IWUIC

2016 GROUP B COMMITTEE ACTION HEARINGS

APRIL 17, 2016 – APRIL 27, 2016
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2016 GROUP B – PROPOSED CHANGES TO THE INTERNATIONAL FIRE CODE

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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.

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 F code change proposals may not be included on this list, as they are being heard by another committee.

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WUIC1-16

IWUIC: 504.5.

Proponent : William Hall, Portland Cement Association (jhall@cement.org)

2015 International Wildland-Urban Interface Code

504.5 Exterior walls. Exterior walls of buildings or structures shall be constructed with one of the following methods:

1. Materials *approved*for not less than 1-hour fire-resistance-rated construction on the exterior side.
2. *Approved noncombustible*materials.
3. ~~Heavy timber or log wall construction.~~
3. Fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the *International Building Code*.
4. ~~Ignition-resistant materials on the exterior side.~~
4. Ignition-resistant materials on the exterior side complying with Section 503.2.

Such material shall extend from the top of the foundation to the underside of the roof sheathing.

Reason: While the char rate of Heavy Timber and Log Homes would provide more time for the occupants to escape, the fact still remains that dry wood will continue to burn until nothing is left unless suppressed and in a wild fire event, the area is typically evacuated prior to the fire reaching the area. With the on slough of a wild fire, it is doubtful that emergency fire services will be responding in a timely matter if at all. This code and especially this section dealing with Ignition Resistance I or IR-I aims to stop the conflagration and destruction of the home or structure by requiring ignition resistant material on the exterior, except in the case of Heavy Timber and Log Homes. These types of structures offer no ignition resistance and actually help to give the embers a place to land, build-up and ignite the structure. Once the structure is on fire log and timber elements will continue to burn unless fire services are able to respond. If the intent of this section is to stop the ignition of structures long enough for the wild fire to pass, this permissible construction type misses the mark. This proposal would remove the language allowing heavy timber and log homes in Ignition Resistance zone 1.

Cost Impact: Will not increase the cost of construction
This proposal will not increase the cost of construction. Based on construction cost data published by ICC, there are other less costly alternatives.

WUIC1-16 : 504.5-HALL12291

WUIC2-16

IWUIC: 504.5.

Proponent : William Hall, Portland Cement Association, representing Portland Cement Association (jhall@cement.org)

2015 International Wildland-Urban Interface Code

Revise as follows:

504.5 Exterior walls. Exterior walls of buildings or structures shall be constructed with one of the following methods:

1. Materials *approved*for not less than 1-hour fire-resistance-rated construction on the exterior side.
2. *Approved noncombustible*materials.
3. ~~Heavy timber or log wall construction.~~
3. Fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the *International Building Code*.
4. ~~Ignition-resistant materials on the exterior side.~~
4. Ignition-resistant materials on the exterior side complying with section 504.2.

Such material shall extend from the top of the foundation to the underside of the roof sheathing.

Reason: While the char rate of Heavy Timber and Log Homes would provide more time for the occupants to escape, the fact still remains that dry wood will continue to burn until nothing is left unless suppressed and in a wild fire event, the area is typically evacuated prior to the fire reaching the area. With the on slough of a wild fire, it is doubtful that emergency fire services will be responding in a timely matter if at all. This code and especially this section dealing with Class 1 Ignition Resistance or IR-I aims to stop the conflagration and destruction of the home or structure by requiring ignition resistant material on the exterior, except in the case of Heavy Timber and Log Homes. These types of structures offer no ignition resistance and actually help to give the embers a place to land, build-up and ignite the structure. Once the structure is on fire, unless fire services are able to respond, what chance does it have of burning itself out before complete destruction? If the intent of this section is to stop the ignition of structures long enough for the wild fire to pass, this permissible construction type misses the mark. This proposal would remove the language allowing heavy timber and log homes in Class 1 Ignition Resistance areas.
This proposal also refers the user back to section 504.2 for reference when selecting ignition resistant materials for the exterior.

Cost Impact: Will not increase the cost of construction
This proposal does not increase the cost of construction. Based on ICC published cost data, heavy timber and log home construction are more costly that other alternatives.

WUIC2-16 : 504.5-HALL12677

WUIC3-16

IWUIC: 504.5.

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

2015 International Wildland-Urban Interface Code

Add new text as follows:

504.5 Exterior walls. Exterior walls of buildings or structures shall be constructed with one of the following methods:

1. Materials *approved* for not less than 1-hour fire-resistance-rated construction on the exterior side.
2. *Approved noncombustible* materials.
3. Heavy timber or log wall construction.
4. Fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the *International Building Code*.
5. Ignition-resistant materials on the exterior side.
6. Wall assemblies tested in accordance with ASTM E2707 for 10-minutes direct flame contact exposure provided there is absence of flame penetration through the wall and absence of glowing combustion on the interior surface of the assembly at the end of 70 minutes; 10 minutes of direct flame contact followed by 60 minutes of observation time.

Such material shall extend from the top of the foundation to the underside of the roof sheathing.

Architectural trim, embellishments, roof or wall top cornice projections, rafter ends, fascias, gutters, and eave construction shall not be considered part of the exterior wall and shall comply with other applicable provisions of this code.

Reference standards type: This reference standard is new to the ICC Code Books
Add new standard(s) as follows:
ASTM E 2707-15 Standard Test Method for Determining Fire Penetration of Exterior Wall Assemblies Using a Direct Flame Impingement Exposure

Reason: Performance criteria for exterior walls will make sure no material that performs well will be excluded, and conversely that no material which does not perform will be included. The ASTM standard proposed was developed as a consequence of wild fire experience in the state of California, and mirror the standards of the California State Fire Marshal's office. The propsoed acceptance criteria are consistent with that used for regulation in the State of California. This change would make clause 504.5 functionally equivalent to Clause 707A.3(5), Chapter 7A-Materials and Construction Methods for Exterior Wildfire Exposure of the California Building Code 2013.

