Tomberlin's changes would require testing of every house, but would permit the HVAC contractor to do the testing. It should be noted that the IECC and the IRC already provide an inspection option in lieu of blower door testing.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1301(402.4.2)(a)

Proponent Information

(Check one): Individual Government Entity Company

Name: Mike Toalson

Representing: HBAV

Mailing Address: _____

Email Address: _____

Telephone Number: _____

Proposal Information

Code(s) and Section(s): IECC 401.4 (and correlating provision in the IRC)

Proposed Change (including all relevant section numbers, if multiple sections):

Add new text and table as follows:

401.4 Compliance testing. Where testing is required to determine air leakage of buildings or duct systems, the code official shall be permitted to require random sample testing of no fewer than one in seven residences.

Supporting Statement (including intent, need, and impact of the proposal):

Duct testing 100% of residences is costly and unnecessary.

Submittal Information

Date Submitted: 1-25-10

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

The Jackson Center

501 N. 2nd Street

Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov

Fax Number: (804) 371-7092

Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1301 (402.4.2) (b)

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: VPMIA/VBCOA PMG Code Committees

Mailing Address: 12055 Government Center Parkway, Suite 630, Fairfax VA 22030

Email Address:

<mailto:guy.tomberlin@fairfaxcounty.gov>

Telephone Number: 703-324-1611

Proposal Information

Code(s) and Section(s): IECC Section 402.4.2.1 and IRC Section N1102.4.2.1 amended by the 2006 VUSBC

Proposed Change (including all relevant section numbers, if multiple sections):

Add new Section 402.4.2.2 to the IECC and N1102.4.2.2 to the IRC to read as follows:

IECC 402.4.2.1.1 Test. Testing shall be performed by approved qualified individuals, testing agencies or contractors. Testing and results shall be as prescribed in Section 403.2.2 and approved recognized industry standards. Test results shall be submitted to the code official prior to occupancy.

IRC N1102.4.2.1.1 Test Testing shall be performed by approved qualified individuals, testing agencies or contractors. Testing and results shall be as prescribed in Section N1102.4.2.1 and approved recognized industry standards. Test results shall be submitted to the code official prior to occupancy.

Supporting Statement (including intent, need, and impact of the proposal):

This will permit the installing contractor or any other approved testing agency to perform whole house "blower door" testing, if that option is elected test as permitted by the IECC/IRC. This proposal is specifically submitted to replace and delete other proposals that would permit any type of random testing. There is no fair, uniform, reasonable method to implement random, testing. The code official cannot be put into the position of determining when testing occurs, neither can the contractor. What if it was decided that every 3 permits issued requires testing? Would it be in a 12 month period? What about the custom home builder who only builds 3 homes a year? Is it acceptable to allow 2 custom homes to be turned over to the owners without required testing? What about the track builder that builds 100 houses per year? They only have to test 33.3%? What if they use multiple sub contractors? Do they just use the best subs on the ones they know are going to require testing? The whole concept behind the testing is to assure energy conservation measures have been incorporated into the buildings construction. Random testing has the potential to completely negate energy conservation assurance. We need to focus on the intent and assurance that each building has complied with the requirements outlined in the energy code, random testing would be cheating virtually all the home buyers who didn't have the required test performed. The answer is what we have proposed here and that is to incorporate the allowance for any qualified person/company to do the test, not to create more burdensome provisions such as specialty contractors or 3rd party certifications that some feel are needed to perform these test.

Submittal Information

Date Submitted: Jan. 21, 2010.

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1301 (402.4.2)(C)

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: VPMIA/VBCOA PMG Code Committees

Mailing Address: 12055 Government Center Parkway, Suite 630, Fairfax VA 22030

Email Address:

mailto:guy.tomberlin@fairfaxcounty.gov

Telephone Number: 703-324-1611

Proposal Information

Code(s) and Section(s): IECC Section 403.2.2 and IRC Section N1103.2.2.1 amended by the 2006 VUSBC

Proposed Change (including all relevant section numbers, if multiple sections):

Add new IECC Section 403.2.2.1 and IRC Section N1103.2.2.1 (below the exceptions) to read as follows:

IECC 403.2.2.1. Testing shall be performed by approved qualified individuals, testing agencies or contractors. Testing and results shall be as prescribed in Section 403.2.2 and approved recognized industry standards. Test results shall be submitted to the code official prior to occupancy.

IRC N1103.2.2.1 Test Testing shall be performed by approved qualified individuals, testing agencies or contractors. Testing and results shall be as prescribed in Section N1103.2.2 and approved recognized industry standards. Test results shall be submitted to the code official prior to occupancy.

Supporting Statement (including intent, need, and impact of the proposal):

This will permit the installing contractor or any other approved testing agency to test as required by the IECC and IRC. This proposal is specifically submitted to replace and delete other proposals that would permit any type of random testing. There is no fair, uniform, reasonable method to implement random, testing. The code official cannot be put into the position of determining when testing occurs, neither can the contractor. What if it was decided that every 3 permits issued requires testing? Would it be in a 12 month period? What about the custom home builder who only builds 3 homes a year? Is it acceptable to allow 2 custom homes to be turned over to the owners without required testing? What about the track builder that builds 100 houses per year? They only have to test 33.3%? What if they use multiple sub contractors? Do they just use the best subs on the ones they know are going to require testing? The whole concept behind the testing is to assure energy conservation measures have been incorporated into the buildings construction. Random testing has the potential to completely negate energy conservation assurance. We need to focus on the intent and assurance that each building has complied with the requirements outlined in the energy code, random testing would be cheating virtually all the home buyers who didn't have the required test performed. The answer is what we have proposed here and that is to incorporate the allowance for any qualified person/company to do the test, not to create more burdensome provisions such as specialty contractors or 3rd party certifications that some feel are needed to perform these test.

