



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-8000

ASSISTANT SECRETARY FOR HOUSING-
FEDERAL HOUSING COMMISSIONER

June 2, 2006

Robert E. Solomon, PE
Project Manager
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02269-7422

Re: Update on the Third Group of Construction and Safety Standards Proposals

Dear Mr. Solomon:

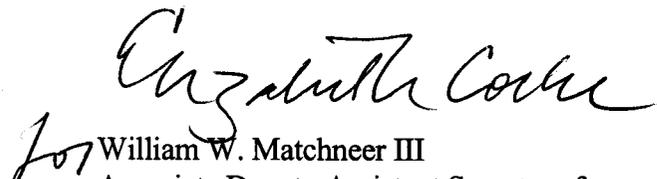
I am pleased to provide the Manufactured Housing Consensus Committee (MHCC), this update on the third group of revisions to the Manufactured Home Construction and Safety Standards (24 CFR Part 3280) the MHCC proposed to the Department. On behalf of Secretary Jackson, Commissioner Montgomery, and the Department, I would like to again thank the MHCC for its work in developing these recommendations.

The program office has completed its initial review of the proposals. As the detailed analysis enclosed indicates, we are in agreement with the majority of them. The proposals with which the program office is in agreement are summarized on pages 1-3 of the attached response under the heading *Recommendations Agreed to by the Program Office* and *Recommendations Agreed to by the Program Office in Reference to the On-Site Rule Under Consideration*.

The remaining proposals have been gathered under the headings *Recommendations Agreed to by the Program Office with Possible Editorial Changes*, and *Recommendations for Further Discussion Between the MHCC and the Program Office*.

Once again, let me thank the MHCC for providing these recommendations. The program staff and I look forward to the opportunity to discuss them in person during the June 14-16, 2006 MHCC meeting, and to obtaining the MHCC's additional views as we develop the proposed rule for this group of construction and safety standards.

Sincerely,


For William W. Matchneer III
Associate Deputy Assistant Secretary for
Regulatory Affairs and Manufactured Housing

Enclosure

Possible MHCSS Changes to Consider for Future Proposals

Exterior Stairs

The current proposals address stairs as part of the MHCSS. Should there be a concurrent change to the Model Manufactured Home Installation Standards addressing exterior stairways/landings? Or is it appropriate to leave the Model Installation Standards silent on this issue and allow the LAHJ to address such issues. (Note: Although the stair geometry, handrails, and guards will be the same for exterior stairways, the building code deals with landings exterior doors differently than interior landings.)

Attic Access

The MHCC may also want to consider a requirement for attic access. Please consider the following:

Attic Access. An attic access opening must be provided to attic areas that exceed 30 square feet and have a vertical height of 30 inches or greater. The rough-framed opening shall not be less than 22 inches by 30 inches and shall be located in a hallway or other readily accessible location. A 30 inch minimum unobstructed headroom in the attic space shall be provided at some point above the access opening.

Energy Efficiency

Consider comprehensive updates to Subpart F – Thermal Protection and other standards to improve the energy efficiency of manufactured homes.

INITIAL HUD RESPONSE TO THE MHCC'S THIRD GROUP OF CONSTRUCTION AND SAFETY STANDARDS (STANDARDS) PROPOSALS

I. Recommendations Agreed to by the Program Office

5 ROP	3280.3	This proposal requires the consumer manuals to be in accordance with 3282.207 of the Regulations.
6 ROP [*]	3280.4	This proposal adds the National Fenestration Rating Council to the incorporation by reference section.
7 ROP	3280.11(d)	This proposal provides clarification related to the location and positioning of the certification label.
12 ROC	3280.113	This proposal allows glazed openings to face into a roofed porch where certain conditions are met.
-Editorial- ^{**}	3280.105(b)(2)	This proposal clarifies that the door seal is permitted to reduce the opening of the door by a maximum of 1 inch.
33 ROP	3280.114(c)	This proposal adds requirements for guards that are not currently included in the Standards. <i>Note: This Section would be redesignated as 3280.114(d) based on changes to the landings section.</i>
8 ROP	3280.114(c)(2)	This proposal adds requirements for the design loads that guards must meet. These requirements are not currently included in the Standards. <i>Note: This Section would be redesignated as 3280.114(d)(2) based on changes to the landings section.</i>
35 ROP ^{**}	3280.204(c)	This proposal allows a microwave cooking appliance meeting UL Standard 923 to be used in lieu of a metal hood.
40 ROP	3280.305(a) 3280.305(e)	This proposal provides for a continuous load path in multi-story construction.
42 ROP	3280.305(g)	This proposal requires that the bottom board be tight against all penetrations. <i>Note: The Beach Puncture Test for Puncture and Stiffness of Paperboard, and Corrugated and Solid Fiberboard, ASTM D 781-1968(73) referenced in this section was withdrawn in 1984 – should this section be revised?</i>

