IBC - General

2016 GROUP B COMMITTEE ACTION HEARINGS

APRIL 17, 2016 – APRIL 27, 2016
KENTUCKY INTERNATIONAL
CONVENTION CENTER
LOUISVILLE, KY

ICC
INTERNATIONAL
CODE COUNCIL®

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TENTATIVE ORDER OF DISCUSSION
2016 PROPOSED CHANGES TO THE
INTERNATIONAL BUILDING CODE - STRUCTURAL

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some S code change proposals may not be included on this list, as they are being heard by another committee.

NUMBERS NOT USED

G8-16
S35-16

G3-16
G9-16
G11-16
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G33-16
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FS6-16
G1-16
G14-16 Part I
G19-16 Part I
S1-16
S2-16
S3-16
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S6-16
S7-16
S8-1 Part I
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S25-16 Part I
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S33-16 Part I
S34-16 Part I
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S41-16 Part I
S42-16 Part I
S43-16 Part I
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G6-16 Part I
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S293-16 Part I
G10-16 Part I
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S298-16
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S300-16 Part I
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S303-16
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FS7-16
FS8-16
FS9-16
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S310-16
S311-16
S312-16
G39-16
G40-16

TENTATIVE ORDER OF DISCUSSION
2016 PROPOSED CHANGES TO THE
INTERNATIONAL EXISTING BUILDING CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some EB code change proposals may not be included on this list, as they are being heard by another committee.

ADM3-16
ADM24-16
G4-16
G20-16
G21-16
G22-16
EB4-16
EB5-16
EB7-16
EB16-16
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EB10-16
EB42-16
EB11-16
EB12-16
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EB46-16
S5-16 Part I
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EB37-16
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EB53-16
EB54-16
EB55-16
EB56-16
EB57-16
EB8-16
EB58-16
EB59-16
EB60-16
EB61-16

TENTATIVE ORDER OF DISCUSSION
2016 PROPOSED CHANGES TO THE INTERNATIONAL ENERGY CONSERVATION CODE – RESIDENTIAL
AND
INTERNATIONAL RESIDENTIAL CODE - ENERGY

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation does not necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some RE code change proposals may not be included on this list, as they are being heard by another committee.

NUMBERS NOT USED

RE62-16
RE88-16
RE93-16

ADM1-16 Part III
CE2-16 Part II
RE3-16
CE1-16 Part II
CE3-16 Part II
ADM2-16 Part III
ADM6-16 Part III
ADM4-16 Part III
CE4-16 Part II
CE5-16 Part II
ADM9-16 Part III
CE7-16 Part II
CE272-16 Part II
CE8-16 Part II
CE11-16 Part II
G9-16 Part II
RE4-16
RE5-16
RE6-16
CE13-16 Part II
ADM16-16 Part III
CE14-16 Part II
RE7-16
RE8-16
RE9-16
CE18-16 Part II
ADM26-16 Part III
ADM35-16 Part III
G14-16 Part III
G10-16 Part III
RE11-16
CE38-16 Part II
CE23-16
RE12-16
RE16-16
RE13-16
RE14-16
RE15-16
RE17-16
RE18-16
RE19-16
RE20-16
RE21-16
RE22-16
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RE24-16
RE25-16
RE26-16
RE27-16
RE28-16
RE29-16
RE30-16
RE31-16
RE32-16
RE33-16
RE34-16
RE35-16
RE36-16
RE37-16
RE38-16
RE39-16
RE40-16
RE41-16
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RE43-16
RE44-16
RE45-16
RE46-16
RE47-16
RE48-16
RE49-16
RE50-16
CE84-16 Part II
RE51-16
RE52-16
CE65-16 Part II
RE53-16
RE54-16
CE86-16 Part II
RE55-16
CE87-16 Part II
RE56-16
RE57-16
RE58-16
RE59-16
RE60-16
RE61-16
RE63-16
RE64-16
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RE66-16
RE67-16
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RE71-16
RE72-16
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RE80-16
RE81-16
RE82-16
RE83-16

RE84-16
RE85-16
RE86-16
RE87-16
CE106-16 Part II
RE89-16
CE137-16 Part II
RE90-16
RE91-16
RE92-16
CE115-16 Part II
CE114-16 Part II
RE94-16
RE95-16
RE96-16
RE97-16
RE98-16
CE134-16 Part II
CE135-16 Part II
CE169-16 Part II
RE99-16
RE100-16
CE147-16 Part II
RE101-16
RE102-16
RE103-16
RE104-16
RE105-16
RE106-16
RE107-16
RE108-16
RE109-16
RE110-16
RE111-16
RE112-16
RE113-16
RE191-16
CE175-16 Part II
RE114-16
RE115-16
RE116-16
RE117-16
RE118-16
RE119-16
RE120-16
RE121-16
RE122-16
RE123-16
RB271-16 Part II
RE124-16
CE177-16 Part II
CE176-16 Part II
RE125-16
RE126-16
RE127-16
RE128-16
CE174-16 Part II
RE129-16
RE130-16
RE131-16
RE132-16
RE133-16
RE134-16
RE135-16
RE136-16
RE137-16
RE138-16
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RE143-16
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RE148-16
RE149-16
RE150-16
RE151-16
RE152-16
RE153-16
RE154-16
CE259-16 Part II
RE155-16
RE156-16
RE157-16
RE158-16
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RE160-16
RE161-16
RE162-16
RE163-16
RE164-16
RE165-16
RE166-16
RE167-16
CE248-16 Part II
RE168-16
RE169-16
RE170-16
RE171-16
RE172-16
RE173-16
RE174-16
RE175-16
RE176-16
RE177-16
RE178-16
RE179-16
RE180-16
RE181-16
RE182-16
CE274-16 Part II
CE275-16 Part II
RE183-16
RE184-16
RE185-16
RE186-16
RE187-16
RE188-16
RE189-16
ADM93-16 Part III
RE1-16
ADM 43-16 Part II
ADM42-16 Part II
ADM45-16 Part II
CE157-16 Part II
ADM61-16 Part III
ADM59-16 Part III
ADM60-16 Part III
ADM62-16 Part III
ADM46-16 Part II
ADM47-16 Part II
ADM54-16 Part II
RE2-16
ADM56-16 Part II
ADM57-16 Part II
ADM82-16 Part III
ADM84-16 Part II
ADM58-16 Part III
ADM80-16 Part III
CE 21-16 Part II
CE22-16 Part II
CE26-16 Part II
CE27-16 Part II
CE33-16 Part II
CE31-16 Part II
CE30-16 Part II
RE190-16
CE28-16 Part II
CE25-16 Part II
CE24-16 Part II
CE29-16 Part II
CE10-16 Part II
RE10-16
RB373-16

TENTATIVE ORDER OF DISCUSSION
2016 PROPOSED CHANGES TO THE INTERNATIONAL FIRE CODE

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

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NUMBER NOT USED

F129-16

WUIC1-16
WUIC2-16
WUIC3-16
WUIC4-16
WUIC5-16
WUIC6-16
WUIC7-16
WUIC8-16
WUIC9-16
PM1-16
PM2-16
PM3-16
PM4-16
PM5-16
PM6-16
PM7-16
    ADM79-16
F1-16
    F12-16
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    F22-16
    F186-16
    S25-16 Part II
F26-16
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    F351-16
    F404-16
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F408-16

G1-16

IBC: 202

Proponent : Mike Fischer, representing Asphalt Roofing Manufacturers Association (mfischer@kellencompany.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] AGGREGATE. In roofing, crushed stone, crushed slag or water-worn gravel used for surfacing for *roof coverings.* Factory-applied mineral surfaces of asphalt shingles and membranes are not aggregate.

STEEP SLOPE. A roof slope equal to or greater than two units vertical in 12 units horizontal (17-percent slope).

Reason: This proposal is editorial- it provides clarifications for roof slope and roofing aggregate.

Cost Impact: Will not increase the cost of construction
The proposal adds no additional requirements.

Staff note: The definition 'steep slope' is only used in the defintion of 'underlayment'. Underlayment is scoped to the structural committee.

G1-16 : 202-STEEP SLOPE-FISCHER13539

G2-16

Part I:
IBC: 202.
Part II:
IRC: R202.

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Proponent : David Tyree, American Wood Council, representing American Wood Council (dtyree@awc.org)

Part I

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

CONVENTIONAL LIGHT-FRAME CONSTRUCTION. A ~~type~~ method of construction whose primary structural elements are formed by a system of repetitive wood-framing members. See Section 2308 for conventional light-frame construction provisions.

LIGHT-FRAME CONSTRUCTION. A ~~type~~ method of construction whose vertical and horizontal structural elements are primarily formed by a system of repetitive wood or cold-formed steel framing members.

Part II

2015 International Residential Code

Revise as follows:

SECTION 202 DEFINITIONS

[RB] LIGHT-FRAME CONSTRUCTION. A ~~type~~ method of construction ~~with~~ whose vertical and horizontal structural elements ~~that~~ are primarily formed by a system of repetitive wood or cold-formed steel framing members.

Reason: The wording of this definition has often caused confusion among code users when determinng the type of construction of a building. Chapter 6 of the IBC describes and provides the requirements for the different types of construction ranging from Type IA to VB. Light wood frame is not considered a type of construction. This proposal simply revises the definition to state that Light-Frame is a "method" of construction and should not be confused with the different "Types of Construction" specified in Chapter 6.
For a complete list of AWC code change proposals and additional information please go to http://www.awc.org/Code-Officials/2015-IBC-Code-Changes.

Cost Impact: Will not increase the cost of construction
There is no increase in the cost of construction due to this change as it is only intended to clarify the existing code provisions.

G2-16 : 202-CONVENIONAL LIGHT-FRAME CONSTRUCTION-TYREE4370

G3-16

IBC: 202 (New)

Proponent : Jonathan Roberts, UL LLC, representing UL LLC (jonathan.roberts@ul.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Add new definition as follows:

SECTION 202 DEFINITIONS

CURTAIN WALL Fenestration products used to create an external nonload-bearing wall that is designed to separate the exterior and interior environments.

Reason: This is the exact definition that is found within the Energy Conservation Code, and the Residential Building Code, and the term curtain wall is referenced throughout the Building Code. The addition of this definition would provide clarity and consistency within the ICC codes.

Cost Impact: Will not increase the cost of construction
This is simply adding a definition to clarify existing requirements.

G3-16 : 202-CURTAIN WALL (New)-ROBERTS4080

G4-16

IBC: 202; IEBC: 202

Proponent : David Bonowitz, representing National Council of Structural Engineers Associations (dbonowitz@att.net)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEES.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] DANGEROUS. Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, has partially collapsed, has moved off its foundation, or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under service loads. For purposes of this definition, service loads shall include permanent, routine or frequent loads but shall not include snow, wind, rain, flood, earthquake or other environmental loads unless such loads are imminent or already in effect.

2015 International Existing Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] DANGEROUS. Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, has partially collapsed, has moved off its foundation, or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgement of any portion, member, appurtenance or ornamentation of the building or structure under service loads. For purposes of this definition, service loads shall include permanent, routine or frequent loads but shall not include snow, wind, rain, flood, earthquake or other environmental loads unless such loads are imminent or already in effect.

Reason: Part 2 of the definition of Dangerous relies on the term "service loads." The intent, dating from when this definition was revised in recent cycles, is to give discretion to the code official to deal with actual, current, or imminent conditions that need to be secured, or evacuated for safety, and corrected. The intent is NOT to condemn buildings because of a design basis storm or earthquake that could happen in the indefinite future.
Perhaps surprisingly, "service loads" are not defined in the IEBC or IBC. However, in IBC Interpretation 23-10 (issued 12/8/2010; see Bibliography), "service loads" were interpreted to be the same as "nominal" loads. Nominal loads are unfactored loads, but they include unfacored environmental loads such as Snow , Wind, and Earthquake. Here's the problem: The load factors for W and E are generally 1.0, and for S and R are sometimes even less than 1.0. Therefore, for environmental loads, the nominal load IS the factored load, so by the interpretation, the service load in the definition of Dangerous is the full design basis W, E, or S load. (By the way, the term "environmental load," though not itself defined, is used in the definition of Essential Facility, Live Load, Load, etc.). This is clearly wrong, and at odds with the intent of the definition.

This proposal solves the problem and makes the well-intended but incorrect Interpretation 23-10 unnecessary. Under the proposal, the definition will continue to rely on the judgment of the code official (regarding "significant risk") but will clarify that the intent is to look at actual, current, or imminent conditions. In particular, the last sentence still allows the code official to consider, for example, existing extreme snow loads, predicted hurricanes, and expected aftershocks.

We prefer the revised definition as proposed, which retains the words "service loads" but clarifies this otherwise undefined term in context. We would also accept a simpler revision that simply replaces the term as follows: "... of the building or structure under permanent, routine, frequent, actual, or imminent loads."

Finally, it is worth noting that ASCE 7-16 will include a definition of "service loads," but it too will differ from the code's intent. The ASCE 7-16 definition will include "environmental loads that are expected to occur during the defined service life of a building." These are often, but not always, smaller than the design basis loads, but they are almost always still significantly bigger than the "everyday" or "routine" loads contemplated by the definition of Dangerous.

Bibliography: IBC Interpretation 23-10, Issued 12-8-2010 (EB_09_23_10), available online at: http://www.iccsafe.org/cs/committeeArea/pdf_file/EB_09_23_10.pdf.

Cost Impact: Will not increase the cost of construction
This is a clarification of the current intent, so there are no changes to construction requirements.

G4-16 : 202-[BS] DANGEROUS-BONOWITZ12245

G5-16

IBC: 202

Proponent : Dale Biggers, P.E., representing GeoCoalition (dbiggers@bohbros.com); Lori Simpson, P.E.,G.E., representing GeoCoalition; Daniel Stevenson, P.E., representing GeoCoalition; E. Anna Sellountou, PhD,PE, representing GeoCoalition; Woodward Vogt, Paradigm Consultants, Inc., representing GeoCoalition (woody@paradigmconsultants.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

[BS] DEEP FOUNDATION. ~~A deep foundation is a foundation element that does not satisfy the definition of a *shallow foundation*~~.
A substructure element that transmits structural loads to the earth such that its embedment depth is substantially larger than its cross-sectional dimensions, and the load is supported by side resistance, or by end bearing, or a combination of both.