Cost Impact: Will increase the cost of construction
Adds performance ASTM stds to existing code consistent with CA IW codes.

Analysis: A review of the standard(s) proposed for inclusion in the code, ASTM E 2707-15 Standard Test Method for Determining Fire Penetration of Exterior Wall Assemblies Using a Direct Flame Impingement Exposure with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 1, 2016.

WUIC3-16 : 504.5-TYREE12721

WUIC4-16

IWUIC: 504.7.

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

2015 International Wildland-Urban Interface Code

Revise as follows:

504.7 Appendages and projections. Walking surface elements of~~*Unenclosed*~~ *unenclosed accessory structures*attached to buildings with habitable spaces and projections, such as decks, shall be ~~not less than 1-hour fire-resistance-rated construction, heavy timber construction or~~ constructed of one of the following:

1. A minimum of 1-hour fire resistance rated construction
2. Heavy timber construction
3. Approved~~*Approved noncombustible*~~ *non-combustible*materials.
4. Fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2 of the *International Building Code*.
5. Ignition-resistant building materials in accordance with Section 503.2.
6. Material that has been tested in accordance with ASTM E2632 and ASTM E2726 and meet the following acceptance criteria:
   6.1 ASTM E2632: Absence of sustained flaming or glowing combustion at the end of a 40-minute observation period: and effective net peak heat release rate of not more than 25kW/ft^2 and absence of melting and dripping particles that are still burning when reaching the floor.
   6.2. ASTM E2726: Absence of sustained flaming or glowing combustion at the end of a 40-minute observation period: and absence of melting and dripping particles that are still burning when reaching the floor.
7. Material that has been tested in accordance with ASTM E2632 and ASTM E84 and meet the following acceptance criteria:
   7.1 ASTM E2632: Absence of sustained flaming or glowing combustion at the end of a 40-minute observation period: and effective net peak heat release rate of not more than 25kW/ft^2 and absence of melting and dripping particles that are still burning when reaching the floor.
   7.2. ASTM E84: Material shall exhibit a flame spread index not exceeding 75 (Class B).

Reference standards type: This reference standard is new to the ICC Code Books
Add new standard(s) as follows:
ASTM E2632/E2632M-13 Standard Test Method for Evaluating the Under-Deck Fire Test Response of Deck Materials

Reason: This proposal regulates the walking surfaces only of unenclosed appendages, since it is the element that would permit the spread of fire, rather than the underlying structure of decks and open porches which are larger in dimension and spaced apart. Investigations from structures and appendages exposed to wildland urban interface fires have not identified framing material for appendages as posing an additional risk. Accordingly, the State of California regulates the walking surface of appendages only.
Proposed alternative 6 would permit decking material that meets the stated acceptance criteria when tested in accordance with the two ASTM deck fire test standards, for under-deck exposure and over-deck brand exposure. Alternative 6 is functionally equivalent to Clause 709A.3(1), Chapter 7A-Materials and Construction Methods for Exterior Wildfire Exposure of the California Building Code 2013. The ASTM under deck fire test standard, E 2632, is already a referenced standard. The ASTM over-deck brand test method, E 2726, proposed to be added to the reference standard list.

Proposed alternative 7 would permit decking material that meets the stated acceptance criteria when tested in accordance with ASTM under-deck fire test standard, and Class B flame spread. Alternative 7 is functionally equivalent to Clause 709A.3(4), Chapter 7A-Materials and Construction Methods for Exterior Wildfire Exposure of the California Building Code 2013. The ASTM under deck fire test standard, E 2632, and ASTM flame spread test standard, E84 are already referenced standards.

ASTM test standards do not set acceptance criteria while the technically equivalent California State Fire Marshal test standards do. The proposed acceptance criteria are those contained in SFM Standards 12-7A-4 (under deck) and 12-7A-5 (over deck).

Cost Impact: Will not increase the cost of construction
Proposal references ASTM Standards which give an alternative procedure which when used, will not increase the cost over existing code requirements.

Analysis: A review of the standard(s) proposed for inclusion in the code, ASTM E2632/E2632M-13 Standard Test Method for Evaluating the Under-Deck Fire Test Response of Deck Materials with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 1, 2016.

WUIC4-16 : 504.7-TYREE13414

WUIC5-16

IWUIC: 504.7, 505.7.

Proponent : John Woestman, Kellen, representing Composite Lumber Manufacturers Association (jwoestman@kellencompany.com)

2015 International Wildland-Urban Interface Code

Add new text as follows:

504.7 Appendages and projections. *Unenclosed accessory structures* attached to buildings with habitable spaces and projections, such as decks, shall be not less than 1-hour fire-resistance-rated construction, heavy timber construction or constructed of one of the following:

1. *Approved noncombustible* materials.
2. Fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2 of the *International Building Code*.
3. Ignition-resistant building materials in accordance with Section 503.2.
4. Plastic composite deck boards and stair treads which comply with ASTM D7032 and comply with at least one of the methods below:
    - 4.1. Weathered in accordance with ASTM D7032 and tested in accordance with ASTM E1354 with a radiant heat flux of 35 kW/m^2 and an electric spark igniter. The weathering shall not decrease the time to ignition by more than 20%, and shall not increase the effective heat of combustion by more than 20%, and shall not increase the peak heat release rate by more than 25%. After demonstrating satisfactory effects of weathering, tested in accordance with ASTM E2632 / E2632M with a peak heat release rate no greater than 25 kW/ft^2 (269 kW/m2).
    - 4.2. After weathering as prescribed by ASTM D7032, tested in accordance with ASTM E2632 / E2632M with a peak heat release rate no greater than 25 kW/ft^2 (269 kW/m^2)..