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25 ROC	3280.307(e)	<p>This proposal provides provisions for multi-section and single family attached dwellings for the omission of the weather resistant exterior finishes for those areas left open for field connection provided certain conditions are satisfied.</p> <p><i>Note-Conforming language should also be included in the Model Installation Standard (MIS).</i></p>
49 ROP	3280.502(a)(2)	<p>This proposal provides clarification for determining the thermal envelope for single family dwelling units and multi-story dwelling units. Reference to “<i>dwelling unit(s)</i>” in several places in the proposed rule would be replaced throughout the document with the term “manufactured home”.</p>
51 ROP	3280.504(a)(3)	<p>This proposal allows the ceiling vapor retarder to be omitted when the story above is part of the same dwelling unit.</p> <p><i>Note: Standard Test Methods for Water Vapor Transmission of Materials, ASTM E 96-93 has a 2005 version.</i></p>
54 ROP	3280.504(b)	<p>This proposal revises the opening paragraph for the exterior walls vapor retarder requirement.</p> <p><i>Note: Please confirm that the only change to this section is the opening paragraph – the changes published in the 1st group of Standards changes will remain.</i></p>
60 ROP	3280.506(b)(i)	<p>This proposal requires the mating wall to be treated as an exterior wall for insulation purposes. In addition, it would not require floor/ceiling assemblies between stories of the dwelling unit to be insulated.</p>
72 ROP	3280.612	<p>This proposal updates the water system test by allowing the system to be tested with air or water at 80 psi (+5 psi) for 15 minutes without loss of pressure.</p>
77 ROP	3280.705(k)	<p>This proposal provides the information that is to be placed on the permanently affixed identification tag indicating the type of gas that is being used.</p> <p><i>Note: The proposed figure has not been provided.</i></p>
79 ROP	3280.705(l)(8)(i)	<p>This proposal amends the static pressure test for gas piping systems using a pressure of 3psi ± 0.2psi for a period of not less than 10 minutes.</p>
81 ROP	3280.708(a)(1)	<p>This proposal provides an editorial change to the section regarding the manufacturer’s responsibilities when the manufacturer supplies the clothes dryer.</p>
87 ROP**	3280.715(a)(7)	<p>This proposal increases the thermal resistance requirement for supply and return air ducts exposed directly to the outside air. The requirement would increase from R=4.0 to R=8.0 for all thermal zones.</p> <p><i>Note: This change contradicts the proposed change in the Second Group of proposed MHCSS changes. The second Group states:</i></p>

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(7) Supply and return ducts, fittings, and crossover duct plenums exposed directly to outside air, such as under-chassis crossover ducts or ducts connecting external heating, cooling, or combination heating/cooling appliances, must be insulated with material having a minimum thermal resistance of R-4 in Thermal Zones 1 and 2. In Thermal Zone 3, such materials must have a minimum thermal resistance of R-8 unless installed in a basement.

44 ROC* 3280.715(c) This proposal addresses the issues regarding the use of tapes, sealants, and mastics used to seal ducts. The proposal would also add the requirement that closure systems used on ducts that meet the requirements of UL 181A, Closure Systems for Use with Rigid Air Ducts and Air Connectors.

Note: A proposed date for UL 181A was not proposed – the most recent edition is 2005.

II. Recommendations Agreed to by the Program Office with Reference to the On-Site Rule Under Consideration

70 ROP 3280.610(c)(5) This proposal allows drain lines to be completed on-site for multi-story homes.

77 ROP 3280.705(c)(1) This proposal adds the requirement that the interconnection of gas lines be accessible for multi-story dwelling units.

78 ROP 3280.705(l)(7) This proposal provides support requirements for vertical gas piping for multi-story dwellings.

41 ROC 3280.709(a)(1) This proposal provides the requirements for direct vent space heating appliances shipped loose for on-site installation in a basement.

23 ROC 3280.305(h) This proposal allows for portions of roof assemblies to be completed on-site.

Note: Installation of plumbing vents must comply with 3280.611 not 3280.710.