Reason: The purpose of the proposed code change is to provide a specific, commonly-accepted technical definition of a "deep foundation." The existing definition assumes an understanding of the definition of a shallow foundation. Further, using part of the term being defined in the definition is poor practice.

Click here to view the members of the GeoCoalition who developed this proposal

Cost Impact: Will not increase the cost of construction
The code change proposal will not change the cost of construction and is simply a clarification.

G5-16 : 202-[BS] DEEP FOUNDATION-BIGGERS10778

G6-16

Part I:
IBC: 202 (New).
Part II:
IRC: , R202 (New).

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Proponent : Larry Wainright, representing Structural Building Components Association (lwainright@qualtim.com)

Part I

2015 International Building Code

Add new definition as follows:

SECTION 202 DEFINITIONS

DESIGN VALUE (LUMBER). Published design data that are representative of the strength and stiffness of specific grades and species/species groups of lumber.

Part II

2015 International Residential Code

Add new definition as follows:

SECTION R202 DEFINITIONS

GRADE (LUMBER). The classification of lumber in regard to strength and utility in accordance with America Softwood Lumber Standard DOC PS 20 and the grading rules of an *approved* lumber rules-writing agency.

SECTION R202 DEFINITIONS

DESIGN VALUE (LUMBER). Published design data that are representative of the strength and stiffness of specific grades and species/species groups of lumber.

Reason: The IRC and IBC do not currently contain a definition for lumber design values. The IBC provides the following definition for the grade of lumber:
[BS] GRADE (LUMBER). The classification of lumber in regard to strength and utility in accordance with America Softwood Lumber Standard DOC PS 20 and the grading rules of an *approved* lumber rules-writing agency.

This definition is brought into the IRC for consistency between the code and greater understanding by users of the code as to what is meant by the term "grade" as it relates to lumber. The strength of lumber is defined by the term "design value" in DOC PS 20-15. The design value is directly tied to the lumber grade by a grade stamp or grade mark where its classification is by mechanically or visually graded means as defined by an approved lumber rules-writing agency. The term design value is used throughout the IRC and IBC in the context of load resisting applications where lumber is used as the resisting element. It is important that building design professionals, builders, building officials and any lumber end-user have easy access to understanding the term design value for lumber.

Cost Impact: Will not increase the cost of construction
This is simply a definition with no change in the technical requirements of the code. Therefore this proposal will not increase the cost of construction.

G6-16 : 202-DESIGN VALUE (LUMBER) (NEW)-WAINRIGHT12967

G7-16

IBC: 202

Proponent : Dale Biggers, P.E., representing GeoCoalition (dbiggers@bohbros.com); Lori Simpson, P.E.,G.E., representing GeoCoalition; Daniel Stevenson, P.E., representing GeoCoalition; E. Anna Sellountou, PhD,PE, representing GeoCoalition; Woodward Vogt, Paradigm Consultants, Inc., representing GeoCoalition (woody@paradigmconsultants.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] DRILLED SHAFT. A cast-in-place deep foundation element, also referred to as caisson, drilled pier, and bored pile, constructed by drilling a hole (with or without permanent casing or drilling fluid) into soil or rock and filling it with fluid concrete after the drilling equipment is removed.

Socketed drilled shaft. A drilled shaft with a permanent pipe or tube casing that extends down to bedrock and an uncased socket drilled into the bedrock.

Reason: The purpose of the proposed code change is to distinguish it from augercast piles (reference to removing drilling equipment). Alternate names are included which are in common use in the industry. Drilling fluids (e.g. slurry) are often used in lieu of casing to stabilize the hole.

Click here to view the members of the GeoCoalition who developed this proposal

Cost Impact: Will not increase the cost of construction
The code change proposal will not change the cost of construction and is simply a clarification.

G7-16 : 202-[BS] DRILLED SHAFT (NEW)-BIGGERS10776

G9-16

Part 1:
IBC: 202, 202 (New).
Part II:
IRC: 0, R202 (New).

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Proponent : Julie Ruth, JRuth Code Consulting, representing American Architectural Manufacturers Association (julruth@aol.com)

Part 1

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

FENESTRATION. ~~Skylights~~
Products classified as either vertical fenestration or skylights and sloped glazing, installed in such a manner as to preserve the weather resistant barrier of the wall or roof ~~windows, vertical windows (fixed or moveable), opaque doors, glazed doors, glazed block and combination opaque/glazed doors~~ in which they are installed. Fenestration includes products with glass ~~and nonglass glazing~~ or other transparent or translucent materials.

Add new definition as follows:

FENESTRATION, VERTICAL. Windows that are fixed or movable, opaque doors, glazed doors, glazed block and combination opaque and glazed doors installed in a wall at less than 15 degrees from vertical.

Part II

2015 International Residential Code

Revise as follows:

SECTION R202 DEFINITIONS

[RE] FENESTRATION. ~~Skylights,~~
Products classified as either vertical fenestration or skylights and sloped glazing. installed in such a manner as to preserve the weather resistant barrier of the wall or roof ~~windows, vertical windows (whether fixed~~ in which they are installed. Fenestration includes products with glass or ~~moveable); opaque doors; glazed doors; glass block; and combination opaque and glazed doors~~ other transparent or transluscent materiials.

For definition applicable in Chapter 11, see Section N1101.6.

Add new definition as follows:

FENESTRATION, VERTICAL. Windows that are fixed or moveable, opaque doors, glazed doors, glazed block and combination opaque and glazed doors installed in a wall at less than 15 degrees from vertical.

For definition applicable in Chapter 11, see Section N1101.6.

Reason: The definition of fenstration, skylights, sloped glazing, unit skylights and tubular daylighting devices was revised and reformatted from the 2015 IBC to the 2015 IRC and 2015 IECC during the ICC Group A and B code change cycles in 2012 and 2013.
This proposal revises the definitions of fenestration and vertical fenestration in the IBC and IRC, for consistency with the IECC, and each other. It places the most distinguising characteristics of fenestration in the main definition of that product type, and further distinguishes between vertical fenestration, and skylights and sloped glazing. The definition of skylights and sloped glazing is being addressed in a separate code change proposal.

Although fenestration is an opening in the building envelope, it is to be designed and installed in such a manner as to preserve the integrity of the building envelope component in which it is installed. Fenestration products typically consist of assemblies that are glazed with glass or other transparent or transluscent materials. This proposal places both of these characteristics into the main definition of fenestration.

Although similar, the performance characteristics for skylights and sloped glazing are diferent than for vertical fenestration. This proposal maintains the measurement of 15 degrees from vertical as the point at which fenestration products go from being vertical fenestration installed in a wall, to skylights or sloped glazing. Although the 2015 IECC sets this threshold at 30 degrees from vertical, AAMA strongly feels that this is an erroneous point at which to draw this distinction. The design of products to be weather resistant, particularly with regards to water penetration and snow load, is quite different for products installed at any slope at all in comparison to products installed in a completely vertical position. 15 degrees from vertical has been the accepted threshold for this disctinction for many years. It should not be increased.

We urge approval of this proposal, which places emphasis on the primary function of fenestration products.

Definitions as found in the IRC Energy Chapter (N1101.6) are as follows:

Fenestration. Products classified as either *vertical fenestration* or *skylights*.

Fenestration, vertical. Windows (fixed or moveable), opaque doors, glazed doors, glazed block and combination opaque/glazed doors

composed of glass or other transparent or translucent glazing materials and installed at a slope of a least 60 degrees (1.05 rad) from horizontal.

Cost Impact: Will not increase the cost of construction
The proposal clarifies the characteristics of fenestration. It does not change the requirements for them, and will not increase the cost of constructoin.

G9-16 : 202-FENESTRATION (New)-RUTH4749

G10-16

Part I:
IBC: 202.
Part II:
IECC: 0.
Part III:
IECC: R202 (IRC N1101.6)
Part IV:
IRC: 0.

THIS IS A 4 PART CODE CHANGE. PART I WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. PART II WILL BE HEARD BY THE IECC-COMMERCIAL CODE COMMITTEE. PART III WILL BE HEARD BY THE IECC-RESIDENTIAL CODE COMMITTEE. PART IV WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

Proponent : Julie Ruth, representing American Architectural Manufacturers Association (julruth@aol.com)

Part I

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] SKYLIGHTS AND SLOPED GLAZING. Glass or other transparent or translucent glazing material installed at a slope of 15 degrees (0.26 rad) or more from vertical. ~~Glazing material in~~ Unit skylights, ~~including *unit skylights*~~tubular daylighting devices, ~~*tubular daylighting devices*,~~ and glazing materials in solariums, ~~*sunrooms*~~sunrooms, roofs and sloped walls~~,~~ are included in this definition.

Part II

2015 International Energy Conservation Code

Revise as follows:

SECTION C202 DEFINITIONS

FENESTRATION. Products classified as either vertical fenestration or skylights.

Skylight. Glass or other transparent or translucent glazing material installed at a slope of less than 60 degrees (1.05 rad) from horizontal, including unit skylights, tubular daylighting devices, and glazing materials in solariums, sunrooms, roofs and sloped walls.

Vertical fenestration. Windows (fixed or moveable), opaque doors, glazed doors, glazed block and combination opaque/glazed doors composed of glass or other transparent or translucent glazing materials and installed at a slope of at least 60 degrees (1.05 rad) from horizontal.

Part III

2015 International Energy Conservation Code

Revise as follows:

R202 (N1101.6) SKYLIGHT. Glass or other transparent or translucent glazing material installed at a slope of less than 60 degrees (1.05 rad) from horizontal, including unit skylights, tubular daylighting devices, and glazing materials in solariums, sunrooms, roofs and sloped walls.

Part IV

2015 International Residential Code

Revise as follows:

SECTION R202 DEFINITIONS

[RB] SKYLIGHT AND SLOPED GLAZING. Glass or other transparent or translucent glazing material installed at a slope of 15 degrees (0.26 rad) or more from vertical. ~~Glazing materials in skylights, including unit~~ Unit skylights, tubular daylighting devices, and glazing materials in solariums, sunrooms, roofs and sloped walls are included in this definition.

Reason: This revision clarifies the types of products that are included in the category of "skylights" and brings the IECC more closely in alignment with the IRC.

Cost Impact: Will not increase the cost of construction

The proposal simply clarifies which products fall under the category of "skylight", and by default, which do not. It will not impact the cost of construction

G10-16 : 202-FENESTRATION-RUTH10963

G11-16

IBC: 202

Proponent : Tony Crimi, representing International Firestop Council (tcrimi@sympatico.ca)

THIS PROPOSAL WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. PLEASE SEE THE TENTATIVE HEARING ORDER FOR THE STRUCTURAL COMMITTEE.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] JOINT. The system or treatment installed in an opening in or between adjacent assemblies that is created due to building tolerances, or is designed to allow independent movement of the building in any plane caused by thermal, seismic, wind or any other loading.

Reason: The definition is revised to clarify that a "joint" is not an opening, but rather is the materials or system used to fill an opening created where two independent surfaces intersect, with or without contact, and with or without an obvious opening. For example, if the space between two building elements has been filled with some material (e.g. a backer rod), then it is still a "joint", even though the opening was filled, thus literally leaving no opening.
In the previous cycle, a similar item was heard by the IBC Structural Committee. The Committee reason for Disapproval indicated the proposed definition needed to relate to more than joints in fire resistance rated or smoke-rated assemblies. There are also joint requirements for non-fire resistance rated assemblies in the code; therefore the definition should include these. This has been addressed in this modification.

Cost Impact: Will not increase the cost of construction
The proposed change clarifies the definition.

G11-16 : 202 [BS] JOINT-CRIMI4842

G12-16

IBC: 202

Proponent : Gregory Wilson, Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] LOWEST FLOOR. The lowest floor of the lowest enclosed area, including *basement*, but excluding any unfinished or floodresistant enclosure, usable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the structure in violation of Section 1612.-

Reason: This proposal is editorial. It will make this definition consistent with the change to 2015 IRC R322.1.5 that was Approved as Submitted (RB182-13) to ensure consistency with the definition of the National Flood Insurance Program.

Cost Impact: Will not increase the cost of construction
Modifying the definition does not change how the term is used or the requirements applicable to the term.

G12-16 : 202-LOWEST FLOOR-WILSON11858

G13-16

IBC: 202

Proponent : Russell Kendzior, representing National Floor Safety Institute

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Delete without substitution:

SECTION 202 DEFINITIONS

~~**202 [BS] PORCELAIN TILE.** Tile that conforms to the requirements of ANSI A137.1 Section 3.0 for ceramic tile having an absorption of 0.5 percent or less in accordance with ANSI A137.1 Section 4.1 and Section 6.1 Table 10.~~

Reason: We are requesting that the definition of the term Porcelian Tile as defined in Chapter 2. "Definitions" of the 2015 IBC be removed on the basis that the term is defined only by way of a reference to the ANSI A137.1 industry specific standard. This method of defining a term per an industry specific standard is unorthodox and in violation of the IBC code making policy. Furthermore, the Section 2. definition of the term Porcelain Tile is the only place where the ANSI A137.1 standard is referenced in the code therefore by removing the definition from Section 2. will not impact any other section of the code. I believe that the term porcelain tile does not require a definition and should be omitted from the code.

Cost Impact: Will not increase the cost of construction
The term Porcelain Tile is only defined by way of a reference to the ANSI A137.1 industry specific standard which is not used in any other section of the code. Therefore there is no cost impact to remove the term from Section 2.

