FS117-18

IBC: 1404.3, , 1404.3(1) (New), 1404.3(2) (New), TABLE 1404.3.2, 1404.3.2, 1404.3.3, 1404.3.4

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2018 International Building Code

Delete without substitution:

~~**1404.3 Vapor retarders.** Vapor retarders as described in Section 1404.3.3 shall be provided in accordance with Sections 1404.3.1 and 1404.3.2, or an approved design using accepted engineering practice for hygrothermal analysis.~~

Revise as follows:

1404.3 Vapor retarders. Vapor retarder materials shall be classified in accordance with Table 1404.3(1). A vapor retarder shall be provided on the interior side of frame walls in accordance with Table 1404.3(2) and Table 1404.3(3), or an approved design using accepted engineering practice for hygrothermal analysis. The appropriate climate zone shall be selected in accordance with Chapter 3 of the International Energy Conservation Code.

~~**1404.3.1 Class I and II vapor retarders.** Class I and II vapor retarders shall not be provided on the interior side of frame walls in Zones 1 and 2. Class I vapor retarders shall not be provided on the interior side of frame walls in Zones 3 and 4 other than Marine 4. Class I or II vapor retarders shall be provided on the interior side of frame walls in Zones 5, 6, 7, 8 and Marine 4. The appropriate zone shall be selected in accordance with Chapter 3 [CE] of the International Energy Conservation Code Commercial Provisions~~.

Exceptions:

1. Basement walls.
2. Below-grade portion of any wall.
3. Construction where ~~moisture~~ accumulation, condensation, or ~~its~~ freezing of moisture will not damage the materials.
4. ~~Conditions where Class III vapor retarders are required in Section 1404.3.2.~~

Add new text as follows:

1404.3(1)
VAPOR RETARDER MATERIALS AND CLASSES

VAPOR RETARDER CLASS	ACCEPTABLE MATERIALS
I	Sheet polyethylene, nonperforated aluminum foil, or other approved materials with a perm rating of less than or equal to 0.1
II	Kraft-faced fiberglass batts, paint, or other approved materials with a perm rating greater than 0.1 and less than or equal to 1.0
III	Latex paint, enamel paint, or other approved materials with a perm rating of greater than 1.0 and less than or equal to 10

TABLE 1404.3(2)
VAPOR RETARDER OPTIONS

CLIMATE ZONE	VAPOR RETARDER CLASS		
	I	II	III[a]
1, 2	Not permitted	Not Permitted	Permitted
3, 4 (except Marine 4)	Not permitted	Permitted	Permitted
Marine 4, 5, 6, 7, 8	Permitted	Permitted	See Table 1404.3(3)

a. Only Class III vapor retarders shall be used on the interior side of frame walls where foam plastic insulating sheathing with a perm rating of less than 1 is applied in accordance with Table 1404.3(3) on the exterior side of the frame wall.

Revise as follows:

TABLE ~~1404.3.2~~ 1404.3(3)
CLASS III VAPOR RETARDERS

ZONE	CLASS III VAPOR RETARDERS PERMITTED FOR:[a,b]
Marine 4	Vented cladding over wood structural panels Vented cladding over fiberboard Vented cladding over gypsum Continuous insulation with *R*-value ≥ R2.5 over 2 × 4 wallContinuous insulation with *R*-value ≥ R3.75 over 2 × 6 wall
5	Vented cladding over wood structural panels Vented cladding over fiberboard Vented cladding over gypsum Continuous insulation with *R*-value ≥ R5 over 2 × 4 wall Continuous insulation with *R*-value ≥ R7.5 over 2 × 6 wall
6	Vented cladding over fiberboard Vented cladding over gypsum Continuous insulation with *R*-value ≥ R7.5 over 2 × 4 wall Continuous insulation with *R*-value ≥ R11.25 over 2 × 6 wall
7 and 8	Continuous insulation with *R*-value ≥ R10 over 2 × 4 wall Continuous insulation with *R*-value ≥ R15 over 2 × 6 wall

~~For SI: 1 pound per cubic foot = 16 kg/m^3.~~

a. Spray foam with a maximum permanence of 1.5 perms at the installed thickness applied to the interior cavity side of wood structural panels, fiberboard, insulating sheathing or gypsum is deemed to meet the continuous insulation requirement where the spray foam *R*-value meets or exceeds the specified insulating sheathing *R*-value.

b. Vented cladding shall include vinyl lap siding, polypropylene, or horizontal aluminum siding, brick veneer with clear airspace as specified in this code, and other approved vented claddings.

Delete without substitution:

~~**1404.3.2 Class III vapor retarders.** Class III vapor retarders shall be permitted where any one of the conditions in Table 1404.3.2 is met. Only Class III vapor retarders shall be used on the interior side of frame walls where foam plastic insulating sheathing with a perm rating of less than 1 is applied in accordance with Table 1404.3.2 on the exterior side of the frame wall.~~

~~**1404.3.3 Material vapor retarder class.** The *vapor retarder class* shall be based on the manufacturer's certified testing or a tested assembly.~~
~~The following shall be deemed to meet the class specified:~~

~~Class I: Sheet polyethylene, nonperforated aluminum foil with a perm rating of less than or equal to 0.1.~~
~~Class II: Kraft-faced fiberglass batts or paint with a perm rating greater than 0.1 and less than or equal to 1.0.~~
~~Class III:Latex or enamel paint with a perm rating of greater than 1.0 and less than or equal to 10.0~~.

~~**1404.3.4 Minimum clear airspaces and vented openings for vented cladding.** For the purposes of this section, vented cladding shall include the following minimum clear airspaces:~~

1. ~~Vinyl, polypropylene or horizontal aluminum siding applied over a weather-resistive barrier as specified in this chapter.~~
2. ~~Brick veneer with a clear airspace as specified in this code.~~
3. ~~Other *approved* vented claddings.~~

Reason:
This proposal is a non-technical change to reformat the vapor retarder provisions to make them more transparent and user-friendly. The proposal uses a "look-up" table format whereby the logic for selection of appropriate vapor retarders is more visually obvious and appropriate options are more readily selected for various climate conditions and vapor retarder classes. This proposal is intended to help bring focus on consideration of formatting and editorial improvements while technical changes are addressed in separate proposals.

Cost Impact
The code change proposal will not increase or decrease the cost of construction .

The proposal is a nontechnical format change and therefore has no cost impacts except those that might be associated with improving compliance and enforcement.

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