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III. Recommendations Agreed to by the Program Office with Possible Editorial Changes

- 5 ROC 3280.103(a)(2) The proposal requires ceiling mounted lighting fixtures and wall mounted lighting fixtures in bathrooms to be operated by different switches.
- Suggest moving to Subpart I – Electrical Systems. Consider moving to 3280.807 as a new requirement.*
- 4 ROC 3280.103(a)(3) The proposal requires linear fluorescent fixtures to utilize T-8 lamps or lamps of equal or greater efficiency.
- Suggest moving to Subpart I – Electrical Systems. Consider moving to 3280.807 as a new requirement.*
- 10 ROC 3280.108(c) This proposal requires all interior doors to have a minimum clear opening width of 27 in.
- This is in conflict with proposed 3280.111(b), which reduces bathroom door widths for single section units to 23". Recommend that these two sections be combined with an exception for bathroom doors in single section units. (Note-the reduced width for single section homes would also be an issue for accessibility with the Office of Fair Housing and Equal Opportunity (FHEO)).*
- 10 ROC 3280.111(b) This proposal requires single-section bathroom doors to have a minimum clear opening width of 23 in., and multi-section bathroom doors to have a minimum clear opening width of 27 in.
- See above comments on 10 ROC for Section 3280.108(c).*
- 22 ROP 3280.114(a) The proposal adds requirements for stairways that are not currently included in the Standards.
- Consider adding to proposed 3280.114(a)(4) discussing winders:*
- Within any flight of stairs, the greatest winder tread depth at the 12 in. walk line shall not exceed the smallest by more than 3/8 in.**
- 25 ROP 3280.114(a) The proposal adds requirements for landings that are not currently included in the Standards.
- The current wording would allow a landing to be the smaller of the stairway or door it serves. Please consider the following changes to the section and redesignate the following sections as appropriate:*

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§3280.114 ~~(a)~~(b) Landings.

~~(1) General. A minimum dimension of travel distance of a landing shall be 3 ft (914 mm). Every landing must have a minimum dimension of 36 in. measured in the direction of travel. The minimum width of a landing shall not be less than the stairway and or door that it serves. Landings shall must be located as follows: required by Section §3280.114 (a).~~

~~(i) Landings for Stairways. (1) There shall must be a floor or landing at the top and bottom of each stairway, except at the top of an interior flight of basement stairs, provided a door does not swing over the stairs. The width of each landing must not be less than the stairway served.~~

~~(ii) Doors. (2) A landing or floor shall must be located on each side of an interior doorway- and the width of each landing must not be less than the door it serves. The maximum threshold height above the floor or landing shall must be ½ in. (13 mm) provided that thresholds more than ¼ in. (6 mm) above the adjacent floor shall must be beveled with a slope not steeper than 1 in 2.~~

29 ROP 3280.114(b) The proposal provides for handrail requirements that are not currently included in the Standards.

3280.114(b)(1) would require all stairways with 2 or more risers to have a handrail and single-riser stairs not at doors to have a handrail. This proposal will require all stairs/treads not at doors to have a handrail. Was this the intention of the MHCC?

This section would be listed as 3280.114(c) to coincide with adjustment to the Landings section.

Note: 3280.114(b)(3)(ii) deals with the continuity of handrails serving single riser stairs also.

23 ROP 3280.114(d) The proposal provides for stairway illumination requirements that are not currently included in the Standards.

Note: This Section would be re-designated as 3280.114(e) based on changes to the landings section.

Landings may not be required at the top of stairways. Therefore, please consider the following edits to the section:

§3280.114(d) Stairway Illumination. All interior and exterior stairways shall must be provided with a means to illuminate the stairways, including the landings and treads. Interior stairs stairways must shall be provided with an artificial light source located in the immediate vicinity of each landing of the stairway, at the top and bottom of the stair. For interior stairs the artificial light sources shall must be capable of illuminating treads and landings to levels not be less than 10 foot-candles (108 lx) measured at the center of treads and landings. Exterior stairs stairways shall must be provided with an artificial light source located in the immediate vicinity of the top landing of the stair.

No provisions are provided for the light activation of the stairway illumination. Please consider:

The control for activation of the required interior stairway lighting must be accessible at the top and bottom of each stairway without traversing any steps. The illumination of exterior stairways must be controlled from inside the dwelling unit.