Staff note: There is a published errata to this definition that is reflected in this proposal. This is the only reference to *ANSI A137.1-12. American National Standard for Specifications for Ceramic Tile* in the IBC. Deletion of this definition will also remove this standard from Chapter 35.

G13-16 : 202- [BS] PORCELAIN TILE-KENDZIOR11545

G14-16

Part I:
IBC: 202.
Part II:
IECC: 0.
Part III:
R202 (IRC N1101.6)
Part IV:
IRC: 0.

THIS IS A 4 PART CODE CHANGE. PART I WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. PART II WILL BE HEARD BY THE IECC-COMMERCIAL CODE COMMITTEE. PART III WILL BE HEARD BY THE IECC-RESIDENTIAL CODE COMMITTEE. PART IV WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THESE COMMITTEES.

Proponent : Theresa Weston, representing DuPont Building Innovations (theresa.a.weston@dupont.com)

Part I

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] ROOF ASSEMBLY (For application to Chapter 15 only). A system designed to provide weather protection and resistance to design ~~*loads.*~~ loads. The system consists of a ~~*roof covering*~~ roof covering and ~~*roof deck*~~ roof deck or a single component serving as both the roof covering and the ~~*roof deck*~~ roof deck. A roof assembly includes the ~~*roof deck*~~ roof deck, ~~*vapor retarder*~~ underlayment, ~~substrate or~~ and roof covering and can also include a thermal barrier, insulation or a vapor retarder, ~~*vapor retarder and roof covering*~~ based on design specifications.

Part II

2015 International Energy Conservation Code

C202 (N1101.6) ROOF ASSEMBLY. A system designed to provide weather protection and resistance to design loads. The system consists of a roof covering and roof deck or a single component serving as both the roof covering and the roof deck. A roof assembly includes the roof covering, underlayment, and roof deck, and can also include a thermal barrier, insulation~~,~~ or a vapor retarder ~~and interior finish~~ , based on design specifications.

Part III

2015 International Energy Conservation Code

Revise as follows:

SECTION 202 DEFINITIONS

ROOF ASSEMBLY. A system designed to provide weather protection and resistance to design loads. The system consists of a roof covering and roof deck or a single component serving as both the roof covering and the roof deck. A roof assembly includes the roof covering, underlayment, and roof deck, and can also include a thermal barrier, insulation~~,~~ or a vapor retarder ~~and interior finish~~ , based on design specifications.

Part IV

2015 International Residential Code

SECTION R202 DEFINITIONS

[RB] ROOF ASSEMBLY. A system designed to provide weather protection and resistance to design loads. The system consists of a roof covering and roof deck or a single component serving as both the roof covering and the roof deck. A roof assembly includes the roof deck, ~~vapor retarder~~ underlayment, ~~substrate or~~ and roof covering and can also include a thermal barrier, insulation~~,~~ or a vapor retarder, ~~and roof covering~~ based on design specifications.

Reason: This proposal makes clarifies and makes corrections to the definition. Specifically, in the definition in the IBC and IRC it replaces one of the redundant "vapor retarder" listings with "underlayment". Additionally it separates the items that are only present in some roof assemblies, from those that are present in all roof assemblies.

Cost Impact: Will not increase the cost of construction
This is a clarification of a definition and does add any additional restrictions or requirements.

G15-16

IBC: 202

Proponent : Woodward Vogt, representing GeoCoalition (woody@paradigmconsultants.com)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEES.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] SHALLOW FOUNDATION. A subsurface element that transmits the structural loads to the earth at a relatively shallow ~~foundation~~ depth, generally such that the depth is typically, but not necessarily, small compared to the cross-sectional size of the element, and includes an individual spread, combined, or strip footing, a raft or mat ~~foundation~~, a ~~slab-ongrade foundation~~ slab-on-grade or a similar ~~foundation~~ element.

Reason: Click here to view the members of the GeoCoalition who developed this proposal.
To provide a specific, commonly-accepted technical definition.

Cost Impact: Will not increase the cost of construction
The change is a clarification and there will be no change in construction requirements.

G15-16 : 202-[BS] SHALLOW FOUNDATION-VOGT12382

G16-16

IBC: 202 (New); IFC: 202 (New)

Proponent : Victor Cuevas, representing City of Los Angeles

THIS CODE CHANGE WILL BE HEARD BY THE IFC COMMITTEE. SEE THE TENTATIVE HARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Add new definition as follows:

SECTION 202 DEFINITIONS

SMOKE ZONE A defined area for which the movement of smoke is limited or restricted through the use of mechanical and/or passive smoke control systems.

2015 International Fire Code

Add new definition as follows:

SECTION 202 DEFINITIONS

SMOKE ZONE. A defined area for which the movement of smoke is limited or restricted through the use of mechanical and/or passive smoke control systems.

Reason: The term "Smoke Zone" has not previously been defined.

Cost Impact: Will not increase the cost of construction
This amendment w ill simply provide a definition w hich does not currently exist in the code. The addition of this new term, does not create change in construction requirements.

G16-16 : 202-SMOKE ZONE (New)-CUEVAS4891

G17-16

Part I:

IBC: , 1512, 1512.1, 202 (New), [BG] 1510.7, [BG] 1510.7.1, [BG] 1510.7.2, [BG] 1510.7.3, [BG] 1510.7.4.

Part II:

IRC: , R202 (New).

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Proponent : Edward Kulik, representing Building Code Action Committee (bcac@iccsafe.org)

Part I

2015 International Building Code

Add new definition as follows:

SECTION 202 DEFINITIONS

SOLAR ENERGY SYSTEM. A system that converts solar radiation to usable energy, including photovoltaic panel system and solar thermal system.

SECTION 202 DEFINITIONS

SOLAR THERMAL COLLECTOR. Components in a solar thermal system that collect and convert solar radiation to thermal energy.

SECTION 202 DEFINITIONS

SOLAR THERMAL SYSTEM. A system that converts solar radiation to thermal energy for use in heating or cooling.

Delete without substitution:

~~**[BG] 1510.7 Photovoltaic panels and modules.** Rooftop-mounted *photovoltaic panels* and *modules* shall be designed in accordance with this section.~~

~~**[BG] 1510.7.1 Wind resistance.** Rooftop-mounted *photovoltaic panels* and *modules* shall be designed for component and cladding wind loads in accordance with Chapter 16 using an effective wind area based on the dimensions of a single unit frame.~~

~~**[BG] 1510.7.2 Fire classification.** Rooftop-mounted *photovoltaic panels* and *modules* shall have the fire classification in accordance with Section 1505.9.~~

[BG] 1510.7.3 Installation. Rooftop-mounted *photovoltaic panels* and *modules* shall be installed in accordance with the manufacturer's instructions.

~~**[BG] 1510.7.4 Photovoltaic panels and modules.** Rooftop-mounted *photovoltaicpanels* and *modules* shall be *listed* and labeled in accordance with UL 1703 and shall be installed in accordance with the manufacturer's instructions.~~

Revise as follows:

SECTION 1512 ~~PHOTOVOLTAIC PANELS AND MODULES~~ SOLAR ENERGY SYSTEMS

1512.1 Photovoltaic panels and modules and solar thermal collectors. *Photovoltaic panels* and *modules* and solar thermal collectors installed upon a roof or as an integral part of a roof assembly shall comply with the requirements of ~~this code and the *International Fire Code*~~Section 3111.

Part II

2015 International Residential Code

Add new definition as follows:

SECTION R202 DEFINITIONS

SOLAR ENERGY SYSTEM. A system that converts solar radiation to usable energy, including photovoltaic panel system and solar thermal system.

SECTION R202 DEFINITIONS

SOLAR THERMAL COLLECTOR. Components in a solar thermal system that collect and convert solar radiation to thermal energy.

SECTION R202 DEFINITIONS

SOLAR THERMAL SYSTEM. A system that converts solar radiation to thermal energy for use in heating or cooling.

Reason: The proposed terms "solar thermal collector" and "solar thermal system" are from ICC 900/SRCC 300-15, Solar Thermal System Standard. These terms are currently used in the IRC and it is therefore appropriate for the defintions to be included.
The expansion of Section 3111 in the International Building Code by Proposal G211-15 in the Group A cycle covers all that is within Section 1510.7 and its subsections, as well as providing all the applicable requirements for photovoltaic panels and modules in one location of the code. There are additional requirements that apply to rooftop-mounted photovoltaic panels and modules that are not covered in Section 1510.7, including roof access, signage, routing of conductors, and additional electrical requirements. By locating all applicable requirements in one location in the chapter for Special Construction, all applicable requirements will be addressed. In addition, Section 3111 also covers all the applicable requirements for solar thermal systems, which include the solar thermal collectors mounted on the roof. Revising Section 1512.1 provides the appropriate pointer to the requirements in Section 3111.

This proposal is submitted by the ICC Building Code Action Committee (BCAC). BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2014 and 2015 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: **BCAC**

Cost Impact: Will not increase the cost of construction
No cost increase as this correlates the requirements relocated to Section 3111.

G17-16 : [BG] 1510.7-KULIK13179

G18-16

IBC: 202

Proponent : Gregory Wilson, Federal Emergency Management Agency (gregory.wilson2@fema.dhs.gov)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] START OF CONSTRUCTION. The date of issuance of permits for new construction and *substantial improvements*to *existing structures,*provided the actual start of construction, *repair*, reconstruction, rehabilitation, *addition*, placement or other improvement is within 180 days after the date of issuance. The actual start of construction means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of a slab or footings, installation of pilings or construction of columns.

Permanent construction does not include land preparation (such as clearing, excavation, grading or filling), the installation of streets or walkways, excavation for a *basement*, footings, piers or foundations, the erection of temporary forms or the installation of accessory buildings such as garages or sheds not occupied as *dwelling units*or not part of the main building. For a *substantial improvement*, the actual "start of construction" means the first *alteration*of any wall, ceiling, floor or other structural part of a building, whether or not that *alteration*affects the external dimensions of the building.

Reason: This proposal is editorial. The intent is to make explicit that "issuance" refers to the issuance of permits and not any other decision or document (such as a certificate of occupancy).

Cost Impact: Will not increase the cost of construction
Clarification only. No change in requirements.

G18-16 : 202-START OF CONSTRUCTION-WILSON11484

G19-16

Part I:
IBC: 202.
Part II:
IRC: 0, R202 (New).

THIS IS A 2 PART CODE CHANGE. PART I WILL BE HEARD BY THE IBC-STRUCTURAL CODE COMMITTEE. PART II WILL BE HEARD BY THE IRC-BUILDING CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Proponent : Theresa Weston, representing DuPont Building Innovations (theresa.a.weston@dupont.com)

Part I

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

STEEP SLOPE. A roof slope greater than two units vertical in 12 units horizontal (17-percent slope).

[BS] UNDERLAYMENT. One or more layers of a durable, water resistive material (e.g. felt, sheathing paper, nonbituminous saturated felt, or ~~other *approved* material~~ self-adhered membrane) that provides a degree of protection against water intrusion based on the roof slope and anticipated environmental exposure, over which steep slope a ~~steep slope *roof covering*~~ roof covering is applied.

Part II

2015 International Residential Code

Add new text as follows:

SECTION R202 DEFINITIONS

STEEP SLOPE. A roof slope greater than two units vertical in 12 units horizontal (17-percent slope).

Revise as follows:

SECTION R202 DEFINITIONS

[RB] UNDERLAYMENT. One or more layers of a durable, water resistive material (e.g. felt, sheathing paper, nonbituminous saturated felt, or ~~other *approved* material~~ self-adhered membrane) that provides a degree of protection against water intrusion based on the roof slope and anticipated environmental exposure, over which a *steep slope* roof covering~~, with a slope of 2 to 12 (17 percent slope) or greater,~~ is applied.

Reason: This proposal expands the definition to describe an underlayment more generally, rather than describing it only by example materials.

Cost Impact: Will not increase the cost of construction
This proposal only updates a definition and does not include any additional restrictions or requirements.

G19-16 : 202-[BS] UNDERLAYMENT-WESTON13072

G20-16

IBC: 202; IEBC: 202, [BS] 606.2.4 (New)

Proponent : David Bonowitz, representing National Council of Structural Engineers Associations (dbonowitz@att.net)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEES.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] SUBSTANTIAL STRUCTURAL DAMAGE. A condition where ~~one or both~~ any of the following apply:

1. The vertical elements of the lateral force-resisting system have suffered damage such that the lateral loadcarrying capacity of any *story*in any horizontal direction has been reduced by more than 33 percent from its predamage condition.
2. The capacity of any vertical component carrying gravity load, or any group of such components, that supports more than 30 percent of the total area of the structure's floors and roofs has been reduced more than 20 percent from its predamage condition and the remaining capacity of such affected elements, with respect to all dead and *live loads*, is less than 75 percent of that required by this code for new buildings of similar structure, purpose and location.
3. The capacity of any structural component carrying snow load, or any group of such components, that supports more than 30 percent of the roof area of similar construction, has been reduced more than 20 percent from its predamage condition, and the remaining capacity with respect to dead, live, and snow loads is less than 75 percent of that required by this code for new buildings of similar structure, purpose, and location.

2015 International Existing Building Code

Revise as follows:

[BS] SUBSTANTIAL STRUCTURAL DAMAGE. A condition where ~~one or both~~ any of the following apply:

1. The vertical elements of the lateral forceresisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than 33 percent from its predamage condition.
2. The capacity of any vertical component carrying fravity load, or any group of such components, that supports more than 30 percent of the total area of the structure's floors and roofs has been reduced more than 20 percent from its predamage condition and the remaining capacity of such affected elements, with respect to all dead and live loads, is less than 75 percent of that required by this code for new buildings of similar structure, purpose and location.
3. The capacity of any structural component carrying snow load, or any group of such components, that supports more than 30 percent of the roof area of similar construction, has been reduced more than 20 percent from its predamage condition, and the remaining capacity with respect to dead, live, and snow loads is less than 75 percent of that required by the International Building Code for new buildings of similar structure, purpose, and location.