505.7 Appendages and projections. *Unenclosed accessory structures* attached to buildings with habitable spaces and projections, such as decks, shall be not less than 1-hour fire-resistance-rated construction, heavy timber construction or constructed of one of the following:

1. *Approved noncombustible* materials.
2. Fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2 of the *International Building Code*.
3. Ignition-resistant building materials in accordance with Section 503.2.
4. Plastic composite deck boards and stair treads which comply with ASTM D7032 and comply with at least one of the methods below:
    - 4.1. Weathered in accordance with ASTM D7032 and tested in accordance with ASTM E1354 with a radiant heat flux of 35 kW/m^2 and an electric spark igniter. The weathering shall not decrease the time to ignition by more than 20%, and shall not increase the effective heat of combustion by more than 20%, and shall not increase the peak heat release rate by more than 25%. After demonstrating satisfactory effects of weathering, tested in accordance with ASTM E2632 / E2632M with a peak heat release rate no greater than 25 kW/ft^2 (269 kW/m2).
    - 4.2. After weathering as prescribed by ASTM D7032, tested in accordance with ASTM E2632 / E2632M with a peak heat release rate no greater than 25 kW/ft^2 (269 kW/m^2).

Reason:
Reason

This proposal seeks to introduce practical and realistic performance requirements for plastic composites used for construction of exterior decks (appendages and projections) in wildland-urban interface areas. This proposal introduces ASTM E2632, commonly known as the under-deck fire test, to the IWUIC. This proposal is limited to plastic composite deck boards and stair treads and is focused on products which have already demonstrated compliance to ASTM D7032, as required by the IBC and the IRC.

This proposal explicitly requires the fire testing to evaluate the effects of weathering. Test option 4.1 requires comparing the before-weathering fire performance with the after-weathering fire performance of the deck material using the cone calorimeter (ASTM E1354 test). If the before and after small-scale cone calorimeter fire test demonstrates the fire performance of the decking material is not adversely affected by weathering, then the larger scale ASTM E2632 test evaluates the fire performance of the deck material. Test option 4.2 allows the manufacture the more expensive option of weathering adequate deck material to conduct the ASTM E2632 test on weathered deck material.

The requirements of test options 4.1 and 4.2 rely on a fire test specifically designed to test and evaluate the performance of decking when constructed as a deck assembly in simulated WUI fire exposure. While this different than the ASTM E84 test of Section 503.2 for ignition-resistant building materials, including the requirement in the proposal for these products to first comply with ASTM D7032 also means these products must demonstrate a ASTM E84 flame spread index of 200 or less (as required in ASTM D7032). The test configuration and test requirements of ASTM E2632 were developed specifically for deck materials in WUI applications.

The ASTM E2632 test procedure requires constructing a small deck structure (joists and deck boards) consistent with the manufacturer's installation instructions and then this deck structure is placed over a burner. The flames and heat from the ignited burner are is designed to simulate combustibles burning under a deck which frequently occurs during a WUI fire. The test deck structure is subject to the intense flame and heat from the burner for 3 minutes, and the fire performance of the decking is evaluated for the next 40 minutes to determine the response of the decking.

Below are pictures of the ASTM E2632 / E2632M test. Notice the configuration of this small test deck and the wall to which the deck is adjacent, simulating an actual installation of a deck adjacent to a structure.

Photo 1. ASTM E2632 under-deck test in progress.

The test deck assembly is subjected to the flame and heat of the burner for 3 minutes (80 kW), simulating a WUIC fire causing combustibles beneath a deck to burn.