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- 66 ROP 3280.608(b) This proposal includes horizontal and vertical support requirements for drainage and water piping.
- The horizontal requirements have support requirements specifically for plastic piping while the vertical piping support requirements are general. Please consider:*
- horizontal plastic drainage piping shall must be supported at intervals not to exceed 4 feet (1220 mm) and horizontal plastic water piping shall must be supported at intervals not to exceed 3 feet (915 mm). Vertical drainage and water piping shall be supported at each story height.**
- 39 ROP 3280.609(c)(iii) This proposal adds requirements for the discharge of the water heater relief valve.
- The requirement that it be piped “outside the dwelling unit” could allow the discharge to be piped underneath the home. In addition, “an approved location” is a vague and unenforceable requirement. Please consider:*
- (iii) Relief valves ~~shall~~ **must** be provided with full-sized drains, with cross sectional areas equivalent to that of the relief valve outlet. The outlet of a pressure relief valve, temperature relief valve, or combination thereof, must not be directly connected to the drainage system. The discharge ~~for from~~ the relief valve ~~shall~~ **must** be piped full size separately to the outside of the ~~dwelling unit~~ **manufactured home, other than underneath the home,** or to an **indirect waste receptor located** ~~approved location~~ inside the ~~dwelling unit~~ **manufactured home.** Drain lines ~~shall~~ **must** be of a material listed for hot water distribution and ~~shall~~ **must** drain fully by gravity, ~~shall~~ **must** not be trapped, and ~~shall~~ **must** not have their outlets threaded, and the end of the drain ~~shall~~ **must** be visible for inspection.
- Add definition for indirect waste receptor:*
- Indirect waste receptor. A receptor that receives a discharge pipe that is not directly connected to a receptor but maintains a suitable air gap from end of pipe to top of drain.**
- 71 ROP 3280.611(c) This proposal allows sections of a wet vented drain that is 3 in. diameter to carry the waste of an unlimited number of fixtures.
- This change does not appear to be consistent with the IRC which requires 4 in diameter drain piping for an unlimited number of fixtures.*
- 80 ROP 3280.705(1)(8)(iii) This proposal requires that when gas piping between transportable sections must be made by means of rigid pipe installed on-site, the installation instructions must contain provisions for on-site testing for leakage.
- Consider adding language that the installation instructions for on-site testing must be consistent with the requirements in 3280.705(1)(8)(i). A conforming revision would also be needed for the MIS.*
- Where gas piping between transportable sections must be made by means of ~~hard~~ rigid pipe installed on-site, the installation instructions shall must contain provisions for on-site testing for leakage consistent with the provisions in paragraph (i) of this section.**
- 43 ROP 3280.715(a)(4) This proposal provides for an alternative method for determining if the supply ducts are airtight. The requirement considers supply ducts airtight when a duct blaster test demonstrates duct leakage of less than 60cfm per floor at 25Pa.

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Although a new limit has been suggested, how and when the test must be conducted is not provided. ASHRAE 152 provides procedures for such a test. In addition, please consider eliminating the outdated requirement in the standard in lieu of the proposed new requirement. Is 60cfm per floor an appropriate limit for duct leakage – please provide rationale.

- 46 ROC
93 ROP
47 ROC 3280.810(b) This proposal aligns the MHCSS with NFPA 70, National Electrical Code.
- The proposal includes the option that visual checks are acceptable, therefore, the new reference to specific sections in the MHCSS and NEC and may not remove the ambiguities the proposal is attempting to correct.*
- Note: The 2005 edition will be referenced in the proposal.*
- 48 ROC 3280.902(b) The definition of “drawbar and coupling mechanism” needs to be consistent with definition of the “frame” by indicating “...which connects to the **rigid** substructure...” to prevent direct connection of the floor to the chassis, which is not intended.
- 48 ROC 3280.903(a)(2) Engineering analysis. Engineering analysis methods based on the principals of mechanics **and structural engineering** and/ **or on data that shall be permitted to be taken from successfully transported homes, shall may be permitted used to developed to and support substantiate the** adequacy of the transportation system.
- It is not clear whether this proposal intends to replace Interpretive Bulletin J-1-76 with regard to the provisions on preparing and engineering analysis for the transportation system.*
- 48 ROC 3280.904(b)(10) This proposal makes a series of extensive changes to the entire section that deals with transportation related issues.
- For clarification – is it the intent to delete or retain sections that are not present in the proposal (e.g., 3280.902(g) Highway and 3280.902(e) Lights definitions).*
- 48 ROC 3280.904(b)(8)(iii) Used Tires. Need to refer to 49 CFR 571.119 for all requirements on tires including used tires.