Add new text as follows:

606.2.4 Substantial structural damage to snow load-carrying components. Where substantial structural damage to any snow load-carrying components is caused by or related to snow load effects, any components required to carry snow loads on roof framing of similar construction shall be repaired, replaced, or retrofitted to satisfy the requirements of Section 1608 of the *International Building Code.*

Reason: This proposal corrects an oversight in the current definition of substantial structural damage and adds a new upgrade trigger for snow retrofit.

Recent winters have seen a wave of snow-related roof collapses, especially in the northeast. One might have expected that the IEBC's current provisions for substantial structural damage (SSD) to gravity components would have resulted in repair or retrofit better than the predamage condition. However, when only the roof collapses, in a multi-story building that often represents less than 30 percent of the total building area, so the current SSD trigger does not apply.

Therefore, this proposal adds a new type of SSD specifically related to snow damage patterns, together with a retrofit trigger for the repairs chapter.

- The new SSD type parallels the existing definition of gravity component SSD but considers only the elements carrying snow load (roof framing, columns, etc.) and compares them only to the roof area.
- Like the current SSD definitions, the new SSD type is independent of cause. The cause of damage is considered in the triggering provisions within Chapter 6.
- The proposed trigger in 606.2.4 applies only where the snow SSD was actually caused by snow (using the same wording currently in 606.2.3).
- "Of similar construction" recognizes that a building might have different roof areas of different construction. Thus, the damage is measured relative to the roof area with constuction similar to the damaged area, and the retrofit applies only to this area of similar

construction as well.

The proposal is meant to apply to all IEBC methods of compliance. It is written for Chapter 6 only, however, presuming that Group A EB 10 will stand as approved, so that current Chapter 6 will become the new Repairs chapter, and Prescriptive repair provisions will no longer exist. If that does not occur, and assuming this proposal is approved, we expect ICC staff and correlating committees will ensure that a matching provision is added to the Prescritive method.

Cost Impact: Will increase the cost of construction
The cost of a substantial repair will be increased by the highly beneficial cost of roof framing retrofit. Probably a net savings over time.

Staff note: There is a published errata to IEBC for the defintion of "substantial structural damage" that is reflected in this proposal.

G20-16 : 202-[BS] SUBSTANTIAL STRUCTURAL DAMAGE-BONOWITZ12984

G21-16

IBC: 202; IEBC: 202

Proponent : David Bonowitz, representing National Council of Structural Engineers Associations (dbonowitz@att.net)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEES.

2015 International Building Code

Delete without substitution:

SECTION 202 DEFINITIONS

~~**202 [BS] SUBSTANTIAL STRUCTURAL DAMAGE.** A condition where one or both of the following apply:~~

~~1. The vertical elements of the lateral force resisting system have suffered damage such that the lateral loadcarrying capacity of any *story* in any horizontal direction has been reduced by more than 33 percent from its predamage condition.~~
~~2. The capacity of any vertical component carrying gravity load, or any group of such components, that supports more than 30 percent of the total area of the structure's floors and roofs has been reduced more than 20 percent from its predamage condition and the remaining capacity of such affected elements, with respect to all dead and *live loads*, is less than 75 percent of that required by this code for new buildings of similar structure, purpose and location.~~

2015 International Existing Building Code

Revise as follows:

[BS] SUBSTANTIAL STRUCTURAL DAMAGE. A condition where one or both of the following apply:

1. The vertical elements of the lateral forceresisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than 33 percent from its predamage condition.
2. The capacity of any vertical component carrying gravity load, or any group of such components, that supports more than 30 percent of the total area of the structure's floor(s) and roof(s) has been reduced more than 20 percent from its predamage condition and the remaining capacity of such affected elements, with respect to all dead and live loads, is less than 75 percent of that required by ~~this code~~ the *International Building Code* for new buildings of similar structure, purpose and location.

Reason: This proposal makes editorial revisions that clarify the intent of the definition and facilitate its implementation.
For IBC - The term 'substantial structural damage' was used in Chapter 34. It should have been deleted from the IBC when Chapter 34 was removed.

For IEBC - The edit changes "this code" to "the IBC." The current language is an obsolete holdover from the version of the definition that went with IBC Chapter 34.

Cost Impact: Will not increase the cost of construction
This change is editorial and therefore will not change any construction requirements.

Staff note: There is a published errata in IEBC for the definition of "substantial structural damage" that is reflcted in this proposal.

G21-16 : 202 [BS] SUBSTANTIAL STRUCTURAL DAMAGE-BONOWITZ13052

G22-16

IBC: 202; IEBC: 202

Proponent : Gwenyth Searer, Wiss, Janney, Elstner Associates, Inc.

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEES.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] SUBSTANTIAL STRUCTURAL DAMAGE. A condition where one or both of the following apply:

1. The vertical elements of the lateral force- resisting system have suffered damage such that the lateral loadcarrying capacity of any ~~*story*~~ story in any horizontal direction has been reduced by more than 33 percent from its predamage condition.
2. The capacity of any vertical component carrying gravity load, or any group of such components, that ~~supports~~ has a tributary area more than 30 percent of the total area of the structure's floors and roofs has been reduced more than 20 percent from its predamage condition and the remaining capacity of such affected elements, with respect to all dead and ~~*live loads*~~live loads, is less than 75 percent of that required by this code for new buildings of similar structure, purpose and location.

2015 International Existing Building Code

Revise as follows:

[BS] SUBSTANTIAL STRUCTURAL DAMAGE. A condition where one or both of the following apply:

1. The vertical elements of the lateral forceresisting system have suffered damage such that the lateral load-carrying capacity of any story in any horizontal direction has been reduced by more than 33 percent from its predamage condition.
2. The capacity of any vertical component carrying gravity load, or any group of such components, that ~~supports~~ has a tributary area more than 30 percent of the total area of the structure's floors and roofs has been reduced more than 20 percent from its predamage condition and the remaining capacity of such affected elements, with respect to all dead and live loads, is less than 75 percent of that required by this code for new buildings of similar structure, purpose and location.

Reason: There has been some debate among engineers regarding the meaning of the word "supports". Some argue that since the term "tributary area" is not used, the word "supports" can be interpreted as requiring postulation of a collapse mechanism (e.g., in a square structure with four columns, one at each corner, if you hypothetically removed a single column and half the structure would collapse, then that column "supports" half of the structure. Or if in the same structure, if you removed a single column and the entire structure would collapse, then that column "supports" 100 percent of the structure). Similarly, another interpretation is that if a load is placed somewhere on a structure, and any portion of the load is resisted by the element in question in any amount, then that element "supports" the area where the load was applied. Both these interpretations can result in the columns and walls at any given level of a structure supporting far more than 100 percent of the building.

Neither interpretation is the intent of the trigger, which was only ever intended to incorporate the concept of tributary area. Addition of the term "tributary area" will clarify the intent using a commonly understood technical term.

Cost Impact: Will not increase the cost of construction
This is a clarification / editorial change. As such, this proposal has no implications on the cost of construction.

Staff note: There is a published errata to the definition of 'substantial structural damage' in the IEBC. That errata is reflected in this proposal.

G22-16 : 202-[BS] SUBSTANTIAL STRUCTURAL DAMAGE-SEARER12062

G23-16

IBC: 202

Proponent : Jay Crandell, ARES Consulting, representing Foam Sheathing Committee of the American Chemistry Council

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

VAPOR PERMEABLE ~~MEMBRANE~~. The property of having a moisture vapor permeance rating of 5 perms (2.9 × 10-10 kg/Pa × s × m^2) or greater, when tested in accordance with the desiccant method using Procedure A of ASTM E 96. A vapor permeable material permits the passage of moisture vapor.

Reason: The word "membrane" is superfluous. The definition applies to the vapor permeance property of any material. It has no need to be limited to "membranes". The definition and the property are relevant to other materials such as sheathings, insulation, paint, drywall, etc. The term "vapor permeable membrane" is currently used only once in Section 702.1 and this proposal will have no effect on this usage since the term "vapor permeable" remains defined and the term "membrane" is well understood by its plain meaning. This will match IRC.

Cost Impact: Will not increase the cost of construction
This proposal makes not material change to the code or the definition that has cost implications.

G23-16 : 202-VAPOR PERMEABLE-CRANDELL12549

G24-16

IBC: 202

Proponent : Jason Wilen AIA CDT RRO, National Roofing Contractors Association (NRCA), representing National Roofing Contractors Association (NRCA) (jwilen@nrca.net)

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEES.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

VEGETATIVE ROOF. An assembly of interacting components designed to waterproof~~ and normally insulate~~ a building's top surface that includes, by design, vegetation and related landscape elements.

Reason: The purpose of this change is to address a concern raised during the IgCC code hearing last cycle. We have taken the change to ASTM and the updated definition for "Vegetative Roof" has been balloted with ASTM's D08 Committee and has received no negative votes. This change will therefore make the IBC definition consistent with the most up-to-date definition in ASTM D1079, "Standard Terminology Relating to Roofing and Waterproofing."

Cost Impact: Will not increase the cost of construction
The proposed change is a clarification and does not change the stringency of existing code requirements so the cost of construction will be unchanged.

G24-16 : 202-VEGETATIVE ROOF-WILEN5128

G25-16

IBC: 202

Proponent : Mike Ennis, representing SPRI, Inc. (m.ennis@mac.com)

THIS CODE CHANGE WIILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

SECTION 202 DEFINITIONS

[BS] WALL (for Chapter 21). A vertical element with a horizontal length-to-thickness ratio greater than three, used to enclose space.

Cavity wall.A wall built of *masonry units*or of concrete, or a combination of these materials, arranged to provide an airspace within the wall, and in which the inner and outer parts of the wall are tied together with metal ties.

Dry-stacked, surface-bonded wall.A wall built of concrete *masonry units*where the units are stacked dry, without *mortar*on the bed or *head joints*, and where both sides of the wall are coated with a surface-bonding *mortar*.

Parapet wall. ~~The part of any~~ Any wall ~~entirely~~ more than 4-inches (102 mm) and less than 36-inches (915 mm) wide, which projects 12-inches (305 mm) or more above the roof ~~line~~ on one side and 72-inches (1830 mm) or more above the grade on the other side.

Reason: Sections of the code reference parapet walls; however, "parapet wall" is not clearly defined. Dimensionally defining a parapet wall will help assure field conditions are correctly detailed. The minimum width of a parapet wall should be limited to 4-inches because any wall less than 4-inches is non-structural and does not support the roof or other building components. In addition the wind load on such a small area is considered insignificant. For this reason when evaluating the attachment of edge metal in conformance with Section 1504.5 Edge securement for low-slope roofs, edge metal on a horizontal surface less that 4-inches is tested as a fascia, not a coping. The maximum width should be limited to 36-inches because widths greater than this can be stood upon and are subject to roof loads, and should be treated as a roof area. Also, it is impractical to cope walls greater than 36-inches wide with metal, stone, tile, or other traditional coping materials. The minimum height of a parapet wall should be limited to 12-inches above the roof because walls extending less than this height do not provide any safety or screening of a parapet. Also, it is impractical to roof and cope walls less than 12-inches above the roof deck with traditional coping and roofing materials.

Cost Impact: Will not increase the cost of construction
Changing the definition will not increase the cost of construction.

G25-16 : 202-[BS] WALL (for Chapter 21)-ENNIS12297

G26-16

IBC: [F] 307.1.1, 311.1 (IFC: [BG] 202), 311.2 (IFC: [BG] 202); IFC: 903.2.4 (IBC: [F] 903.2.4), 903.2.9 (IBC: [F] 903.2.9), 5001, 5001.1, 5004.3.1

Proponent : Kara Gerczynski, representing Elizabeth Fire Protection District (kara@elizabethfire.com)

THIS CODE CHANGE WILL BE HEARD BY THE IFC COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

[F] 307.1.1 Uses other than Group H. An occupancy that stores, uses or handles hazardous materials as described in one or more of the following items shall not be classified as Group H, but shall be classified as the occupancy that it most nearly resembles.

1. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Section 416 and the *International Fire Code*.
2. Wholesale and retail sales and storage of flammable and combustible liquids in mercantile occupancies conforming to the *International Fire Code*.
3. Closed piping system containing flammable or combustible liquids or gases utilized for the operation of machinery or equipment.
4. Cleaning establishments that utilize combustible liquid solvents having a flash point of 140°F (60°C) or higher in closed systems employing equipment *listed*by an *approved*testing agency, provided that this occupancy is separated from all other areas of the building by 1-hour *fire barriers*constructed in accordance with Section 707 or 1hour *horizontal assemblies*constructed in accordance with Section 711, or both.
5. Cleaning establishments that utilize a liquid solvent having a flash point at or above 200°F (93°C).
6. Liquor stores and distributors without bulk storage.
7. Refrigeration systems.
8. The storage or utilization of materials for agricultural purposes on the premises.
9. Stationary batteries utilized for facility emergency power, uninterruptable power supply or telecommunication facilities, provided that the batteries are provided with safety venting caps and *ventilation*is provided in accordance with the *International Mechanical Code.*
10. Corrosive personal or household products in their original packaging used in retail display.
11. Commonly used corrosive building materials.
12. Buildings and structures occupied for aerosol storage shall be classified as Group S-1, provided that such buildings conform to the requirements of the *International Fire Code*.
13. Display and storage of nonflammable solid and nonflammable or noncombustible liquid hazardous materials in quantities not exceeding the maximum allowable quantity per *control area*in Group M or S occupancies complying with Section 414.2.5.
14. The storage of black powder, smokeless propellant and small arms primers in Groups M and R-3 and special industrial explosive devices in Groups B, F, M and S, provided such storage conforms to the quantity limits and requirements prescribed in the *International Fire Code*.
15. The storage area of distilled spirits in wooden casks and barrels in distilleries.