Submittal Information

Date Submitted: Jan. 21, 2010.

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Centre
600 E. Main St., Ste. 300
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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-1301(404.2)**

Nature of Change:

To require an energy consumption reduction device to be installed on every panel box.

Proponent: Barry Wisner, representing Cherokee Energy Solutions

Staff Comments:

The proposal was not received in time to be vetted through the workgroup process. While the supporting statement indicates the proposal is for both residential and commercial construction, the proposal appears to be submitted only for the IECC. Staff notes that there is no standard listed for the device, nor any criteria for determining how to approve a device. The proponent has not indicated whether he has sought approval for this requirement at the national level.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-1301 (404.2)

Proponent Information

(Check one): Individual Government Entity Company

Name: BARRY WISNER

Representing: CHEROKEE ENERGY SOLUTIONS

Mailing Address: 2436 MISTWOOD FOREST DRIVE, CHESTER, VA 23831

Email Address: barrywisner@hotmail.com

Telephone Number: 804 475-9288

Proposal Information

Code(s) and Section(s): 404.1 Existing. ADD NEW REQUIREMENT 404.2.
505.7 Existing. ADD NEW REQUIREMENT 505.8.

Proposed Change (including all relevant section numbers, if multiple sections):

404.2 Energy management device, voltage control guard, is required on every panel serving a residential dwelling.

505.8 Energy management device, voltage control guard, is required on the last distribution panel closest to the load of every single phase commercial electrical distribution panel utilized for lighting and general power.

Supporting Statement (including intent, need, and impact of the proposal):

INTENT: Energy savings. Reduce single phase power panel electrical consumption by installing the Voltage Control Guard (VCG). The VCG removes noise from the broad band of spectrum noises that exists on the neutral side of electric installations and restores the optimum phase and polarity in the system. The impact on the consumer is a reduction of electric consumption without requiring a change in the behavior of the consumer.

NEED: The Virginia Energy Plan 2007, Chapter 3: Energy Efficiency and Conservation, has a stated goal "...to reduce electric use by 10% by 2022 as called for in the 2007 electric re-regulation legislation" (Reference to Title 67 of the Code of Virginia 67-101, 67-102.)

Federal Executive Order 13123 (1999), Greening the Government Through Efficient Energy Management, Section 202: "Energy Efficiency Improvement Goals. Through life-cycle cost-effective measures, each agency shall reduce energy consumption per square foot, per unit of production, or per other unit is applicable by 20% by 2005 and 25% by 2010 relative to 1990. No facilities will be exempt from these goals unless they meet new criteria for exemptions as issued by DOE."

In order to help achieve the goals of these plans to reduce energy consumption based on these requirements, the VCG can provide a contribution to meeting these savings goals.

IMPACT: (continued below)

Submittal Information

Date Submitted: JANUARY 27, 2010.

IMPACT: Using statistical analysis on almost 2 years of field and lab data, in concert with tests currently being performed by Dominion Power, the data supports a reduction in consumption in the 5% savings range. The histograms of data collected between April 2008 and June 2009 indicate that the VCG1 has resulted in a 5% or greater savings in energy consumption in 99% of the current single-phase installations.

Dominion Services, Inc., a division of Virginia Dominion Power, is in their second phase of testing. The first phase included the installation of voltage control guards in Charles City County. The first phase is complete and they are now moving into the second level of that testing because the single unit showed positive results.

Dominion Services, Inc. has test results indicating 3 to 5 percent savings and is expanding the tests to a larger model sample because they see savings in single unit tests. Their goal is to demonstrate a lower transformer core excitation, indicating that the reduced consumption will result in creating both a heat reduction in equipment and appliance loads. These ongoing tests provide additional validation of the conceptual and operational framework of the VCG.

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-2803.1(403.3)**

Nature of Change:

To add ventilation rates to the International Mechanical Code (IMC) to address areas where smoking is allowed, but are not considered smoking lounges.

Proponent: Shawn Strausbaugh, representing Arlington County

Staff Comments:

The proposal was not received in time to be vetted through the workgroup process; however, it resulted from discussions from a multi-jurisdictional group of mechanical inspection personnel to address how the IMC affects the implementation of the Virginia Indoor Clean Air Act. As the 2009 IMC assumes no smoking in areas other than smoking lounges, adjustments were needed to the ventilation rates to provide reasonable ventilation rates in those areas where smoking is permitted, but the concentration would not be as intense as in a smoking lounge. The proposal uses established ventilation rates from when the IMC did address smoking in areas other than smoking lounges.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-2803.1 (403.3)

Proponent Information (Check one): Individual Government Entity Company

Name: Shawn Strausbaugh Representing: Arlington County, VA

Mailing Address: 2100 Clarendon Blvd. suite 1000 10th floor Arlington, VA 22201

Email Address: sstrausbaugh@arlingtonva.us Telephone Number: 703-228-3842

Proposal Information

Code(s) and Section(s): IMC 403.3 as currently amended by the 2006 VUSBC

Proposed Change (including all relevant section numbers, if multiple sections): IMC 403.3 second paragraph: With the exception of smoking lounges and other designated areas where smoking is permitted the ventilation rates in Table 403.3 are based on the absence of smoking in occupiable spaces. Where smoking is anticipated in a space other than a smoking lounge, the ventilation system serving the space shall be designed to provide ventilation over and above that required by Table 403.3 in accordance with accepted engineering practice

Add to table 403.3 under **public spaces:**

Lounges designated as an area where smoking is permitted, with footnote b, 30 cfm per person- people outdoor airflow rate in breathing zone cfm/person, 100 default occupant density #/1000 square feet.