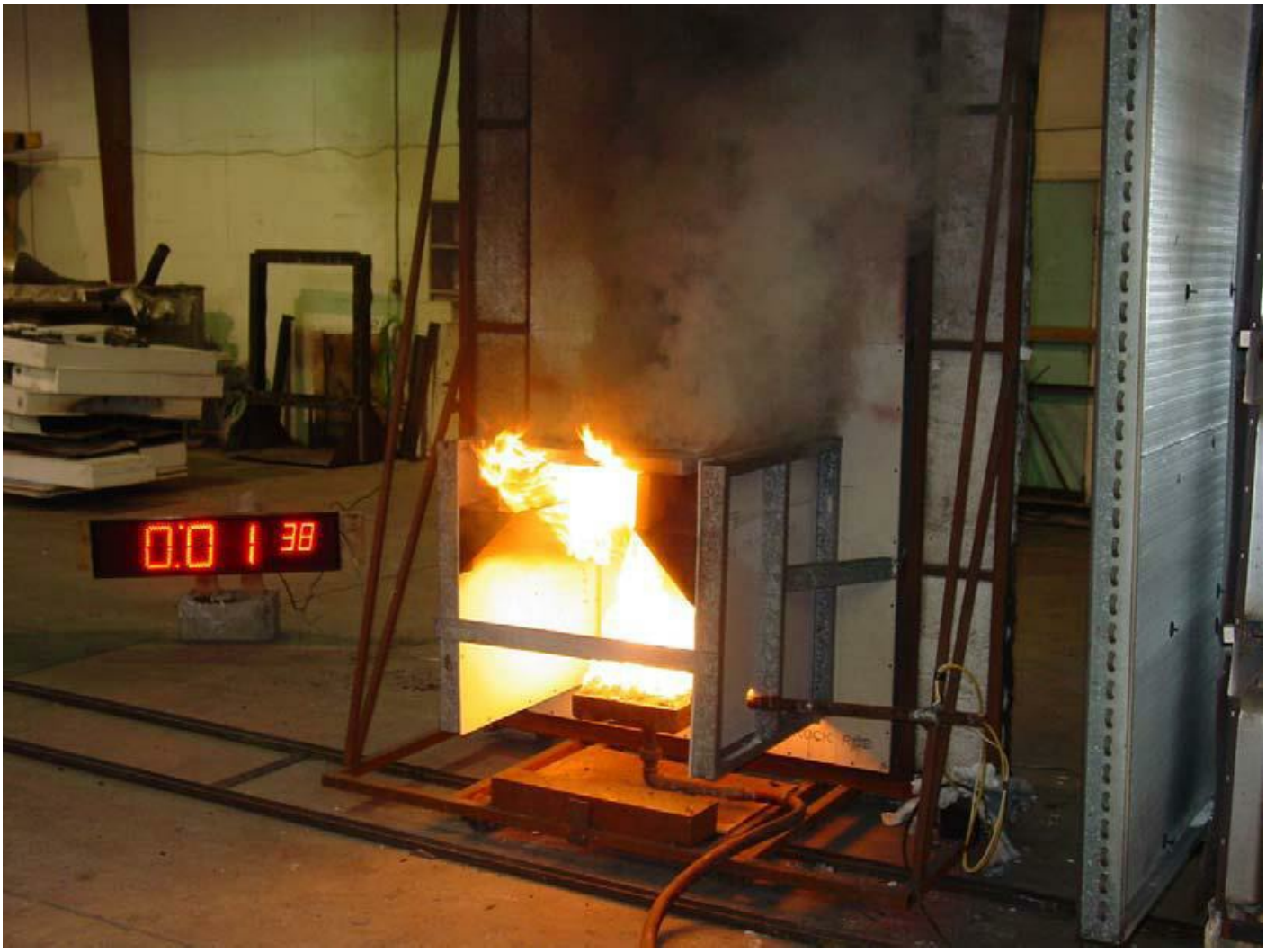
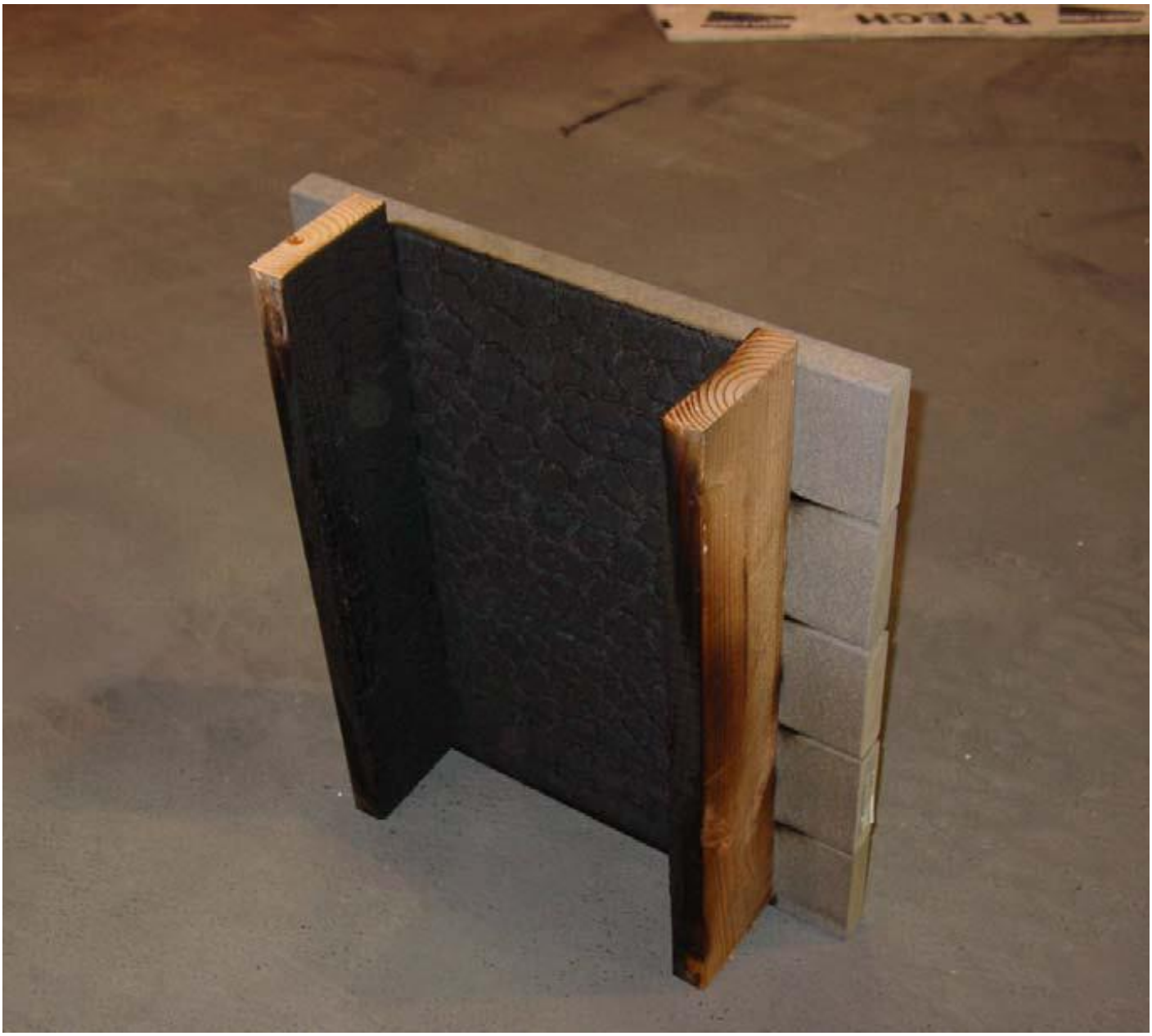