SECTION 311 STORAGE GROUPS

311.1 (IFC:[BG] 202) Storage Group S. *No change to text.*

311.2 (IFC: [BG] 202) Moderate-hazard storage, Group S-1.
Storage Group S-1 occupancies are buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:
Aerosols, Levels 2 and 3
Aircraft hangar (storage and repair)
Bags: cloth, burlap and paper
Bamboos and rattan
Baskets
Belting: canvas and leather
Beverages: over 16-percent alcohol content; bulk and retail packaging.
Beverages: 16 percent alcohol or less in bulk
Books and paper in rolls or packs
Boots and shoes
Buttons, including cloth covered, pearl or bone
Cardboard and cardboard boxes
Clothing, woolen wearing apparel
Cordage
Dry boat storage (indoor)
Furniture
Furs

Glues, mucilage, pastes and size
Grains
Horns and combs, other than celluloid
Leather
Linoleum
Lumber
Motor vehicle repair garages complying with the maximum allowable quantities of hazardous materials listed in Table 307.1(1) (see Section 406.8)
Photo engravings
Resilient flooring
Silks
Soaps
Sugar
Tires, bulk storage of
Tobacco, cigars, cigarettes and snuff
Upholstery and mattresses
Wax candles

2015 International Fire Code

Revise as follows:

903.2.4 (IBC [F] 903.2.4) Group F-1. An *automatic sprinkler system* shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

1. A Group F-1 *fire area* exceeds 12,000 square feet (1115 m^2).
2. A Group F-1 *fire area* is located more than three stories above grade plane.
3. The combined area of all Group F-1 *fire areas* on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2).
4. A Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses exceeds 2,500 square feet (232 m^2).
5. A Group F-1 fire area used for the manufacture of distilled spirits.

903.2.9 (IBC [F] 903.2.9) Group S-1. An *automatic sprinkler system* shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. A Group S-1 *fire area* exceeds 12,000 square feet (1115 m^2).
2. A Group S-1 *fire area* is located more than three stories above grade plane.
3. The combined area of all Group S-1 *fire areas* on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2).
4. A Group S-1 *fire area* used for the storage of commercial motor vehicles where the *fire area* exceeds 5,000 square feet (464 m^2).
5. A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 m^2).
6. A Group S-1 fire area used for the storage of distilled spirits in wooden barrels or casks.

SECTION 5001 GENERAL

5001.1 Scope. Prevention, control and mitigation of dangerous conditions related to storage, dispensing, use and handling of hazardous materials shall be in accordance with this chapter.

This chapter shall apply to all hazardous materials, including those materials regulated elsewhere in this code, except that where specific requirements are provided in other chapters, those specific requirements shall apply in accordance with the applicable chapter. Where a material has multiple hazards, all hazards shall be addressed.

Exceptions:

1. In retail or wholesale sales occupancies, the quantities of medicines, foodstuff or consumer products and cosmetics containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solutions not being flammable shall not be limited, provided such materials are packaged in individual containers not exceeding 1.3 gallons (5 L).
2. Quantities of alcoholic beverages in retail or wholesale sales occupancies shall not be limited providing the liquids are packaged in individual containers not exceeding 1.3 gallons (5 L).
3. Application and release of pesticide and agricultural products and materials intended for use in weed abatement, erosion control, soil amendment or similar applications where applied in accordance with the manufacturers' instructions and label directions.
4. The off-site transportation of hazardous materials where in accordance with Department of Transportation (DOTn) regulations.
5. Building materials not otherwise regulated by this code.
6. Refrigeration systems (see Section 606).

7. Stationary storage battery systems regulated by Section 608.
8. The display, storage, sale or use of fireworks and *explosives* in accordance with Chapter 56.
9. *Corrosives* utilized in personal and household products in the manufacturers' original consumer packaging in Group M occupancies.
10. The storage of ~~distilled spirits and~~ wines in wooden barrels and casks.
11. The use of wall-mounted dispensers containing alcohol-based hand rubs classified as Class I or II liquids where in accordance with Section 5705.5.

5004.3.1 System requirements. Exhaust ventilation systems shall comply with all of the following:

1. Installation shall be in accordance with the *International Mechanical Code*.
2. Mechanical ventilation shall be at a rate of not less than 1 cubic foot per minute per square foot [0.00508 $m^3/(s \cdot m^2)$] of floor area over the storage area.
   Exception: Areas used for the bulk storage of distilled spirits in wooden barrels or casks can be provided with an engineered ventilation system in accordance with Chapter 4 of the *International Mechanical Code*. The air flow shall not be less than that required to maintain the flammable vapor concentration in the storage area at or below 25 percent of the LFL 18 inches above finished floor level.
3. Systems shall operate continuously unless alternative designs are *approved*.
4. A manual shutoff control shall be provided outside of the room in a position adjacent to the access door to the room or in an *approved*location. The switch shall be a break-glass or other *approved*type and shall be *labeled*: VENTILATION SYSTEM EMERGENCY SHUTOFF.
5. Exhaust ventilation shall be designed to consider the density of the potential fumes or vapors released. For fumes or vapors that are heavier than air, exhaust shall be taken from a point within 12 inches (305 mm) of the floor. For fumes or vapors that are lighter than air, exhaust shall be taken from a point within 12 inches (305 mm) of the highest point of the room.
6. The location of both the exhaust and inlet air openings shall be designed to provide air movement across all portions of the floor or room to prevent the accumulation of vapors.
7. Exhaust air shall not be recirculated to occupied areas if the materials stored are capable of emitting hazardous vapors and contaminants have not been removed. Air contaminated with explosive or flammable vapors, fumes or dusts; flammable, highly toxic or toxic gases; or radioactive materials shall not be recirculated.

Reason: There is confusion about the applicability of flammable liquid (Chapter 57) and hazardous materials (Chapter 50) provisions to distilled spirits because of the exception for distilled spirits and wines stored in wooden barrels and casks in IFC Chapters 50 and 57.
The issue is arising because of the growing popularity of "boutique" or "craft" distillers. These distilleries have bulk storage of flammable and combustible liquids in wooden crafts. The Distilled Spirits Council of The United States (DISCUS) reported there have been 158 fire losses reported from 1933-2004.
In 2005 DISCUS release recommended guidelines for these facilities which addressed ventilation and secondary containment requirements. Still within the past 12 years since the DISCUS study came out there have been numerous fires in Kentucky.

The confusion is further complicated by how the International Building Code classifies the various activities into Groups. The manufacturing of beverages with over 16 percent alcohol is classified as an F-1:

> 306.2 Moderate-hazard factory industrial, Group F-1.
> Factory industrial uses that are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:
>
> Beverages: over 16-percent alcohol content

The storage of beverages with up to and including 16-percent alcohol in metal, glass or ceramic containers is classified as an S-2:

> 311.3 Low-hazard storage, Group S-2.
> Storage Group S-2 occupancies include, among others, buildings used for the storage of noncombustible materials such as products on wood pallets or in paper cartons with or without single thickness divisions; or in paper wrappings. Such products are permitted to have a negligible amount of plastic trim, such as knobs, handles or film wrapping. Group S-2 storage uses shall include, but not be limited to, storage of the following:
>
> Beverages up to and including 16-percent alcohol in metal, glass or ceramic containers

However, there is no classification listed for storage of beverages with over 16 percent alcohol and there are no exemptions for distilling activities or bulk storage of distilled spirits in Section 307.

> 311.2 Moderate-hazard storage, Group S-1.
> Storage Group S-1 occupancies are buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:
>
> ???
>
> [F] 307.1.1 Uses other than Group H.
> An occupancy that stores, uses or handles hazardous materials as described in one or more of the following items shall not be classified as Group H, but shall be classified as the occupancy that it most nearly resembles.
>
> 15. The storage of distilled spirits in wooden crates and barrels in distilleries.

A review of the International Fire Code Commentary concerning the distilled spirits in wooden barrels exception finds the following statement:

> 5001.1 Scope.
> Prevention, control and mitigation of dangerous conditions related to storage, dispensing, use and handling of hazardous materials shall be in accordance with this chapter.

This chapter shall apply to all hazardous materials, including those materials regulated elsewhere in this code, except that where specific requirements are provided in other chapters, those specific requirements shall apply in accordance with the applicable chapter. Where a material has multiple hazards, all hazards shall be addressed.

Exceptions:

10. The storage of distilled spirits and wines in wooden barrels and casks.

IFC Commentary:

"Exception 10 covers the storage of distilled spirits and wines in wooden barrels and casks. This statement may appear to exempt all requirements for these products from being a Group H occupancy. However, the IBC will still classify the storage area as a Group H occupancy if the amounts exceed the maximum allowable quantities (MAQs) per control area listed in Table 307.1(1) of that code for flammable or combustible liquids. All requirements for a Group H occupancy in the IBC are still applicable; however, any requirements from the code are not."

In summary, when you manufacture distilled spirits you are an F-1 occupancy. When you manufacture wine or beer you are an F-2 occupancy. When you store wine and beer you are an S-2 occupancy. When you store distilled spirits in retail packaging you are not an H occupancy but there is no clarifying entry under S-1. If you store any beverage with over 16% alcohol in bulk, (includes some wines), you have an H occupancy. As far as risk goes, manufacturing has a higher risk than storage for an event, yet manufacturing of distilled spirits is an F-1 regardless of amount and but an H if stored in bulk. This makes no sense. To top it off, when you go to the IFC, if you store your distilled spirits in bulk in wooden barrels Chapter 50 and 57 do not apply so there are no code requirements.

This proposal attempts to address this confusion recognizing the main issues are need for automatic fire suppression, need for mechanical ventilation and need for containment of spills. It is proposed to add a classification under S-1 for storage of beverages over 16% alcohol in bulk or retail packaging along with beverages with 16% or less alcohol in bulk.

Modify the exception from H occupancies to apply to liquor stores, distilleries that are storing distilled spirits in wooden barrels or casks.

Add automatic fire suppression requirements for the manufacture of distilled spirits or bulk storage of distilled spirits regardless of square footage.

Remove the distilled spirit in wooden barrels exception in Chapter 50 of the IFC to provide for ventilation and spill containment requirements, and

modify the ventilation requirements to match current industry practice.

The Group classifications are clarifies with the elimination of the H group for storage in exchange for fire protection features including suppression, ventilation and spill containment.

Cost Impact: Will not increase the cost of construction
This proposal will likely break even on the cost of construction by clarifying what the appropriate Group designation is, elimination of the unnecessary H classifications and clarifying what protection levels are necessary.

G26-16 : [F] 307.1.1-GERCZYNSKI12232

G27-16

IBC: [F] 403.4.8.3, [F] 403.4.8.4.

Proponent : Stephen DiGiovanni, representing Southern Nevada Chapter of ICC (sdigiovanni@clarkcountynv.gov)

THIS CODE CHANGE WIILL BE HEARD BY THE IFC COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

[F] 403.4.8.3 Standby power loads. The following are classified as standby power loads:

1. ~~Power and lighting for the *fire command center* required by Section 403.4.6.~~
2. *Ventilation* and automatic fire detection equipment for *smokeproof enclosures*.
3. Elevators.
4. Where elevators are provided in a *high-rise building* for *accessible means of egress*, fire service access or occupant self-evacuation, the standby power system shall also comply with Sections 1009.4, 3007 or 3008, as applicable.

[F] 403.4.8.4 Emergency power loads. The following are classified as emergency power loads:

1. Exit signs and *means of egress*illumination required by Chapter 10.
2. Elevator car lighting.
3. *Emergency voice/alarm communications systems*.
4. Automatic fire detection systems.
5. *Fire alarm*systems.
6. Electrically powered fire pumps.
7. Power and lighting for the *fire command center* required by Section 403.4.6.

Reason: Given the importance of the fire command center in an emergency event it is imperative that the room be fully illuminated and powered to function properly during an emergency. This proposal attempts to ensure that all power and lighting in the fire command center is provided as quickly as possible to ensure continuity of operations in the fire command center should power be lost during an event.

Cost Impact: Will increase the cost of construction
This proposal will require improvements to the emergency power supply system for high-rise buildings.

G27-16 : [F] 403.4.8.3-DIGIOVANNI3818

G28-16

IBC: [F] 405.8.1, [F] 405.8.2.

Proponent : Stephen DiGiovanni, Clark County Building Department, representing Southern Nevada Chapter of ICC (sdigiovanni@clarkcountynv.gov)

2015 International Building Code

Revise as follows:

[F] 405.8.1 Standby power loads. The following loads are classified as standby power loads:

1. Smoke control system.
2. *Ventilationand automatic fire detection equipment for smokeproof enclosures.*
3. ~~Fire pumps.~~
3. Elevators, as required in Section 3003.

[F] 405.8.2 Emergency power loads. The following loads are classified as emergency power loads:

1. *Emergency voice/alarm communications systems*.
2. *Fire alarm*systems.
3. Automatic fire detection systems.
4. Elevator car lighting.
5. Means of egress and exit sign illumination as required by Chapter 10.
6. Electrically powered fire pumps.

Reason: In the 2015 IBC, Section 403.4.8 (High-rise buildings), the redundant pow er source requirements for electrically pow ered fire pumps w as changed from stand-by pow er to emergency pow er. This proposed change applies the same requirement to Underground Buildings.

Note: It is possible for a single building to qualify as both an underground building and a high-rise building. As such, these provisions should be consistent betw een the tw o requirement sets to avoid potential design conflicts.

Cost Impact: Will increase the cost of construction
This proposal w ill increase the cost of construction as it requires improved performance for the back-up pow er for underground buildings.

G28-16 : [F] 405.8.1-DIGIOVANNI3821

G29-16

IBC: 406.4.3.

Proponent : Satyendra Ghosh, representing Precast/Prestressed Concrete Institute (skghoshinc@gmail.com)

THIS CODE CHANGE WIILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

406.4.3 Vehicle barriers. *Vehicle barriers*not less than 2 feet 9 inches (835 mm) in height shall be placed where the vertical distance from the floor of a drive lane or parking space to the ground or surface directly below is greater than 1 foot (305 mm). *Vehicle barriers*shall comply with the loading requirements of Section 1607.8.3.