Add to table 403.3 Under **Food and Beverage service:**

Bars or cocktail lounges designated as an area where smoking is permitted, with footnote b, 30 cfm per person- people outdoor airflow rate in breathing zone cfm/person, 100 default occupant density #/1000 square feet.

Cafeteria or fast food designated as an area where smoking is permitted, with footnote b, 20 cfm per person- people outdoor airflow rate in breathing zone cfm/person, 100 default occupant density #/1000 square feet.

Dining rooms designated as an area where smoking is permitted, with footnote b, 20 cfm per person- people outdoor airflow rate in breathing zone cfm/person, 70 default occupant density #/1000 square feet.

Supporting Statement (including intent, need, and impact of the proposal): The purpose of this proposed change is to provide more precise, enforceable code language to IMC 403.3 other than using the current term "accepted engineering practice". The ventilation rates provided in the existing 2006 VUSBC are based on the absence of smoking in occupied areas, except for the "smoking lounges" classification. The existing code gives no direction to the required outdoor air ventilation rates for other designated areas where smoking is permitted, other than stating per "accepted engineering practice". The outdoor air rates added in this proposed change are taken from the 2006 IMC. The ventilation rates in the 2006 IMC are higher than those in the 2006 VUSBC because they are based on the presence of smoking in occupied areas. This proposal is simply taking current ventilation rates that were designed and based on the presence of smoking in occupied areas, and incorporating those rates into the VUSBC. Note that the rates shown in this proposed change are less than half of the required outdoor air ventilation required per person under the occupancy classification of "smoking lounge". This proposed change will add flexibility and cost saving to a currently restrictive code requirement by providing

previously approved, alternate ventilation rates to an otherwise silent code section. This change was created through several meetings of the Northern VA Inter-jurisdictional group that were held to reach a consensus on how the VA Indoor clean air act and the existing VUSBC were to be enforced. Based upon these meeting it was felt that the existing mechanical portion of the VUSBC needed to have defined outdoor air ventilation rates for smoking areas instead of permitting the use of accepted engineering practice that would result in numerous different interpretations, or restricting all areas designated for smoking to the occupancy classification of "Smoking lounge". Again note that all the added smoking areas as listed above were taken from previously approved rates from the 2006 IMC.

Submittal Information

Date Submitted: January 23, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-2803.1(1101.10)(a) and (b)**

Nature of Change:

Two proposals to address the new requirement in the International Mechanical Code for the use of a locking cap on air-conditioning compressor units.

Proponent: Guy Tomberlin, representing VPMIA and VBCOA's Plumbing/Mechanical/Fuel Gas Committees (C-2803.1(1101.10)(a)) and Frank Castelvechi, representing Henrico County Building Department (C-2803.1(1101.10)(b))

Staff Comments:

The proposals were not received in time for review by the workgroups but the issue was discussed at several meetings. The 2006 IMC had the requirement for locking caps, so the requirement has been in place now for several years. However, at the national level in the first round of proposals for the 2012 IMC, a proposal was submitted to accept other methods of preventing access to the units in lieu of the locking caps. Mr. Tomberlin's proposal is the proposal that was accepted in the first round of hearings for the 2012 IMC. Mr. Castelvechi's proposal is to delete the requirement altogether as not being necessary on commercial appliances due to their location. Evidently, there was a similar proposal at the national level which was disapproved by the committee, but the committee action was overturned by the assembly. Mr. Tomberlin's proposal was reviewed by the Codes and Standards Committee on December 14, 2009 and was tentatively approved unless public comment was received. Mr. Castelvechi's proposal constitutes public comment, so both proposals will now be reviewed concurrently.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-2803.1(1101.10)(a)

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: VPMFA/VBCOA PMG Code Comm.

Mailing Address: 12055 Gait Ctr. Plkwy - Suite 630

Email Address: guy.tomberlin@fushun.com Telephone Number: 703-324-1611

Proposal Information

Insert M-132 language into the IMC only -

Code(s) and Section(s): This was approved on a national level.

Proposed Change (including all relevant section numbers, if multiple sections): Note: you can click in this box and insert text. The box will expand to accommodate your insertions.

Supporting Statement (including intent, need, and impact of the proposal): Note: you can click in this box and insert text. The box will expand to accommodate your insertions.

Submittal Information

Date Submitted: 12/7/09

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
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M132-09/10
1101.10

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing the International Institute of Ammonia Refrigeration

Revise as follows:

1101.10 Locking access port caps. Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be otherwise secured to prevent unauthorized access.

Reason: The intent of this change is not to diminish the barrier to "huffing" that was established by adding Section 1101.10 to the 2009 code. Instead, it is to recognize that there are other methods whereby access ports can be secured. For example, in a refrigerated warehouse, a valve inside of the building may block the flow of refrigerant to the access port located outside except when filling is taking place. With this arrangement, no refrigerant is released even when the cap is removed when the valve is closed. Likewise, ports may be located with rooftop equipment having no access except via a roof hatch from the inside. Locking, tamper-resistant caps tend to be a more suitable solution for residential-style equipment with small access ports, and the code needs to be more flexible to accommodate industrial equipment at commercial facilities.

Cost Impact: The code change proposal may increase or decrease the cost of construction depending on the selected method.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-2803.1(1101.10)(b)

Proponent Information

(Check one): Individual Government Entity Company

Name: Frank G Castelvechi, III, PE

Representing: Henrico County

Mailing Address:

PO Box 90775
Henrico VA 23273

Email Address: cas13@co.henrico.va.us

Telephone Number: 804 501 4375

Proposal Information

Code(s) and Section(s): IMC 1101.10, IRC M1411.6 Locking Access Port Caps.

Proposed Change (including all relevant section numbers, if multiple sections):
Delete this section in its entirety.