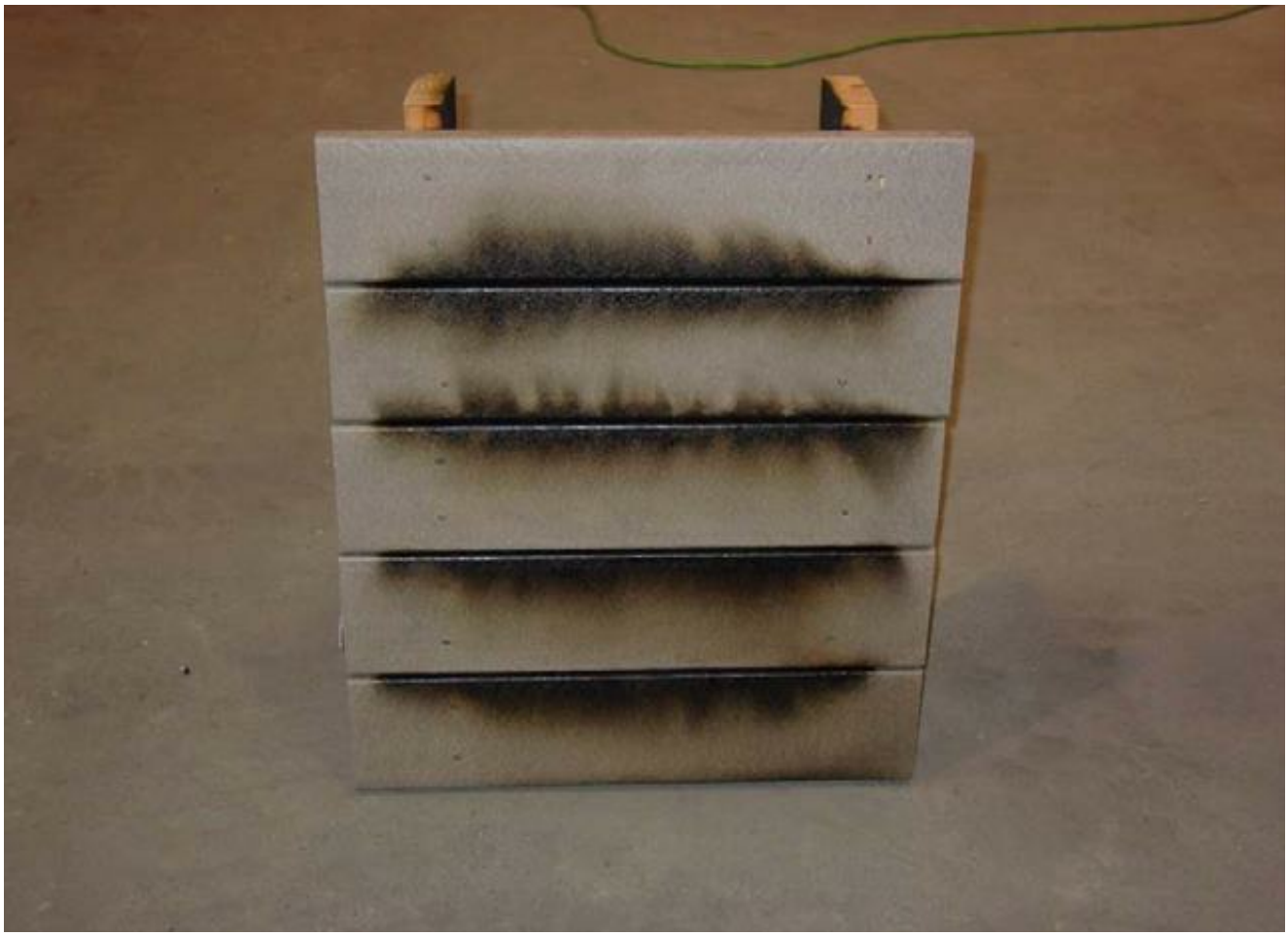