> ~~**Exception**~~ **Exceptions:**1. *Vehicle barriers*are not required in vehicle storage compartments in a mechanical access parking garage.
>
> 2. Where a vehicle barrier is designed to resist the load required by Section 1607.8.3 applied on an area less than 12 inches in height, the minimum vehicle barrier height is permitted to be reduced to 2 feet 3 inches plus half the height of the load application area.

Reason: ASCE 7-10 Section 4.5.3, referenced from Section 1607.8.3, requires: "Vehicle barrier systems for passenger vehicles shall be designed to resist a single load of 6,000 lb (26.70 kN) applied horizontally in any direction to the barrier system, ... For design of the system, the load shall be assumed to act at heights betw een 1 ft 6 in. (460 mm) and 2 ft 3 in. (686 mm) above the floor or ramp surface, located to produce the maximum load effects. The load shall be applied on an area not to exceed 12 in. by 12 in. (305 mm by 305 mm)." The 2 feet 9 inches of minimum barrier height is 2 feet 3 inches, the maximum height of load application, plus 6 inches, half the height of the 12-inch by 12-inch load application area. How ever, note that the ASCE 7 language reads "not to exceed 12 in. by 12 in." If a designer can design the barrier system to w ithstand the same load applied at the maximum 2 feet 3 inches height applied over a smaller 6-in. high by 12-inch w ide area, there is no reason for the barrier to be taller than 2 feet 3 inches plus half the 6-in. height of the load application area or 2 feet 6 inches total. The proposed change w ould permit this flexibility. The few inches become important w hen a designer is struggling to meet the openness requirement in Section 406.5. Note that ASCE 7-16 Section 4.5.3 is unchanged.

Cost Impact: Will not increase the cost of construction
This proposal may result in a modest decrease in the cost of a parking structure, if its design is affected by the proposed change.

G29-16 : 406.4.3-GHOSH13258

G30-16

IBC: [F] 412.6, [F] 412.6.1, [F] 412.6.3, [F]412.6.7 (New), [F]412.6.7.1 (New), [F]412.6.7.2 (New).

Proponent : Michael O'Brian, representing Fire Code Action Committee (fcac@iccsafe.org)

THIS CODE CHANGE WIILL BE HEARD BY THE IFC COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

[F] 412.6 Aircraft paint hangars. Aircraft painting operations ~~where flammable liquids are used in excess of the maximum allowable quantities per *control area* listed in Table 307.1(1)~~ shall be conducted in an aircraft paint hangar that complies with the provisions of Sections 412.6.1 through ~~412.6.6~~ 412.6.7. Buildings and structures, or parts thereof, used for the application of flammable finishes shall comply with the applicable provisions of Section 416.

[F] 412.6.1 Occupancy ~~group~~ classfication. Aircraft paint hangars shall be classified ~~as Group H-2~~ in accordance with the provisions of Section 307.1. Aircraft paint hangars shall comply with the applicable requirements of this code and the *International Fire Code*for such occupancy.

[F] 412.6.3 ~~Operations~~ Spray equiment cleaning operations. ~~Only those flammable liquids necessary for painting operations shall be permitted in quantities less than the maximum allowable quantities per *control area* in Table 307.1(1).~~
Spray equipment cleaning operations shall be conducted in a liquid use, dispensing and mixing room.

Add new text as follows:

[F]412.6.7 Electrical. Electrical equipment and devices within the aircraft paint hangar shall comply with NFPA 70.

[F]412.6.7.1 Class I, Division I hazardous (classified) locations. The area within 10 feet horizontally from aircraft surfaces and from the floor to 10 feet above the aircraft surface shall be classified as a Class I, Division I location.

[F]412.6.7.2 Class I, Division 2 hazardous (classified) locations. The area horizontally from aircraft surfaces between 10 feet and 30 feet and from the floor to 30 feet above the aircraft surface shall be classified as a Class I, Division 2 location.

Reason: There is currently a conflict in the International Building Code as regards the occupancy classification of aircraft paint hangars. Section 412.6.1 declares that aircraft paint hangars be classified as Group H-2 occupancies. However, Section 307.1.1, Item 1 allows for occupancies used for the application of flammable finishes that comply with IBC Section 416 and the International Fire Code to be classified as the occupancy that they most nearly resemble. This conflict is proposed to be resolved in favor of the specific Chapter 3 occupancy classification provisions. Those provisions are more comprehensive and in better technical context.

Several additional improvements have been made to Section 412.6. The appropriate reference to IBC Section 416 for all aircraft paint hangars regardless of occupancy classification has been added. Section 412.5.3 states, "Only those flammable liquids necessary for painting operations shall be permitted in quantities less than the maximum allowable quantities per control area in Table 307.1(1)." It makes no sense to stipulate a requirement to limit quantities of flammable liquids necessary for painting operations to less than the maximum allowable quantities in a Group H-2 occupancy as previously required in Section 412.6.1. The spray equipment cleaning operations requirements have been retained. Also, appropriate reference to NFPA 70 and hazardous (classified) locations are made in new Section 412.6.7.

Approval of this proposal will eliminate current conflicts that regulate the occupancy classification of aircraft paint hangars and will improve functionality of applicable technical requirements for these unique buildings.
This proposal is submitted by the ICC Fire Code Action Committee (FCAC). The FCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes with regard to fire safety and hazardous materials in new and existing buildings and facilities and the protection of life and property in wildland urban interface areas. In 2014 and 2015 the Fire-CAC has held 5 open meetings. In addition, there were numerous conference calls, Regional Work Group and Task Group meetings for the current code development cycle, which included members of the committees as well as any interested parties, to discuss and debate the proposed changes. Related documentation and reports are posted on the FCAC website at: FCAC

Cost Impact: Will not increase the cost of construction
This revision will decrease the cost of construction as the paint hangar will not need to be constructed as a Group H-2 occupancy.

G30-16 : [F] 412.6-O'BRIAN11515

G31-16

IBC: [F] 412.6.3, [F] 412.6.4.

Proponent : Gregory Keith, representing The Boeing Company (grkeith@mac.com)

THIS CODE CHANGE WIILL BE HEARD BY THE IFC COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

[F] 412.6.3 Operations. Only those flammable liquids necessary for painting operations shall be permitted in quantities less than the maximum allowable quantities per *control area*in Table 307.1(1). Spray equipment cleaning operations exceeding the maximum allowable quantities per control area in Table 307.1(1) shall be conducted in a liquid use, dispensing and mixing room.

[F] 412.6.4 Storage. Storage of flammable or combustible liquids exceeding the maximum allowable quantities per control area in Table 307.1(1) shall be in a liquid storage room.

Reason: The current spray equipment cleaning operations provisions in Section 412.6.3 that such operations be conducted in a liquid use, dispensing and mixing room and storage provisions in Section 412.6.4 requiring a liquid storage roomare fairly absolute.
The Section 412.6.3 specific requirement overlooks two important aspects. First, flammable or combustible liquids may not be used in the cleaning operation. Many new solvents in use today are not flammable nor combustible and many companies are utilizing these products in an effort to avoid environmental restrictions. Secondly, spray equipment can often be cleaned using minimal amounts of flammable or combustible solvents not in excess of maximum allowable quantities. In either event, the requirement for spray equipment cleaning operations to be conducted in a liquid use, dispensing and mixing room is unduly restrictive and unnecessary.

Similarly, Section 412.6.4 assumes storage of flammable liquids in amounts in excess of the maximum allowable quantities per control area in Table 307.1(1) which may or may not be the case.

Approval of this proposal would align the aircraft paint hangar spray equipment cleaning and storage provisions with the fundamental system of classifying hazardous areas in accordance with Section 307.1 and result in more consistent application of International Fire Code and International Building Code provisions.

Cost Impact: Will not increase the cost of construction
Approval would reduce the cost of construction for facilities where quantities of flammable and combustible liquids less than the maximum allowable quantitiy per control are used or stored.

G31-16 : [F] 412.6.3-KEITH12094

G32-16

IBC: 423.1, 423.1.1, 423.2, 423.3, 423.4, 1604.5.

Proponent : Edward Kulik, representing Building Code Action Committee (bcac@iccsafe.org); Andrew Herseth, representing Federal Emergency Management Agency (andrew.herseth@fema.dhs.gov)

THIS CODE CHANGE WIILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

423.1 General. In addition to other applicable requirements in this code, ~~storm shelters~~*storm shelters* shall be constructed in accordance with ICC 500. Buildings or structures that are designated as emergency shelters by the emergency management official having jurisdiction shall also comply with Table 1604.5.

423.1.1 Scope. This section applies to the construction of storm shelters constructed as separate detached buildings or constructed as safe rooms within buildings for the purpose of providing safe refuge from storms that produce high winds, such as tornados and hurricanes. Such structures shall be designated to be hurricane shelters, tornado shelters, or combined hurricane and tornado shelters.

423.2 Definitions. The following terms are defined in Chapter 2:
STORM SHELTER.
Community storm shelter.
Residential storm shelter.

423.3 Critical emergency operations. In areas where the shelter design wind speed for tornados in accordance with Figure 304.2(1) of ICC 500 is 250 MPH, 911 call stations, emergency operation centers and fire, rescue, ambulance and police stations shall ~~have~~ comply with Table 1604.5 and shall be provided with a storm shelter constructed in accordance with ICC 500.

Exception: Buildings meeting the requirements for shelter design in ICC 500.

423.4 Group E occupancies. In areas where the shelter design wind speed for tornados is 250 MPH in accordance with Figure 304.2(1) of ICC 500, all Group E occupancies with an aggregate occupant load of 50 or more shall have a storm shelter constructed in accordance with ICC 500. The shelter shall be capable of housing the total occupant load of the Group E occupancy.

Exceptions:
1. Group E day care facilities.
2. Group E occupancies accessory to places of religious worship.
3. Buildings meeting the requirements for shelter design in ICC 500.

1604.5 Risk category. Each building and structure shall be assigned a risk category in accordance with Table 1604.5. Where a referenced standard specifies an occupancy category, the risk category shall not be taken as lower than the occupancy category specified therein. Where a referenced standard specifies that the assignment of a risk category be in accordance with ASCE 7, Table 1.5-1, Table 1604.5 shall be used in lieu of ASCE 7, Table 1.5-1.

TABLE 1604.5
RISK CATEGORY OF BUILDINGS AND OTHER STRUCTURES

RISK CATEGORY	NATURE OF OCCUPANCY
I	Buildings and other structures that represent a low hazard to human life in the event of failure, including but not limited to:
	• Agricultural facilities.
	• Certain temporary facilities.
	• Minor storage facilities.
II	Buildings and other structures except those listed in Risk Categories I, III and IV.
	Buildings and other structures that represent a substantial hazard to human life in the event of failure, including but not limited to:
	• Buildings and other structures whose primary occupancy is public assembly with an occupant load greater than 300.

III	• Buildings and other structures containing Group E occupancies with an occupant load greater than 250.
	• Buildings and other structures containing educational occupancies for students above the 12th grade with an occupant load greater than 500.
	• Group I-2 occupancies with an occupant load of 50 or more resident care recipients but not having surgery or emergency treatment facilities.
	• Group I-3 occupancies.
	• Any other occupancy with an occupant load greater than 5,000.[a]
	• Power-generating stations, water treatment facilities for potable water, wastewater treatment facilities and other public utility facilities not included in Risk Category IV.
	• Buildings and other structures not included in Risk Category IV containing quantities of toxic or explosive materials that:
	Exceed maximum allowable quantities per control area as given in Table 307.1(1) or 307.1(2) or per outdoor control area in accordance with the *International Fire Code*; and
	Are sufficient to pose a threat to the public if released.[b]
IV	Buildings and other structures designated as essential facilities, including but not limited to:
	• Group I-2 occupancies having surgery or emergency treatment facilities.
	• Fire, rescue, ambulance and police stations and emergency vehicle garages.
	• Designated[c] emergency shelters including earthquake or *community storm*~~, hurricane or other emergency~~ *shelters* for use during and immediately after an event.
	• Designated[c] emergency preparedness, communications and operations centers and other facilities required for emergency response.
	• Power-generating stations and other public utility facilities required as emergency backup facilities for Risk Category IV structures.
	• Buildings and other structures containing quantities of highly toxic materials that:
	Exceed maximum allowable quantities per control area as given in Table 307.1(2) or per outdoor control area in accordance with the *International Fire Code;* and
	Are sufficient to pose a threat to the public if released.[b]
	• Aviation control towers, air traffic control centers and emergency aircraft hangars.
	• Buildings and other structures having critical national defense functions.
	• Water storage facilities and pump structures required to maintain water pressure for fire suppression.

a. For purposes of occupant load calculation, occupancies required by Table 1004.1.2 to use gross floor area calculations shall be permitted to use net floor areas to determine the total occupant load.

b. Where approved by the building official, the classification of buildings and other structures as Risk Category III or IV based on their quantities of toxic, highly toxic or explosive materials is permitted to be reduced to Risk Category II, provided it can be demonstrated by a hazard assessment in accordance with

Section 1.5.3 of ASCE 7 that a release of the toxic, highly toxic or explosive materials is not sufficient to pose a threat to the public.
c. As designated by the emergency management official having jurisdiction.

Reason: The purpose of this code change is to clarify which types of shelters are required to be assigned to Risk Category IV per Table 1604.5 and who is responsible for providing the designation.
Risk categories are assigned to buildings to account for consequences and risks to human life (building occupants) in the event of a building failure. The intent is to assign higher risk categories, and hence higher design criteria, to buildings or structures that, if they experience a failure, would inhibit the availability of essential community services necessary to cope with an emergency situation and therefore have grave consequences to either the building occupants or the population around the building or structure that relies upon the provided services (such as a power station).