Supporting Statement (including intent, need, and impact of the proposal):

Providing locking caps to refrigerant ports is an unnecessary expense as it will do little to address the issue of the huffing of refrigerant as the existing caps and valves already require tools to access and those interested in huffing would either be able to access the refrigerant by puncturing or sawing into the lines or equipment resulting in greater losses to those from whom the refrigerant is being stolen. Keys for these caps would soon be readily available to the underground as many huffers are either HVAC Techs or are introduced to it by HVAC Techs. Other sources of refrigerant for huffing such as vehicle systems are readily available. Other commonly available inhalants include paint, whipped cream, propane, gasoline etc.

The ICC committee had rejected this change but was overruled by the assembly after emotional testimony.

Submittal Information

Date Submitted: 12/8/2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov

Fax Number: (804) 371-7092

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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-2804.1(310.1)**

Nature of Change:

To add a provision to the International Mechanical Code require any buildings where CSST gas piping is used to be provided with a lightning protection system.

Proponent: David G. Humphrey, representing the Virginia Chapter of the International Association of Electrical Inspectors

Staff Comments:

The proposal was not received in time to be vetted through the workgroup process; however, the issue of the use of CSST was discussed at a number of workgroup meetings as a continuation from the 2006 code change cycle. There was anecdotal evidence of continued problems with CSST systems but concerns were raised as to whether this was a solution. The proposal does not include the provisions of the International Residential Code for CSST, where most of the product is used.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change Nos. C-2901.1.1(Appendix C)(a) and (b)**

Nature of Change:

Two proposals to use Appendix C of the International Plumbing Code (IPC), the first for gray water recycling systems and the second for both gray water recycling systems and rain water re-use.

Proponent: Guy Tomberlin, Fairfax County Building Department, representing VPMIA and VBCOA's Plumbing/Mechanical/Fuel Gas Committees for (a) and representing only himself for (b)

Staff Comments:

Appendix C of the IPC, for gray water recycling systems, was added to the IPC in the 2006 edition. Virginia did not make it part of the USBC. This issue has been discussed at the workgroup meetings and the first proposal is to provide standards for the voluntary use of gray water recycling systems. The second proposal is to also use the appendix for rain water re-use, which essentially uses the same technology as gray water systems. The Department has formed a sub-workgroup of state agency representatives from the Department of Environmental Quality, the Department of Conservation and Recreation and the Department of Health and other interested parties to determine whether functional design issues are present and need to be addressed, such as protection of the potable water supply outside of a building or structure and the disposal of re-used gray water or rain water. The sub-workgroup is still meeting to develop recommendations concerning these proposals.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-2901.1.1 (Appendix C)(a)

Proponent Information

(Check one): Individual Government Entity Company

Name: Guy Tomberlin

Representing: VA Plumbing and Mechanical Inspectors Association and VA Building and Code Officials Association Plumbing/Mechanical/Fuel Gas Committees

Mailing Address: 12055 Government Center Parkway, Suite 630
Fairfax, VA 22035

Email Address: guy.tomberlin@fairfaxcounty.gov

Telephone Number: 703-324-1611

Proposal Information Include Appendix

Code(s) and Section(s): Incorporate Appendix C of the IPC into the body of the code.

Proposed Change (including all relevant section numbers, if multiple sections):

New USBC/IPC Section R2901.1.1 Use of Appendix C for Gray water recycling systems. In addition to the other applicable provisions of this code, gray water recycling systems shall comply with the provisions in Appendix C of the IPC.

Note to staff – renumber existing sections accordingly.

Supporting Statement (including intent, need, and impact of the proposal): This technology has developed into a system that results in a safe installation with a huge energy conserving advantage. In today's "Green" environment this is a much needed step in the right direction for plumbing systems. Currently being located in an Appendix results in the requirements for a code modification review each time one of these systems is proposed. Once this option is inserted into the body of the code it becomes a designers choice whether to take advantage of recycling or not. This proposal has also been submitted on the National level. The impact is this creates another option for industry to utilize, enabling greater energy/water savings.

Submittal Information

Date Submitted: July 2, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-2901.1.1 (Appendix C)(b)

Proponent Information

(Check one): X Individual Government Entity Company

Name: Guy Tomberlin

Representing: Myself

Mailing Address: 12055 Government Center Parkway, Suite 630
Fairfax, VA 22035

Email Address: guy.tomberlin@fairfaxcounty.gov

Telephone Number: 703-324-1611

Proposal Information Include Appendix

Code(s) and Section(s): Incorporate Appendix C of the IPC into the body of the code.

Proposed Change (including all relevant section numbers, if multiple sections):

New USBC/IPC

Section R2901.1.1 Use of Appendix C for Gray water recycling systems. In addition to the other applicable provisions of this code, gray water recycling systems shall comply with the provisions in Appendix C of the IPC.

2901.1.1.1 Rain water re-use. Where approved rainwater re-use shall be permitted when installed in accordance with the IPC Appendix C provisions for gray water recycling systems. Rainwater and gray water systems shall not be interconnected.

Note to staff – renumber existing sections accordingly.

Supporting Statement (including intent, need, and impact of the proposal): This technology has developed into a system that results in a safe installation with a huge energy conserving advantage. In today's "Green" environment this is a much needed step in the right direction for plumbing systems. Currently being located in an Appendix results in the requirements for a code modification review each time one of these systems is proposed. Once this option is inserted into the body of the code it becomes a designers choice whether to take advantage of recycling or not. The words "where approved" are incorporated into the text due to the facts that other agencies may be involved in the decision making process such as Health Dept or Department of Environmental Quality. The impact is this creates another option for industry to utilize, enabling greater energy/water savings.

Submittal Information

Date Submitted: July 2, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

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VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-3001.2.1**

Nature of Change:

To reference the newest addendum to the traditional elevator standard and to add a new standard for the evaluation of newer design or non-traditional elevators to the USBC.