Photo courtesy of Western Fire Center, Inc.

Photos 2 & 3. Result of flame and heat from burner of ASTM E2632 fire test.

After the 3-minutes of flame and heat from the burner, the test deck assembly is observed for 40 minutes and fire performance data is collected during this time period. This test deck assembly was stood on end after the fire test to illustrate the effects of a simulated WUI fire under the deck.


R-TECH



Photos courtesy Western Fire Center, Inc.

Photo 4. Test deck assembly ASTM E2632 fire test failure.

During the ASTM E2632 fire test 40-minute observation period, this test deck assembly had a peak heat release rate in excess of 25 kW/ft^2. This decking material w ould not meet the criteria for use in a WUI area as it exceeded the proposed maximum peak heat release rate.

Photo courtesy Fiberon,.

Photos 5 & 6. Test deck assembly ASTM E2632 fire test successes.

The fire of these tw o different test deck assemblies subsided once the burner w as turned off at 3 minutes into the test. These decking materials did not exceed the maximum peak heat release rate of 25 kW/ft^2 of this proposal.

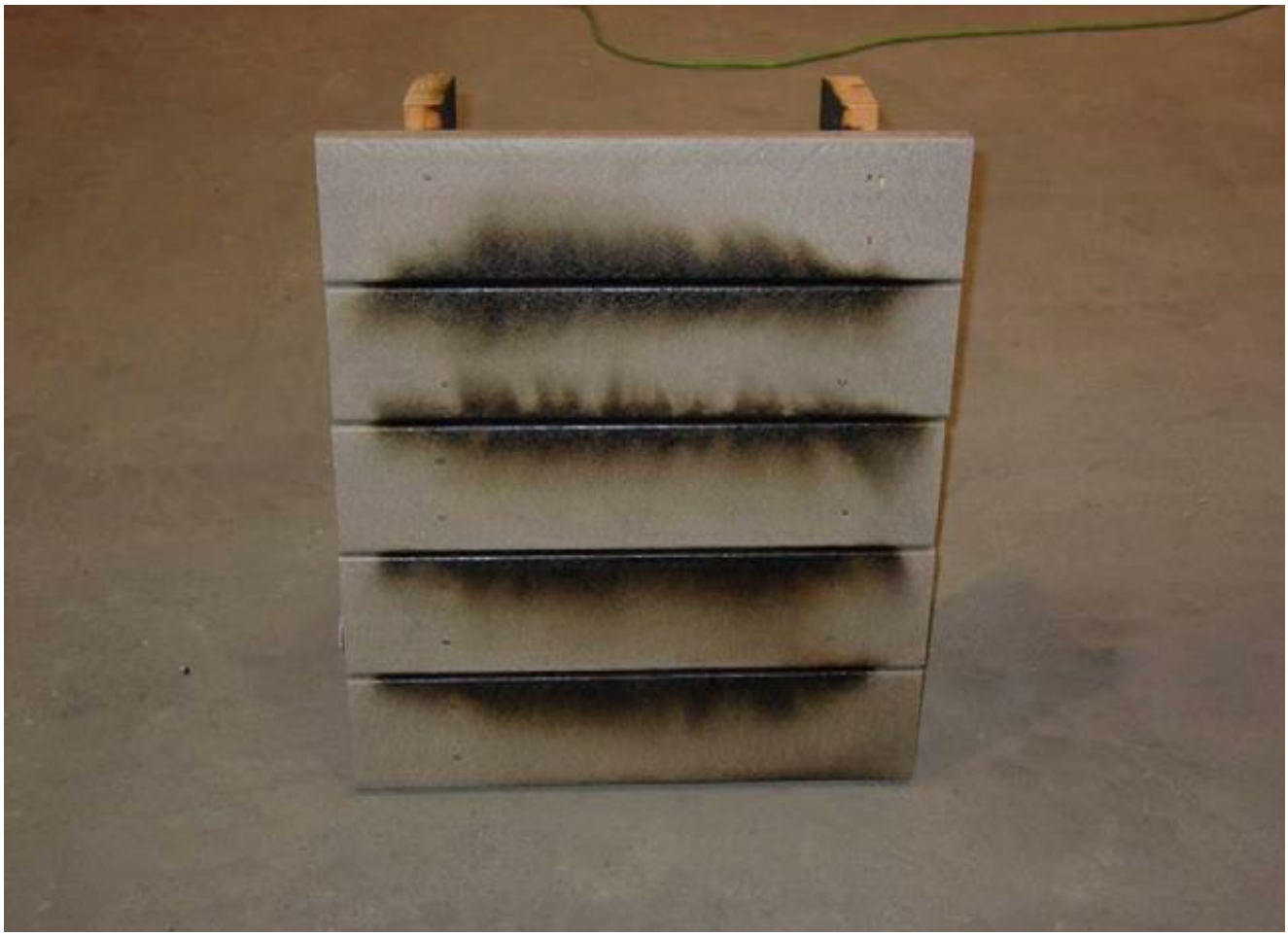


Photo courtesy Fiberon,.

Photo courtesy Western Fire Center

Cost Impact: Will not increase the cost of construction
Will not increase the cost of construction. This proposal offers an alternative to the current IWUIC requirements.

WUIC5-16 : 504.7-WOESTMAN13423

WUIC6-16

IWUIC: 505.5.

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

2015 International Wildland-Urban Interface Code

Add new text as follows:

505.5 Exterior walls. Exterior walls of buildings or structures shall be constructed with one of the following methods:

1. Materials *approved*for a minimum of 1-hour fire-resistance-rated construction on the exterior side.
2. *Approved noncombustible*materials.
3. Heavy timber or log wall construction.
4. Fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the *International Building Code*.
5. Ignition-resistant materials on the exterior side.
6. Wall assemblies tested in accordance with ASTM E2707 for 10-minutes direct flame contact exposure provided there is absence of flame penetration through the wall and absence of glowing combustion on the interior surface of the assembly at the end of 70 minutes; 10 minutes of direct flame contact followed by 60 minutes of observation time.

Such material shall extend from the top of the foundation to the underside of the roof sheathing.
Architectural trim, embellishments, roof or wall top cornice projections, rafter ends, fascias, gutters, and eave construction shall not be considered part of the exterior wall and shall comply with other applicable provisions of this code.

Reference standards type: This reference standard is new to the ICC Code Books
Add new standard(s) as follows:
ASTM E2707-14 Standard Test Method for Determining Fire Penetration of Exterior Wall Assemblies Using a Direct Flame Impingement Exposure

Reason: Performance criteria for exterior walls will make sure no material that performs well will be excluded, and conversely that no material which does not perform will be included. The ASTM standard proposed was developed as a consequence of wild fire experience in the state of California, and mirror the standards of the California State Fire Marshal's office. The propsoed acceptance criteria are consistent with that used for regulation in the State of California. This change would make clause 505.5 functionally equivalent to Clause 707A.3(5), Chapter 7A-Materials and Construction Methods for Exterior Wildfire Exposure of the California Building Code 2013.

Cost Impact: Will not increase the cost of construction
Adds performance stds to existing code consistent with CA IW codes.

Analysis: A review of the standard(s) proposed for inclusion in the code, ASTM E2707-14 Standard Test Method for Determining Fire Penetration of Exterior Wall Assemblies Using a Direct Flame Impingement Exposure with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 1, 2016.

WUIC6-16 : 505.5-TYREE11365

WUIC7-16

IWUIC: 505.7.