Table 1604.5 of the IBC, which was originally copied from Table 1.5-1 of ASCE 7 and has existed in the IBC since the 2000 edition, includes under Risk Category IV "Designated earthquake, hurricane or other emergency shelters". This item has always meant shelters that are used both during and immediately after an event. The item is amended to clarify that both uses apply.

Additionally, with the introduction of ICC-500 Standard for the Design and Construction of Storm Shelters (ICC 500) in 2008, and subsequently in 2014, the term 'hurricane shelter' is now used in Section 423 of the IBC and throughout ICC 500. Without the clarification of the word 'community' proposed above, ALL hurricane shelters would have to be Risk Category IV, even residential hurricane shelters (shelters provided in dwelling units and having an occupant load not exceeding 16 persons), which does not meet the intent of Risk Category IV buildings.

Furthermore, with the introduction of ICC 500, the term 'storm shelter' has become a defined term and includes tornado shelters in addition to hurricane shelters, both of which are emergency shelters and as such meet the spirit and intent of being Risk Category IV structures.

The addition of footnote C is intended to provide clarification and meaning to the term 'designated' provided in the table; without this added footnote one may ask, 'designated by whom?' Another observed issue with the term 'designated', is that the designation often comes well after the building is designed and built, which is too late to incorporate the structural design provision of Risk Category IV. This clarification will lead to pre-design involvement of the emergency management official having jurisdiction, whom is typically the one that designates emergency shelters.

It is noted that, starting with the 2010 edition of ASCE 7, Table 1.5-1 no longer provides bulleted lists of the types of buildings that fall under each Risk Category. It was the decision of the ASCE 7 committee that Table 1.5-1 should only provide the general criteria, and that Table 1604.5 of the IBC should detail the specific occupancies or uses that fall under each Risk Category as decided on by the stakeholders and participants in the ICC code development process.

The ICC Building Code Action Committee (BCAC) is a co-proponent of this proposal. BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance assigned International Codes or portions thereof. In 2014 and 2015 the BCAC has held 5 open meetings. In addition, there were numerous Working Group meetings and conference calls for the current code development cycle, which included members of the committee as well as any interested party to discuss and debate the proposed changes. Related documentation and reports are posted on the BCAC website at: **BCAC**

Cost Impact: Will not increase the cost of construction
As this is intended as a clarification only, the cost of construction will not be increased.

G32-16 : 423.1-KULIK10973

G33-16

IBC: 423.1.

Proponent : Stephen Skalko, representing Precast/Prestressed Concrete Institute (svskalko@cox.net); James Baty, representing TBD (jbaty@tilt-up.org)

THIS CODE CHANGE WIILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

423.1 General. In addition to other applicable requirements in this code, storm shelters shall be constructed in accordance with ICC 500.

> **Exception**: Where manufacturers installation instructions require joint widths greater than 3/8-inches, pre-cast concrete panel joints of up to 3/4-inches shall be permitted for joints in accordance with ASTM C920.

Reason: Section 306.8, Exception 1 to ICC 500 permits joint widths in precast concrete panels to be 3/8-inches or less and meet ASTM C920 to comply with the standard. However, there are some joint materials that meet ASTM C920 requirements but also have further requirements from the manufacturer that the joint width be specified at 3/4-inches for proper installation and performance. This proposal will permit the use of these slightly wider joint widths where the manufacturers of approved joint material have installation instructions that require these larger joints.

The use of specified dimensions such as this is consistent with dimensional provisions within ACI 318, Building Code Requirements For Structural Concrete such as cover for reinforcement. In addition, the 3/4-inch dimension is consistent with the width of the undercut permitted for storm shelter doors in ICC 500 Section 306.7.

Finally, providing special modifications to referenced standards such as this within the IBC is not unusual. Similar modifications are made to ASCE 7 in IBC Section 1613.5, to ACI 318 in Section 1905.1 and to TMS 402/ACI 530/ASCE 5 in Section 2107.1 where the Code Change Committee for the IBC deems the special modifications warranted.

Cost Impact: Will not increase the cost of construction
The proposed change should result in a reduction in cost by permitting the joint widths in pre-cast concrete panels to meet the industry tolerances for panel construction used for storm shelters. Further savings will also be realized by eliminating extra protection devices or methods unnecessary for these industry standard joints for the shelter envelope.

G33-16 : 423.1-SKALKO5476

G34-16

IBC: 2303.2.9.

Proponent : James Smith (jsmith@awc.org)

THIS CODE CHANGE WIILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

2303.2.9 ~~Type I and II construction~~ Construction type applications. Fire-retardant treated wood shall be permitted to be used in accordance with the construction type provisions of Chapter 6 and in accordance with the applicable conditions of specific sections of this code permitting or requiring its use. See Section 603.1 for certain limitations on the use of *fire-retardant-treated wood* in buildings of Type I or II construction.

Reason: There are potential uses of FRTW in Types I and II construction that are provided for in the code but are not listed in Section 603.1. For instance, certain canopies (406.7.2), kiosks (402.6.2), projections (705.2), penthouses (1510.2.5), mechanical equipment screens (1510.6.2), and pedestrian walkways (3104.3), to name a few. The current pointer to the construction type I and II provisions in Chapter 6 is still helpful, but not exclusive, and should be broadened to include all the construction type provisions in Chapter 6 (to include Types III and IV as well), as well as reminding the code user that there are other provisions throughout the code which permit the use of FRTW under certain conditions in all construction types.

Cost Impact: Will not increase the cost of construction
As this proposal is not changing any technical provision of the code and adding clarity, the cost of construction will not increase.

G34-16 : 602.3-SMITH11569

G35-16

IBC: [F] 2702.1.7; IFC: 604.1.7.

Proponent : Gregory Wilson (gregory.wilson2@fema.dhs.gov); Rebecca Quinn, representing Federal Emergency Management Agency (rcquinn@earthlink.net)

THIS CODE CHANGE WIILL BE HEARD BY THE IFC COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

[F] 2702.1.7 Group I-2 occupancies. In Group I-2 occupancies~~, in new construction or where the building is substantially damaged, where an essential electrical system is~~ located in flood hazard areas established in Section 1612.3 where new or replacement essential electrical systems are installed, the ~~system~~ systems shall be located and installed in accordance with ASCE 24. Where connections for hook up of temporary generators are provided, the connections shall be located at or above the elevation required in ASCE 24.

2015 International Fire Code

Revise as follows:

604.1.7 Group I-2 occupancies. In Group I-2 occupancies~~, where an essential electrical system is~~ located in flood hazard areas established in Section 1612.3 of the *International Building Code*~~and~~ where new or replacement essential electrical ~~system generators~~ systems are installed, the ~~system~~ systems shall be located and installed in accordance with ASCE 24. Where connections for hook up of temporary generators are provided, the connections shall be located at or above the elevation required in ASCE 24.

Reason: This proposal does two things to combine texts in two codes to produce the same phrasing in both sections, which was the original intent when these sections were approved for the 2015 editions. The differences between IBC 2702.1.7 and IFC 604.1.7 were brought to the attention of ICC staff several months ago.
First, the proposal makes the requirement apply to new and replacement essential electrical systems. Second, it makes the requirement apply to essential electrical systems, not just "essential electrical system generators" because a generator is a part of an essential electrical system. The term "essential electrical system" is used in the IBC and IFC, but defined in NFPA 99.

The proposal adds a requirement related to hook up of temporary generators. Hook ups should be above the required flood elevation (i.e., at or above the same elevation as the building's lowest floor or dry floodproofing level), otherwise if inundated, the hook ups may not be functional and readily when floodwater rises to that elevation.

Cost Impact: Will not increase the cost of construction
Intent is to make the sections consistent.

G35-16 : [F] 2702.1.7-WILSON12138

G36-16

IBC: [F] 2702.2.5 (New); IFGC: [M] 614.10; IMC: 504.10, 505.3.

Proponent : Edward Kulik, representing Building Code Action Committee (bcac@iccsafe.org), Adolph Zubia, representating IAFC Fire & Life Safety Section

THIS CODE CHANGE WIILL BE HEARD BY THE IFC COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Add new text as follows:

[F] 2702.2.5 Exhaust systems. Standby power shall be provided for common exhaust systems for domestic kitchens located in multistory structures as required in Section 505.3 of the *International Mechanical Code*. Standby power shall be provided for common exhaust systems for clothes dryers located in multistory structures as required in Section 504.10 of the *International Mechanical Code* and Section 614.10 of the *International Fuel Gas Code*.

2015 International Mechanical Code

Revise as follows:

504.10 Common exhaust systems for clothes dryers located in multistory structures. Where a common multistory duct system is designed and installed to convey exhaust from multiple clothes dryers, the construction of the system shall be in accordance with all of the following:

1. The shaft in which the duct is installed shall be constructed and fire-resistance rated as required by the *International Building Code*.
2. Dampers shall be prohibited in the exhaust duct. Penetrations of the shaft and ductwork shall be protected in accordance with Section 607.5.5, Exception 2.
3. Rigid metal ductwork shall be installed within the shaft to convey the exhaust. The ductwork shall be constructed of sheet steel having a minimum thickness of 0.0187 inch (0.4712 mm)(No. 26 gage) and in accordance with SMACNA *Duct Construction Standards*.
4. The ductwork within the shaft shall be designed and installed without offsets.
5. The exhaust fan motor design shall be in accordance with Section 503.2.
6. The exhaust fan motor shall be located outside of the airstream.
7. The exhaust fan shall run continuously, and shall be connected to a standby power source in accordance with Section 2702 of the *International Building Code*.
8. Exhaust fan operation shall be monitored in an *approved* location and shall initiate an audible or visual signal when the fan is not in operation.
9. Makeup air shall be provided for the exhaust system.
10. A cleanout opening shall be located at the base of the shaft to provide *access* to the duct to allow for cleaning and inspection. The finished opening shall be not less than 12 inches by 12 inches (305 mm by 305 mm).
11. Screens shall not be installed at the termination.
12. The common multistory duct system shall serve only clothes dryers and shall be independent of other exhaust systems.

505.3 Common exhaust systems for domestic kitchens located in multistory structures. Where a common multistory duct system is designed and installed to convey exhaust from multiple domestic kitchen exhaust systems, the construction of the system shall be in accordance with all of the following:

1. The shaft in which the duct is installed shall be constructed and fire-resistance rated as required by the *International Building Code*.
2. Dampers shall be prohibited in the exhaust duct, except as specified in Section 505.1. Penetrations of the shaft and ductwork shall be protected in accordance with Section 607.5.5, Exception 2.
3. Rigid metal ductwork shall be installed within the shaft to convey the exhaust. The ductwork shall be constructed of sheet steel having a minimum thickness of 0.0187 inch (0.4712 mm)(No. 26 gage) and in accordance with SMACNA *Duct Construction Standards*.
4. The ductwork within the shaft shall be designed and installed without offsets.
5. The exhaust fan motor design shall be in accordance with Section 503.2.
6. The exhaust fan motor shall be located outside of the airstream.
7. The exhaust fan shall run continuously, and shall be connected to a standby power source in accordance with Section 2702 of the *Intenational Building Code*.
8. Exhaust fan operation shall be monitored in an approved location and shall initiate an audible or visual signal when the fan is not in operation.
9. Where the exhaust rate for an individual kitchen exceeds 400 cfm (0.19 m^3/s) makeup air shall be provided in accordance with Section 505.2.
10. A cleanout opening shall be located at the base of the shaft to provide access to the duct to allow for cleanout and inspection. The finished openings shall be not less than 12 inches by 12 inches (305 mm by

305 mm).
11. Screens shall not be installed at the termination.
12. The common multistory duct system shall serve only kitchen exhaust and shall be independent of other exhaust systems.

2015 International Fuel Gas Code

Revise as follows:

[M] 614.10 Common exhaust systems for clothes dryers located in multistory structures. Where a common multistory duct system is designed and installed to convey exhaust from multiple clothes dryers, the construction of such system shall be in accordance with all of the following:

1. The shaft in which the duct is installed shall be constructed and fire-resistance rated as required by the *International Building Code*.
2. Dampers shall be prohibited in the exhaust duct. Penetrations of the shaft and ductwork shall be protected in accordance with Section 607.5.5, Exception 2, of the *International Mechanical Code*.
3. Rigid metal ductwork shall be installed within the shaft to convey the exhaust. The ductwork shall be constructed of sheet steel having a minimum thickness of 0.0187 inch (0.471 mm) (No. 26 gage) and in accordance with SMACNA *Duct Construction Standards*.
4. The ductwork within the shaft shall be designed and installed without offsets.
5. The exhaust fan motor design shall be in accordance with Section 503.2 of the *International Mechanical Code*.
6. The exhaust fan motor shall be located outside of the airstream.
7. The exhaust fan shall run continuously, and shall be connected to a standby power source in accordance with Section 2702 of the *International Building Code*.
8. The exhaust fan operation shall be monitored in an *approved* location and shall initiate an audible or visual signal when the fan is not in operation.
9. Makeup air shall be provided for the exhaust system.
10. A cleanout opening shall be located at the base of the shaft to provide *access* to the duct to allow for cleaning and inspection. The finished opening shall be not less than 12 inches by 12 inches (305 mm by 305 mm).
11. Screens shall not be installed at the termination.

Reason: Kulik: This public proposal is submitted by the ICC Building Code Action Committee (BCAC). The BCAC was established by the ICC Board of Directors to pursue opportunities to improve and enhance an assigned International Code or portion thereof. This includes both the technical aspects of the codes as well as the code content in terms of scope and application of referenced standards. Since its inception in July, 2011, the BCAC has held 13 open meetings and numerous workgroup calls which included members of the BCAC as well as any interested party to discuss and debate the proposed changes and the public comments. Related documentation and reports are posted on the BCAC website at: http://www.iccsafe.org/cs/BCAC/Pages/default.aspx.
Last cycle proposal F59-13 reorganized the ICC emergency and standby power requirements so they can be applied more consistently. The concept was that IBC Section 2702 would include the general standby and emergency power requirements and individual code sections would dictate the power duration and other specific details, and cross reference IBC Section 2702.