Proponent: James D. Lawrence, representing the International Association of Elevator Consultants

Staff Comments:

The proposal was not received in time to be vetted through the workgroup process; however, it was discussed at one meeting of DHCD staff with the Virginia Building and Code Officials Association. It was recognized that the standard has merit for facilitating the acceptance of newer or non-traditional elevators for which the normal ASME A17.1 standard does not provide complete coverage for. It was also noted that the '08 addendum to ASME A17.1 authorizes the use of the new A17.7 standard, which might be sufficient rather than actually referencing the new standard. The proponent did not provide a copy of either the '08 addendum to the ASME A17.1 standard or the new A17.7 standard and was informed that copies needed to be provided.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-3001.2.1

Proponent Information

(Check one): Individual Government Entity Company

Name: James D. Lawrence

Representing: IAEC (International Association of Elevator Consultants, formerly NATEP)

Mailing Address: 4214 Coles Point Way, Glen Allen, VA 23060

Email Address: jlawrence9@aol.com

Telephone Number: 804.747.0971

Proposal Information

Code(s) and Section(s): IBC - Chapter 35 Referenced Standards

Proposed Change (including all relevant section numbers, if multiple sections):

change the referenced standards in Chapter 35 of the IBC as follows:

ASME

Add A17.1a-2008/CSA B44a-08 Addenda to ASME A17.1-2007/CSA B44-07

Add A17.7-2007/CSA B44.7-07 Performance-based safety code for elevators and escalators

ADD The following paragraph *

Supporting Statement (including intent, need, and impact of the proposal):

1. A17.1a addendum covers clarifications, corrections, deletions and additions and updates the elevator referenced standard to the most recent, available version of A17.1 issued Dec. 5, 2008 and effective June 5, 2009.
2. A17.7 provides a means for demonstrating safety of design for new technology elevator products and will be helpful to the AHJ community. This new performance-based code provides an objective and structured method for establishing design and product safety for newly introduced designs and technologies that are not specifically covered in A17.1. A17.7 was published and effective in 2007 and uses Accredited Elevator/Escalator Certification Organization(s) (AECO) authorized by ANSI, ASME or SCC.

Submittal Information

* 3001.2.1 Performance-based safety code for elevators and escalators. A17.7/CSA B44 may be used as an acceptable alternative to A17.1/CSA B44

Date Submitted: 12/1/09

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)

Main Street Center
600 E. Main St., Suite 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



authority having jurisdiction will establish the effective date for their local regulations.

(07)
(055)

SECTION 1.2 PURPOSE AND EXCEPTIONS

1.2.1 Purpose

The purpose of this Code is to provide for the safety of life and limb, and to promote the public welfare. Compliance with this Code shall be achieved by

(a) conformance with the requirements in ASME A17.1/CSA B44; or

(b) conformance with some of the requirements in ASME A17.1/CSA B44 and for systems, subsystems, components, or functions that do not conform with certain requirements in ASME A17.1/CSA B44, conform with the applicable requirements in ASME A17.7/CSA B44.7; or

(c) conformance with the requirements in ASME A17.7/CSA B44.7

1.2.2 Exceptions to ASME A17.1

The provisions of this Code are not intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety to those prescribed by this Code, provided that there is technical documentation to demonstrate the equivalency of the system, method, or device.

1.2.2.1 The specific requirements of this Code shall be permitted to be modified by the authority having jurisdiction based upon technical documentation or physical performance verification to allow alternative arrangements that will assure safety equivalent to that which would be provided by conformance to the corresponding requirements of this Code.

1.2.2.2 This Code contains requirements that are also covered in the National Building Code of Canada (NBCC). Reference to the NBCC is recognition that said requirements are not within the scope of this Code in Canada.

In jurisdictions not enforcing the NBCC, the use of the NBCC is not intended.

1.2.2.3 Exceptions shall be based on the requirements of 1.2.2.1.

(07)
(a)

SECTION 1.3 DEFINITIONS

Section 1.3 defines various terms used in this Code. In addition, some nomenclature and terminology used in the elevator industry and other ASME publications are defined.

access switch: see *hoistway access switch*.

alteration: any change to equipment, including its parts, components, and/or subsystems, other than maintenance, repair, or replacement.

alteration, as part of an: a repair or replacement that is included with other work that is classified as an alteration.

alternate level: a floor level identified by the building code or fire authority, other than the designated level.

annunciator, car: an electrical device in the car that indicates visually the landings at which an elevator landing signal registering device has been actuated.

applied frame entrance: a wraparound or partial addition to an existing entrance frame used to improve the appearance or to provide the required clearances.

approved: acceptable to the authority having jurisdiction.

authority having jurisdiction: the organization, office, or individual responsible for enforcement of this Code. Where compliance with this Code has been mandated by legislation or regulation, the "authority having jurisdiction" is the regulatory authority (see *regulatory authority*).

authorized personnel: persons who have been instructed in the operation of the equipment and designated by the owner to use the equipment.

automatic transfer device: a power-operated mechanism that automatically moves a load consisting of a cart, tote box, pallet, wheeled vehicle, box, or other similar object from and/or to the car.

auxiliary power lowering device: an alternatively powered auxiliary control system that will, upon failure of the main power supply, allow a hydraulic elevator to descend to a lower landing.

brake, driving machine, elevator, dumbwaiter, or material lift: an electromechanically or electrohydraulically released spring, or gravity applied device, that is part of the electric driving machine of the elevator, dumbwaiter, or material lift used to apply a controlled force at a braking surface to hold or retard the elevator, dumbwaiter, or material lift. See Nonmandatory Appendix F.

electrohydraulically released: a means of release in which an electric current applied to a solenoid valve or the motor of a hydraulic pump directs pressurized hydraulic fluid to an actuator (such as a hydraulic jack) that overcomes a resisting force (such as a spring) as long as the electric current flows.

electromechanically released: a means of release in which an electric current applied to an actuator (such as a solenoid) causes an electromagnetic force that overcomes a resisting force (such as a spring) as long as the electric current flows.

brake, driving machine, escalator, or moving walk: an electromechanical device that is part of the electric driving machine of the escalator or moving walk, used to

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-3008.1**

Nature of Change:

To limit the application of the new occupant evacuation elevator provisions in the International Building Code to only elevators in buildings higher than 420 feet.