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

2015 International Wildland-Urban Interface Code

Add new text as follows:

505.7 Appendages and projections. ~~*Unenclosed*~~ *Walking surface elements of unenclosed accessory structures*attached to buildings with habitable spaces and projections, such as decks, shall be ~~not less than 1-hour fire-resistance-rated construction, heavy timber construction or~~ constructed of one of the following:

1. A minimum of 1-hour fire resistance rated construction
2. Heavy timber construction.
3. ~~*Approved noncombustible*~~ Approved non-combustible materials.
4. Fire- retardant- treated wood identified for exterior use and meeting the requirements of Section 2303.2 of the ~~*International Building Code*~~International Building Code.
5. Ignition- resistant building materials in accordance with Section 503.2.
6. Material that has been tested in accordance with ASTM E2632 and ASTM E2726 and meet the following acceptance criteria:

   6.1 ASTM E2632: Absence of sustained flaming or glowing combustion at the end of a 40-minute observation period: and effective net peak heat release rate of not more than 25kW/ft2 and absence of melting and dripping particles that are still burning when reaching the floor.

   6.2. ASTM E2726: Absence of sustained flaming or glowing combustion at the end of a 40-minute observation period: and absence of melting and dripping particles that are still burning when reaching the floor.
7. Material that has been tested in accordance with ASTM E2632 and ASTM E84 and meet the following acceptance criteria:

   7.1 ASTM E2632: Absence of sustained flaming or glowing combustion at the end of a 40-minute observation period: and effective net peak heat release rate of not more than 25kW/ft2 and absence of melting and dripping particles that are still burning when reaching the floor.

   7.2. ASTM E84: Material shall exhibit a flame spread index not exceeding 75 (Class B).

Reference standards type: This reference standard is new to the ICC Code Books
Add new standard(s) as follows:
ASTM E2726/E2726M - 12a Standard Test Method for Evaluating the Fire-Test-Response of Deck Structures to Burning Brands

Reason: This proposeal regulates the walking surfaces only of unenclosed appendages, since it is the element that would permit the spread of fire, rather than the underlying structure of decks and open porches which are larger in dimension and spaced apart. Investigations from structures and appendages exposed to wildland urban interface fires have not identified framing material for appendages as posing an additional risk. Accordingly, the State of California regulates the walking surface of appendages only.
Proposed alternative 6 would permit decking material that meets the stated acceptance criteria when tested in accordance with the two ASTM deck fire test standards, for under-deck exposure and over-deck brand exposure. Alternative 6 is functionally equivalent to Clause 709A.3(1), Chapter 7A-Materials and Construction Methods for Exterior Wildfire Exposure of the California Building Code 2013. The ASTM under deck fire test standard, E2632, is already a referenced standard. The ASTM over-deck brand test method, E2726, proposed to be added to the reference standard list.

Proposed alternative 7 would permit decking material that meets the stated acceptance criteria when tested in accordance with ASTM under-deck fire test standard, and Class B flame spread. Alternative 7 is functionally equivalent to Clause 709A.3(4), Chapter 7A-Materials and Construction Methods for Exterior Wildfire Exposure of the California Building Code 2013. The ASTM under deck fire test standard, E2632, and ASTM flame spread test standard, E84 are already referenced standards.

ASTM test standards do not set acceptance criteria while the technically equivalent California State Fire Marshal test standards do. The proposed acceptance criteria are those contained in SFM Standards 12-7A-4 (under deck) and 12-7A-5 (over deck).

Cost Impact: Will not increase the cost of construction
No increases will occur using alternates.

Analysis: A review of the standard(s) proposed for inclusion in the code,

- ASTM E2726/E2726M - 12a Standard Test Method for Evaluating the Fire-Test-Response of Deck Structures to Burning Brands

with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 1, 2016.

WUIC8-16

IWUIC: 506.3.

Proponent : Joseph Holland, Hoover Treated Wood Products (jholland@frtw.com)

2015 International Wildland-Urban Interface Code

Add new text as follows:

506.3 Underfloor enclosure. Buildings or structures shall have underfloor areas enclosed to the ground with exterior walls.

> **Exception:**Complete enclosure shall not be required where the underside of exposed floors and exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour fire-resistance-rated construction , fire-retardant-treated wood, or heavy timber construction. Fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2 of the *International Building Code.*

Reason: The change is proposed for consistency. Fire-retardant-treated w ood is permitted for Class 1 and Class 2 ignition-resistant construction in this application. The ignition-resisrant construction classes are determined by the severity of exposure of the building to w ild fire. Of the three classes, Class 3 is the least severe exposure. The use of fire-retardant-treated w ood provides another option to the user.

Cost Impact: Will not increase the cost of construction
The change only provides another option. Fire-retardant-treated w ood is cost competitive to the other choices currently allow ed.

WUIC8-16 : 506.3-HOLLAND11722

WUIC9-16

IWUIC: , I101 (New), I101.1 (New).

Proponent : Matthew Hunter, representing American Wood Council (mhunter@awc.org)

2015 International Wildland-Urban Interface Code

Add new text as follows:

APPENDIX I Wildland-Urban Interface (WUI) Building Materials Directory

SECTION I101 WUI Building Materials Directory

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

I101.1 General. The ASTM test standards required by this code for products and materials to be used on the exterior of buildings correspond to California test standards as shown in Table I101. Products which comply with the California code shall be deemed to comply with this code, as applicable.