The requirements for standby power for the common exhaust for domestic kitchens and clothes dryers located in multistory structures in the International Mechanical Code and International Fuel Gas Code are the only remaining references to standby power in the ICC family of codes that do not include these cross references, since F59-13 was introduced as a Group B proposal last cycle. This proposal adds the cross references needed to harmonize the standby power requirements.

This proposal was also submitted by Fire and Life Safety Section of the International Association of Fire Chiefs.

Code Change Item F59-13 was previously approved and reorganized the emergency and standby power requirements to maintain consistency between the various I-Codes. The concept of that code change was for IBC Section 2702 to include the general emergency and standby power requirements, while individual code sections would dictate the required duration and other specific details and provide a reference to IBC Section 2702.

The IMC and IFGC requirements for standby power for common exhaust systems serving domestic kitchens and clothes dryers in multistory structures are the only remaining I-Code sections which do not include a reference to IBC Section 2702. This occurred because F59-13 was introduced as a Group B code change item and it missed the Group A cycle.

This proposal will finish the correlation process started by F59-13. These are the last outstanding items to complete the correlation of emergency and standby power requirements.

Zubia:

This proposal is submitted by Fire and Life Safety Section of the International Association of Fire Chiefs.

Code Change Item F59-13 was previously approved and reorganized the emergency and standby power requirements to maintain consistency between the various I-Codes. The concept of that code change was for IBC Section 2702 to include the general emergency and standby power requirements, while individual code sections would dictate the required duration and other specific details and provide a reference to IBC Section 2702.

The IMC and IFGC requirements for standby power for common exhaust systems serving domestic kitchens and clothes dryers in multistory structures are the only remaining I-Code sections which do not include a reference to IBC Section 2702. This occurred because F59-13 was introduced as a Group B code change item and it missed the Group A cycle.

This proposal will finish the correlation process started by F59-13. These are the last outstanding items to complete the correlation of emergency and standby power requirements.

Cost Impact: Will not increase the cost of construction
Kulik: This proposal will not increase the cost of construction if the standby power for the exhaust fan is provided in accordance with the provisions in IBC Section 2702. This proposal has the potential to increase the cost of construction if the standby power source is designed to lesser requirements.
Zubia: This proposal does not add any new requirements. It merely provides correlation with other requirements currently in the I-Codes.

G36-16 : [F] 2702.2.5 (NEW)-KULIK4908

G37-16

IBC: [F] 2702.2.10; IFC: 604.2.10.

Proponent : John Woestman, Kellen Company, representing Builders Hardware Manufacturers Association (BHMA) (jwoestman@kellencompany.com)

THIS CODE CHANGE WIILL BE HEARD BY THE IFC COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE

2015 International Building Code

Revise as follows:

[F] 2702.2.10 ~~Horizontal~~ Special purpose horizontal sliding, accordion, or folding doors. Standby power shall be provided for special purpose horizontal sliding, accordion or folding doors as required in Section 1010.1.4.3. The standby power supply shall have a capacity to operate not fewer than 50 closing cycles of the door.

2015 International Fire Code

Revise as follows:

604.2.10 ~~Horizontal~~ Special purpose horizontal sliding, accordion, or folding doors. Standby power shall be provided for special purpose horizontal sliding, accordion or folding doors as required in Section 1010.1.4.3. The standby power supply shall have a capacity to operate not fewer than 50 closing cycles of the door.

Reason: This proposal updates references to IBC 1010.1.4.3. Special purpose horizontal sliding, accordion or folding doors as the name of this section and related text were revised for the 2015 IBC and IFC. Most of the references to 1010.1.4.3 were updated for the 2015 IBC and IFC. These were not.

Cost Impact: Will not increase the cost of construction
No technical changes.

G37-16 : [F] 2702.2.10-WOESTMAN5498

G38-16

IBC: [F] 3003.1; IFC: 607.2.

Proponent : Bryan Romney, representing self (bryan.romney@fm.utah.edu)

2015 International Building Code

Revise as follows:

[F] 3003.1 Standby power. In buildings and structures where standby power is required or furnished to operate an elevator, the operation shall be in accordance with Sections 3003.1.1 through 3003.1.4.
In addition, upon loss of normal power, each elevator shall be provided with standby power to allow elevator to return to the designated floor level established in accordance with Section 3003.1.2, to stop at that floor level and open the cab door.

2015 International Fire Code

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

In addition, upon loss of normal power, each elevator shall be provided with standby power to allow elevator to return to the designated floor level established in accordance with Section 607.2.2, to stop at that floor level and open the cab door.

Reason: Emergency Operation requirements for elevators and conveying systems are regulated in IBC Section 3003.1. This IBC section stipulates that standby power is required only for those elevators identified by other sections of the code or where voluntarily furnished. The IBC identifies the elevators required to have standby power in Sections 403.4.8, 3003, 3007, 3008, 2702.2.2, 1009.4 and 1009.5. These elevators are primarily used in high rise buildings and to provide accessible routes or accessible means of egress. Generally, elevators operate using the building's primary power source under normal conditions. Under emergency conditions when the primary power source is unavailable, the elevators identified in these code sections automatically receive power from a standby power source for continued functionality.
However, elevators not required to have standby power cease to operate once the primary power source is unavailable. At times elevators can malfunction even without loss of the building's primary power source and cease to operate. The result of the loss of primary power for these elevators is that passengers are stranded inside the elevator cab until the resumption of the building's primary power, repair of the elevator system, or rescue by emergency personnel. In any case, it is unacceptable to strand people in elevators for any reason. It goes counter to the intent of IBC Chapter 10 to provide an unrestricted means of egress by stranding people in elevators.
The IBC is quite diligent about not allowing obstructions in a means of egress and even prescribing door controls that will allow unrestricted exit access and even requires redundant features if one feature fails to operate properly. The IFC also is quite diligent about maintaining means of egress components. The code, however, does not address getting stuck in elevators.
Getting stuck in elevators is quite a common issue and does have serious potential life safety risks. There are many documented and undocumented stories of people getting stuck in elevators when power failures occur or elevator operation malfunctions. The highest risk of elevator operation failure is due to mechanical malfunctions even though elevators are routinely inspected and certified as being maintained properly. The risk of being trapped in an elevator of due to loss of power, either from the building's primary power source or power to an individual elevator, appears to be very low. Because there is no code requirement to provide standby power to all elevators, this feature is provided only as an owner's option. Currently, there is no reliable source of information available to document the number of incidents where people have been stuck in elevators due to primary power failures or maintenance issues. However, based on media coverage and articles of such incidents, there is an apparent plethora of cases where people are stranded in elevators for various reasons.
The usage of elevators for fire fighters and emergency personnel in order to save time in an emergency situation has been endorsed by the IFC in Sections 607.1 and 1103.3.
These sections are shown below:
607.1 Emergency operation.
Existing elevators with a travel distance of 25 feet (7620 mm) or more shall comply with the requirements in Chapter 11. New elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with ASME A17.1.
1103.3 Elevator operation.
Existing elevators with a travel distance of 25 feet (7620 mm) or more above or below the main floor or other level of a building and intended to serve the needs of emergency personnel for firefighting or rescue purposes shall be provided with emergency operation in accordance with ASME A17.3. Even though the IFC has required new elevators and existing elevators, under certain provisions, to be provided with Phase I emergency recall operation and Phase II emergency in-car operation features, the IFC does not require standby power for these elevators. The potential of power failure for these elevators under emergency operating conditions while fire fighters and emergency personnel are in the elevators may be an issue which needs to be addressed.
This code change proposal will at least require sufficient standby power to get people to a floor level and open the elevator door so that people can access an exit. It does not require full elevator operation; it simply allows people to not get stuck in an elevator due to primary power loss. To require standby power to allow this function for all elevators does not present an undue burden to the owners and operators. There certainly is an initial cost impact to provide this

feature, how ever, it is insignificant w hen compared to dealing w ith potential litigation or physical harm caused by getting stuck in an elevator.

Bibliography: http://w w w .theshorthorn.com/new s/campus/about-reports-made-of-people-trapped-in-elevators/article_194a978e-128f-11e2-913f-001a4bcf6878.html
https://w w w .psychologytoday.com/blog/fighting-fear/201205/stuck-in-elevator

Cost Impact: Will increase the cost of construction
Cost Impact: Will increase the cost of construction
There are basically tw o types of elevators: hydraulic; and traction elevators. Each type of elevator has significantly different design features w hich could address this code change proposal. I've listed only a few possible design solutions; how ever, other options may exist. Industry can offer alternate design solutions w hich may be proprietary and still meet the intent of this code change proposal. One very real possibility is that an auxiliary pow er generator can be provided to supply the standby pow er for these elevators w ithout significant costs. Most buildings, regardless of size, w hich have elevators installed w ill already be providing an auxiliary pow er generator to address other issues such as egress lighting, supplemental pow er supply for equipment and fixed furnishings, door controls, HVAC backup pow er, fire alarm and detection, automatic sprinkler systems, etc.; and to add an additional load to this generator for the elevator standby pow er w ould be negligible in cost. This cost w ould not be possible to determine as it depends on the building requirements aside from the elevator loads.
HYRDAULIC ELEVATORS: Battery low ering is already an option for hydraulic elevators w hich can be added for up to approximately $5,000 per elevator. With this feature the elevators could be low ered to a floor level and exiting be obtained through the opened elevator doors.
TRACTION ELEVATORS: Traction elevators, as opposed to hydraulic elevators, depend on a counterw eighted mechanism operated w ith an electric motor drive. Traction elevators are not limited in lift height and more costly than hydraulic elevators in initial cost. As such, the standby pow er requirements are much greater than hydraulic elevators. There are currently tw o options for providing standby pow er: either by an auxiliary generator; or an "Emergency Rescue Unit" (ERU) type system. See comment above regarding auxiliary pow er generators for other building requirements. How ever, if a stand-alone pow er generator is used for the elevator automatic evacuation function, a single generator can cost at a minimum of $5,000 to $10,000. Some elevator manufacturers can provide the ERU w hich w ill provide enough standby pow er to allow the elevator to stop at the nearest floor and open the doors. The estimated cost for the ERU is in the $10,000 to $20,000 range per elevator. There seems to be a current industry limitation on these ERU's for the elevator motors not exceeding 50 horse pow er and not allow ing DC motors. How ever, in those cases, an auxiliary pow er generator may need to be installed.

G38-16 : [F] 3003.1-ROMNEY12636

G39-16

TABLE 3306.1

Proponent : Brian Johnson, representing self

THIS CODE CHANGE WILL BE HEARD BY THE IBC STRUCTURAL CODE COMMITTEE. SEE THE TENTATIVE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

TABLE 3306.1 (IEBC TABLE 1501.6)
PROTECTION OF PEDESTRIANS

HEIGHT OF CONSTRUCTION	DISTANCE FROM CONSTRUCTION TO SIDEWALK, WALKWAY, OR LOT LINE	TYPE OF PROTECTION REQUIRED
8 feet or less	Less than 5 feet	Construction railings
	5 feet or more	None
More than 8 feet	Less than 5 feet	Barrier and covered walkway
	5 feet or more, but not more than one-fourth the height of construction	Barrier and covered walkway
	5 feet or more, but between one-fourth and one-half the height of construction	Barrier
	5 feet or more, but exceeding one-half the height of construction	None

Reason: Code currently lists "lot line" in Table 3306.1 (IEBC Table 1501.6), in this circumstance, there is no provision for enforcement for sidewalks and pedestrian protection inside the lot (OSHA would protect workers in this area, but not the public). many larger sites have walkways and sidewalks inside the lot line or parallel to parking areas that are not at the edge of a lot line. Proposed change creates a safer pedestrian environment, as currently the only pedestrians protected are those who are walking on a sidewalk that is adjacent to the lot line. The intend of the code is to protect the public, but this would include occupants of structures, who are currently not protected during work unless the exit is onto a walkway or sidewalk that is adjacent to or across the lot line.

Cost Impact: Will increase the cost of construction
The cost increases as they must now protect areas on the site itself ersus those that are simply associated with the lot line(s).

G39-16 : TABLE 3306.1-JOHNSON6042

G40-16

IBC: 3306.2.

Proponent : Stephen DiGiovanni, Clark County Building Department, representing Southern Nevada Chapter of ICC (sdigiovanni@clarkcountynv.gov)

THIS CODE CHANGE WIILL BE HEARD BY THE IBC STRUCTURAL COMMITTEE. SEE THE HEARING ORDER FOR THIS COMMITTEE.

2015 International Building Code

Revise as follows:

3306.2 Walkways. A walkway shall be provided for pedestrian travel in front of every construction and demolition site unless the applicable governing authority authorizes the sidewalk to be fenced or closed. Walkways shall be of sufficient width to accommodate the pedestrian traffic, but in no case shall they be less than 4 feet (1219 mm) in width. Walkways shall be provided with a durable walking surface. Walkways shall be *accessible* in accordance with Chapter 11 and shall be designed to support all imposed loads and in no case shall the design live load be less than 150 pounds per square foot (psf) (7.2 kN/m^2). Walkways that lead to a building entrance of an occupied structure where the general public is at risk due to falling construction debris shall be protected from such debris.

Reason: The code provisions are based upon an assumption where the building or structure is completely contained within the construction site with no access by the general public. There are some perceptions that this code provision only applies to "the public right of way". Structures which are under renovation and still open to the public often have private property walkways leading to the entrances of the building and are not subject to the pedestrian protection provisions in the published 2015 IBC. The same hazards which require protection of pedestrians at the public sidewalk may be present on the private property and should be subject to the same protection afforded to those persons on a public sidewalk.

Cost Impact: Will increase the cost of construction
This proposal adds a requirement for overhead protection of construction debris to protect pedestrians on private property, which may lead to increased construction costs.

G40-16 : 3306.2-DIGIOVANNI3857