Proponent: Ray Pylant, Building Official, representing Fairfax County Building Department

Staff Comments:

The proposal was not received in time to be reviewed by the workgroups. The concern raised is that occupant evaluation elevators are not as safe as traditional exits, such as rated stairways, so their use as an acceptable means of egress should not be permitted in other than super-high-rise buildings, where necessary for mass evacuation.

Codes and Standards Committee Action:

Approve as presented.

Disapprove.

Approve as modified (specify):

Carry over to next cycle.

Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

H:\My Documents\2009 Va-2009 International Codes\Code changes\2009Code_Change_FormPrintable.doc

Code Change Number: C-3008.1

Proponent Information (Check one): Individual Government Entity Company

Name: Ray Pylant, Building Official Representing: Fairfax County

Mailing Address: 12055 Government Center Parkway, Suite 444, Fairfax, VA 22035-5504

Email Address: Ray.Pylant@fairfaxcounty.gov Telephone Number: 703-324-1910

Proposal Information

Code(s) and Section(s): 2009 IBC Section 3008, Occupant Evacuation Elevators

Proposed Change (including all relevant section numbers, if multiple sections):

Change Section 3008.1 as follows:

3008.1 General. Where elevators in buildings greater than 420 feet (128 m) in *building height* are to be used for occupant self-evacuation during fires, all passenger elevators for general public use shall comply with this section. ~~Where other elevators are used for occupant self-evacuation, they shall also comply with this section.~~

Supporting Statement (including intent, need, and impact of the proposal):

Section 3008, *Occupant Evacuation Elevators*, was established to provide an alternative to the "additional exit stairway" now prescribed by Section 403.5.2 for high-rise buildings more than 420 feet in building height. However, Section 3008 does not restrict its application to just such buildings, thereby allowing elevators to be configured under its provisions regardless of building height. To make passenger elevators able to continue to operate in a fire emergency, Section 3008 removes certain safety features that are otherwise required for passenger elevators, such as fire sprinklers in machinery spaces (in fully sprinklered buildings) and heat shunt trips that kill mainline power before the elevator safeties and controls are compromised by fire or water. Given the large numbers of people who might need evacuation from very tall buildings in a fire emergency, the logic is understandable. In smaller buildings with fewer people where traditional evacuation methods work, however, the use of elevators for self evacuation in a fire emergency would needlessly raise the hazard level.

Submittal Information

Date Submitted: January 22, 2010

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-3102.5**

Nature of Change:

To add a provision specifically dealing with construction not extending over a lot line.

Proponent: John Catlett, Building Official, representing the City of Alexandria Building Department

Staff Comments:

The proponent offers language from the BOCA Code with some modifications. The BOCA Code was the model code used as the basis for the USBC prior to the merger of the three nationally recognized model code organizations to form the International Code Council. Staff notes that the language suggested may be administrative in nature and if necessary, should be placed in Chapter 1 of the USBC. Section 108.1 of the USBC already requires a permit if a lot line is moved. To only put the language in Chapter 32 of the IBC (which is only for encroachments into the public right of way) would raise issues of whether it was applicable on adjacent private lots. In addition, if a building was constructed under the IRC (USBC Group R-5), it was also be questionable whether a provision in Chapter 32 of the IBC would be applicable. Staff further notes that the definition of “building line” in both the IBC and the IRC specifically prohibits building across a lot line. This change was not fully vetted through the workgroup process as the proposal came in after the first round of workgroup meetings; however it was considered by a DHCD-sponsored meeting with VBCOA and a number of similar issues were raised.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C - 3102.5

Proponent Information

(Check one): Individual Government Entity Company

Name: John Catlett

Representing: City of Alexandria

Mailing Address: 301 King Street, Room 4200, Alexandria, va 22314

Email Address: john.catlett@alexandriava.gov

Telephone Number: 703.746.4200

Proposal Information

Code(s) and Section(s): USBC Construction Code (New) IBC 3201.5

Proposed Change (including all relevant section numbers, if multiple sections):

3201.5 Encroachments of buildings and structures to building line.

Except as provided herein, a part of any building hereinafter erected and additions to an existing building heretofore erected shall not project beyond the lot lines or building line where such lines are established by zoning laws or any other statute controlling building construction. This shall not affect an existing building or structure that may have been constructed over one or more lot or building lines unless being added to and the addition will be placed over one or more lot lines.

Supporting Statement (including intent, need, and impact of the proposal):

It appears to be the intent of the building code to generally not allow buildings and structures to be built over property lines. The ICC has several terms, code provisions and definitions that indicate this position.

First the ICC defines building line as the following:

BUILDING LINE. The line established by law, beyond which a building shall not extend, except as specifically provided by law.

However, the term is only used in one other section of the code pertaining to fire escapes.

The ICC defines Fire Separation Distance as the following:

FIRE SEPARATION DISTANCE. The distance measured from the building face to one of the following:

1. The closest interior lot line;
2. To the centerline of a street, an alley or public way; or
3. To an imaginary line between two buildings on the property.

The application of Fire Separation Distance is found in 406.3.7

406.3.7 Fire separation distance. Exterior walls and openings in exterior walls shall comply with Tables 601 and 602. The distance to an adjacent lot line shall be determined in accordance with Table 602 and Section 704.