TABLE I101.1
ASTM STANDARDS AND CALIFORNIA STANDARD EQUIVALENCE

California Test Standard		**Comparable ASTM Standard (Acceptance criteria are not included in ASTM standards)**
Test Standard	**Acceptance Criteria**	**Test Standard**
SFM 12-7A-1, Exterior Wall Siding and Sheathing.	Absence of evidence of glowing combustion on the interior surface of the assembly at the end of 70-minute test	**ASTM E2707** Standard Test Method for Determining Fire Penetration of Exterior Wall Assemblies Using a Direct Flame Impingement Exposure
SFM 12-7A-4, Decking Part A "Under Deck Flame Test" "	**Part A:** 1. Effective net peak heat release rate < 25 kW/ft2 2. Absence of sustained flaming or glowing combustion at end of the 40-minute observation period. 3. Absence of falling particles that are still burning when reaching the burner or floor.	**ASTM E2632** Standard Test Method for Evaluating the Under-Deck Fire Test Response of Deck Materials
SFM 12-7A-4, Decking **Part B** **"**Burning Brand Exposure"	**Part B:** 1. Absence of sustained flaming or glowing combustion at the conclusion of the 40-min observation period. 2. Absence of falling particles that are still burning when reaching the floor.	**ASTM E2726** Standard Test Method for Evaluating the Fire-Test-Response of Deck Structures to Burning Brands

Reference standards type: This reference standard is new to the ICC Code Books
Add new standard(s) as follows:
ASTM E 2707-15 Standard Test Method for Determining Fire Penetration of Exterior Wall Assemblies Using a Direct Flame Impingement Exposure
ASTM E2726/E2726M - 12a Standard Test Method for Evaluating the Fire-Test-Response of Deck Structures to Burning Brands
California WUI Building Materials Testing Standards:

SFM 12-7A-1 Exterior Wall Siding and Sheathing - 2001
SFM 12-7A-4 Decking - 2001

Reason: The California Wildland-Urban Interface code has three tests for products and materials which may be used in Wildland-Urban Interface areas. In this code, the corresponding ASTM standards have been referenced. The ASTM procedure is identical to that of the California State Fire Marshal (CSFM) tests. The acceptance criteria are virtually the same in the California code and this code. Thus products and materials already tested for acceptance in California should be deemed to comply with this code in so far as the test procedure and its corresponding acceptance criteria are identical.
Adoption of this Appendix will provide the code official with an instant reference library of materials and products which have proven

acceptable by virtue of their testing and listing for use in California. New products will be tested to these standards and will likely be certified to both the ASTM test and the CFSM test.

The main issue here is to provide the local code official with a reference library listing sufficient numbers of products and materials as to make enforcement of this code less arduous.

History for the need of this directory:

Following the October 1991 Oakland Hills Fire, the California Building Standards Commission formed a working group to assist the State Fire Marshal's Office (SFM) conduct fire research and develop regulatory measures to mitigate property damage from wildland urban interface fires. As a result, California Building Code, Chapter 7A-Wildland-Urban Interface Code was created. This code establishes several fire tests to evaluate fire performance of exterior building products.

Manufacturers that want to list exterior building products for use in California must have their products tested by an labeled by a SFM approved agency. In order to best assist building and fire departments in determining if a product meets the WUI code requirements, the State Fire Marshal's Building Materials Listing (BML) program was created. The California BML program provides designers, contractors, and regulators with a reliable and readily available source of information.

The ASTM standards proposed in Chapter 5 were developed as a consequence of wild fire experience in the State of California, and mirror the standards of the California State Fire Marshal's office to evaluate the fire performance of exterior building components under wildland urban fire exposure conditions. Use of the new ASTM Standards allow for materials and assembly selection based on their expected fire performance.

The products and materials listed in BML have been tested in accordance with the ASTM standards, or its California State Fire Marshal (SFM) equivalent, and established as complying with the California Building Code, Chapter 7A Wildland-Urban Interface Code.

The table below provides a mapping of the test standards developed by the California Office of the State Fire Marshal, and designated SFM, and the referenced ASTM standards.

http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_codes#testingstandards

Mapping of California Building Code, Chapter 7A, Referenced Test Standards to ASTM Standards

California Building Code, Chapter 7A Referenced Test Standard	**Comparable ASTM Standard** (Acceptance criteria are not included in ASTM standards; not to usurp code authority)
SFM 12-7A-1, Exterior Wall Siding and Sheathing. **Acceptance Criteria established with standard:** Absence of evidence of glowing combustion on the interior surface of the assembly at the end of 70-minute test	**ASTM E2707** Standard Test Method for Determining Fire Penetration of Exterior Wall Assemblies Using a Direct Flame Impingement Exposure
SFM 12-7A-4, Decking **Part A** "Under Deck Flame Test" **Acceptance Criteria established with standard:** 1. Effective net peak heat release rate < 25 kW/ft2 2. Absence of sustained flaming or glowing combustion at end of the 40-minute observation period. 3. Absence of falling particles that are still burning when reaching the burner or floor.	**ASTM E2632** Standard Test Method for Evaluating the Under-Deck Fire Test Response of Deck Materials
Part B "Burning Brand Exposure" **Acceptance Criteria established with standard:** 1. Absence of sustained flaming or glowing combustion at the conclusion of the 40-min observation period. 2. Absence of falling particles that are still burning when reaching the floor.	**ASTM E2726** Standard Test Method for Evaluating the Fire-Test-Response of Deck Structures to Burning Brands

Cost Impact: Will not increase the cost of construction
The new appendix chapter is being provided to assist the building and fire officials in determining what building materials are considered acceptable for use in WUI areas. Building materials listed in the California SFM Building Materials Listing Handbook comply with the standards specified in Chapter 5 of this code.

Analysis: A review of the standard(s) proposed for inclusion in the code,

- **ASTM E 2707-15** Standard Test Method for Determining Fire Penetration of Exterior Wall Assemblies Using a Direct Flame Impingement Exposure
  ASTM E2726/E2726M - 12a Standard Test Method for Evaluating the Fire-Test-Response of Deck Structures to Burning Brands

  California WUI Building Materials Testing Standards:

  SFM 12-7A-1 - 2001 Exterior wall siding and Sheathing
  SFM 12-7A-3 - 2001 Under Eaves
  SFM 12-7A-4 -2001 Decking

with regard to the ICC criteria for referenced standards (Section 3.6 of CP#28) will be posted on the ICC website on or before April 1, 2016.