The ICC defines Lot Lines as the following:

LOT LINE. A line dividing one lot from another, or from a street or any public place.

There are numerous references to a lot line throughout all of the ICC codes. Most notable is the reference to walls constructed on a lot line, or Party Walls.

705.1.1 Party walls. Any wall located on a lot line between adjacent buildings, which is used or adapted for joint service between the two buildings, shall be constructed as a firewall in accordance with Section 705. Party walls shall be constructed without openings and shall create separate buildings.

Although it is clear that building placement is governed by the distance from the lot line (fire separation distance/exterior wall ratings, openings allowed, vent termination distance, etc.), there is no clear code provision that prohibits construction over an established line. The language regarding Party walls is also not clear. It does not state that a building cannot be placed over a lot line. It only provides requirements if a wall is constructed on a lot line. There is no mandatory language that states a wall will be constructed if the building is placed over the lot line.

The 1996 BOCA National Building Code had very clear language in Section 3202.1 that stated:

"Except as provided herein, a part of any building hereinafter erected and additions to an existing building heretofore erected shall not project beyond the lot lines or beyond the building line where such lines are established by zoning laws or any other statute controlling building construction."

The intent of this change (3201.5) is to add back similar language to clarify that buildings and structures are to be constructed on one property. This will tie all of the other provisions that indicate this intent.

The building official can utilize the modification provisions of Section 106 when one or more properties, under the same ownership, are utilized for one building. There are some local zoning regulations that provide benefit should each lot be maintained as originally platted and not combined. This can also provide savings to the property owner. The building official could consider an easement that cannot be revoked, keeping the properties from being sold separately, and establish the outer lot lines of the combined lots as the fire separation distance. However, this should be the exception to a required provision requiring only one lot.

Submittal Information

Date Submitted: August 24, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-3109.3**

Nature of Change:

To delete the standards for commercial swimming pool construction.

Proponent: Ron Clements, representing the Chesterfield County Building Inspection Department

Staff Comments:

The proposal was considered by the workgroups. There were differing opinions over whether the standards are necessary. They were originally added to the USBC since the IBC did not have standards for pool design. Without the standards, Chapter 16 (the structural design chapter) of the IBC was typically applied with no specific provisions for pools. The legacy (BOCA) code used under the USBC did have some pool design criteria in its structural design chapter, but that did not make it into the IBC. The design criteria that was in the BOCA Code is in the ANSI/NSPI standards, but the standards have many aspects of pool design not regulated by the USBC and this was causing confusion over how far to apply the standards. It was suggested that a proposal should be submitted to just bring in the design standards which were in the BOCA Code. No proposal has been submitted for that however.

Codes and Standards Committee Action:

Approve as presented.

Disapprove.

Approve as modified (specify):

Carry over to next cycle.

Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C - 3109.3

Proponent Information

(Check one): Individual Government Entity Company

Name: Ron Clements

Representing: Chesterfield County Building Inspections

Mailing Address: 9800 Government Center Parkway, Chesterfield County VA, 23832

Email Address: clementsro@chesterfield.gov

Telephone Number: (804) 751-6143

Proposal Information

Code(s) and Section(s): VA Construction code section 3109.3

Proposed Change (including all relevant section numbers, if multiple sections):

Delete the reference to ANSI/NSPI-1 and ANSI/NSPI-2 entirely and use the 2009 IBC section 3109.3 without ammendment.

Delete: "shall be designed and constructed in comformance with ANSI/NSPI-1 or ANSI/NSPI-2, as applicable"

Supporting Statement (including intent, need, and impact of the proposal):

These two standards were submitted to the ICC General committee for reference by the IBC but the code change was denied because the standards have many problems that made them unusable as reference standards. As a plan review engineer that has attempted to use the documents to review commercial pool plans, and a past member of the ICC General committee that reviewed these documents, I can attest the the fact that they are very poor standards. The majority of the substance of these standards are addressing aspects of pools and spas outside of the scope of the building code and it leaves the code user questioning what is enforceable or intended to be enforced. Some examples from the standards are:

5.2.1 Control of sand for beach pool environments; 5.3 Structural design in accordance with accepted engineering practices but no reference to an engineering standard; 5.4 freeze protection requirements for pool shells, filters, pumps, and "other" components not listed; 5.6 regulating colors and finishes of the pool; 6.8 maximum user loads; section 7 regulating the walking area (deck) around the pool; 7.1.16 hose bibs and cross connection that should be regulated by the plumbing code; 7.2 Deck equipment regulations for starting blocks and diving equipment; 8.1.1.1 regulates water clarity; 8.1.2 regulating circulation, 8.2 regulating water velocity; 8.4 regulating guage requirements on pool equipment; section 9 regulation filtration; section 10 regulating pump sizing; section 12 regulation surface skimming; section 19 regulating dressing rooms and facilities; section 19.6 regulating required bathroom facilities that appear to override the Plumbing code; Section 20 regulating spectator areas; section 21 regulation food consumption within the pool; section 22 regulation management of the pool.

I could go on but you get the point. If there is a specific aspect of pool design that is not addressed by the IBC the specific aspect should be placed into the IBC without reference to the standard, or the specific section should be referenced.

The 2009 IBC regulates the fence or barrier required around the pool and required entrapment avoidance is regulated through a reference to the ANSI/APSP-7 standard for entrapment avoidance. Note that ANSI NSPI-1 also has a section on entrapment avoidance that is no longer valid based on the 2009 reference to ANSI/APSP-7.

Submittal Information

Date Submitted:

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
The Jackson Center
501 N. 2nd Street
Richmond, VA 23219-1321

Email Address: taso@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-3109.5.1**

Nature of Change:

To reference an additional national standard for drains in pools.

Proponent: Felix Sarfo-Kantanka, Jr., representing the Pool Safety Council

Staff Comments:

The proposal was considered by the workgroups. It was generally discussed that the current ANSI/ASME A112.19.17 standards provided compliance with the federal law and were adequate in assuring pool drain safety. It was also noted that the ASTM standard might advance the need to use a particular safety device. In addition it was noted that an identical proposal had been submitted to the International Codes and was unsuccessful in obtaining approval.

The proposal was tentatively disapproved at the Codes and Standards Committee meeting of December 14, 2009 unless public comment is received during the Compilation Document comment period.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: Chapter 35 C-3109.5.1

Proponent Information

(Check one): Individual Government Entity Company

Name: Felix Sarfo-Kantanka, Jr.

Representing: Pool Safety Council

Mailing Address: McGuireWoods Consulting LLC, One James Center, 901 East Cary Street,
Richmond, Virginia 23219-4030

Email Address: fsarfo-kantanka@mwcllc.com

Telephone Number: 804-775-1901

Proposal Information

Code(s) and Section(s): Section 3109.5 of the International Building Code

Proposed Change (including all relevant section numbers, if multiple sections):

Revise as follows:

Part 1

Add new Section to read as:

3109.5 Entrapment avoidance. Suction outlets shall be designed and installed in accordance with ANSI/APSP-7.

3109.5.1 Vacuum relief system required. All pool and spa single- or multiple-outlet circulation systems that incorporate submerged suction outlet fittings shall be equipped with an approved or engineered vacuum relief system as follows:

1. Safety vacuum release systems conforming to ASME A112.19.17 or ASTM F 2387; or
2. An approved gravity drainage system.

Part 2

Add the following Standards to Chapter 35 as:

ANSI/ASME A112.19.17-09 "Manufactured Safety Vacuum Release Systems (SVRS) For Residential and Commercial Swimming Pool, Spa, Hot Tub and Wading Pool Suction Systems."

ASTM F 2387-04 "Standard Specification for Manufactured Safety Vacuum Release Systems (SVRS) For Swimming Pools, Spas, Hot Tubs."

Supporting Statement (including intent, need, and impact of the proposal):

This Code change provides a final layer of protection against potential entrapments. While the APSP-7 provides partial protection against entrapment, it does not protect swimmers or waders in the event that problems occur with improperly designed pools, some types of blocked drains, etc. These events can and do occur and when they occur, this proposal provides a mechanism to help prevent entrapment.

Submittal Information

Date Submitted: September 8, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.

Please submit the proposal to:

DHCD DBFR TASO (Technical Assistance and Services Office)
Main Street Centre
600 E. Main St., Ste. 300
Richmond, VA 23219

Email Address: tsu@dhcd.virginia.gov
Fax Number: (804) 371-7092
Phone Numbers: (804) 371-7140 or (804) 371-7150



VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

2009 Code Change Cycle – Code Change Evaluation Form

**USBC – Virginia Construction Code
Code Change No. C-Appendix E**

Nature of Change:

To authorize the use of Appendix E of the IBC for supplemental accessibility provisions as part of the USBC.

Proponent: DHCD Staff

Staff Comments:

The proposal was not developed in time for consideration by the workgroups as it resulted from correspondence with the Federal Department of Justice and DHCD staff in efforts to seek certification of the USBC by the Department of Justice as being equal or exceeding the requirements of the Americans with Disabilities Act (ADA). The appendix in the IBC provides those additional accessibility requirements necessary to gain compatibility with the new ADA/ABA Guidelines approved by the U. S. Access Board and which are to be incorporated as part of the ADA.

Codes and Standards Committee Action:

_____ Approve as presented.

_____ Disapprove.

_____ Approve as modified (specify):

_____ Carry over to next cycle.

_____ Other (specify):

VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
DIVISION OF BUILDING AND FIRE REGULATION

Code Change Form for the 2009 Code Change Cycle

Code Change Number: C-Appendix E

Proponent Information

(Check one): Individual Government Entity Company

Name: DHCD Staff

Representing: _____

Mailing Address: _____

Email Address: _____

Telephone Number: _____

Proposal Information

Code(s) and Section(s): Appendix E of the International Building Code (IBC)

Proposed Change (including all relevant section numbers, if multiple sections):

13 VAC 5-63-395. Appendix E Supplementary Accessibility Requirements.

Appendix E of the IBC shall be part of this code.

Supporting Statement (including intent, need, and impact of the proposal):

This proposal is necessary as part of DHCD's efforts to obtain certification from the U.S. Department of Justice (DOJ) for the USBC being equivalent or exceeding the requirements of the Americans with Disabilities Act (ADA). The U.S. Access Board has published new guidelines (the ADA/ABA Accessibility Guidelines) which are being incorporated into DOJ's regulations implementing the ADA. The new guidelines extend into areas of accessibility not covered by the initial ADA Guidelines, such as telephones, mailboxes, speaker's platforms and vending machines. The U.S. Access Board has worked with the International Code Council to place these new requirements in the IBC; however, they have been located in an appendix to the IBC. Appendices to the International Codes are not automatically made part of the USBC through its incorporation of the IBC by reference, so this provision needs to be added to the USBC to enable the use of the IBC appendix. While some of the aspects of accessibility in Appendix E of the IBC may be questioned as to whether they are within the scope of the USBC as construction typically only extends to those permanent parts of a building, to the extent possible, all of Appendix E needs to become part of the USBC in order to achieve certification for the USBC by DOJ. Therefore, if applicability issues surface and it is determined that any areas of Appendix E are outside of the scope of the USBC, then changes to the statutory authority for the USBC will have to be pursued to enable the full use of the appendix.

Submittal Information

Date Submitted: December 9, 2009

The proposal may be submitted by email as an attachment, by fax, by mail, or by hand delivery.