IV. Recommendations for Further Discussion Between the MHCC and the Program Office

2 ROP 1 ROC	3280.2	This proposal removes the Canal Zone (Panama Canal Zone) from the list of state/commonwealth/territory in the definition of <i>State</i> . This change requires a change in the MHIA before it can be included in the MHCSS.
11 ROC	3280.112	<p>The proposal requires hallways to have a minimum horizontal dimension of 28 in. and 36 in. for single-section and multi-section homes, respectively.</p> <p><i>The width of hallways is addressed in residential building codes as a “Means of Egress” issue. Please consider the following:</i></p> <p>(1) <i>The hallway width was increased for the multi-section unit; however, the hallway width for a single-section unit has remained unchanged. Is it appropriate to have differing egress requirements for single-section and multi-section dwellings when the travel distance requirements are equal for both types of units? Justification will be required in the Environmental Assessment portion of the preamble since this is a life safety issue.</i></p> <p>(2) <i>The hallway width was increased to 36 in. for multi-section units, however, the minimum exterior door width remains 28 in. Consider requiring not less than one exit door be a side-hinged door not less than 36-in wide.</i></p> <p>(3) <i>The reduced width for single section homes would also be an issue for accessibility with the Office of Fair Housing and Equal Opportunity (FHEO).</i></p>
20 ROP	3280.210	<p>The proposal would establish draftstopping requirements that are not currently included in the Standards.</p> <p><i>The 3/8 in. gypsum draftstopping option in 3280.210(d) is not consistent with the draftstopping requirement in the model building codes. Consider 1/2 in. gypsum for consistency.</i></p>
39 ROP	3280.211	<p>The proposal provides for requirements for attached garages that are not currently included in the Standards.</p> <p><i>Proposed 3280.211(a)(1) requires the minimum separation between the garage and manufactured home <u>must be placed on the garage side</u>. The construction of the garage is regulated by the local authority having jurisdiction and is beyond the authority of HUD and the MHCSS. Was the intention to require that the gypsum be placed on the exterior of the manufactured home where the garage will be located?</i></p> <p><i>In addition, the proposed 1/2 in. gypsum is not consistent with 5/8 in. Type X gypsum required by model building codes.</i></p> <p><i>The door thicknesses proposed in 3280.211(b) are not consistent with the 20-minute fire-rated doors required. Consider 1- 3/8 in. thick doors.</i></p>

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21 ROC 3280.304 The proposal would update the material reference standards.
 76 ROP 3280.703

Newer editions are available than those provided for in the recommendations. Below is the list of the proposed reference standards for discussion:

ROP/ROC	Referenced Edition			Available Edition
21 ROC	AAMA Standard	1701.2-2000	*1995	2002
21 ROC	AAMA Standard	1702.2-1985	*1995	2002
21 ROC	AAMA Standard	1704-2001	*1985 ¹	2001
	<i>¹ MHCC proposal to update was not accepted during the first submission based on failure to provide justification and anthropometric data for increasing operating force required to open egress windows.</i>			
21 ROC	AFPA T05	1986 w/1992 Revision		1986 w/1992 Revision
21 ROC	AFPA T03	1993	*same as PS 20	1993
21 ROC	AFPA T101	1997	*2001	2001
21 ROC	ANSI/AHA	A135.4 – 1995	*1995	Now Composite Panel Association ANSI A135.4 – 2004
21 ROC	ANSI/AHA	A135.5 – 1995	*1995	ANSI A135.5 – 2004
21 ROC	ANSI/AHA	A135.6 – 1998	*1998	ANSI A135.6 – 1998
21 ROC	ANSI/AHA	A208.1 – 1999		ANSI A208.1 – 1999
76 ROP	ANSI	Z21.5.1 – 1999	*1999	2002
76 ROP	ANSI	Z21.47a – 1999		2004
76 ROP	ANSI	Z21.1 – 1996	*2000	2005
76 ROP	ANSI	Z21.10.1 – 2000	*1998	2004
76 ROP	ANSI	LC 1 – 1997		2005
76 ROP	ANSI	Z21.24 – 2000		2000
76 ROP	ANSI	Z21.22 – 2000	*1999	1999
76 ROP	ANSI	Z21.20 – 2000	*2000	2005
76 ROP	ANSI	Z21.21 – 2000	*2000	2005
76 ROP	ANSI	Z21.23 – 2000		2000
21 ROC	AISC-ASD	1989	*1989	2005
21 ROC	AISI-SG673	1986 w/ 1989	*1996	2002
		Addendum		
	AISI-1996* (Note-not incorporated by reference as AISI SG673)			
21 ROC	APA-PRP-E-108Q	1994		2001 (Title Change)
21 ROC	APA-S812R	1998		1992
21 ROC	APA-Y-510T	1999		1997
21 ROC	ANSI/ARI 210/240	1994		2005
21 ROC	ARMA – Residential Asphalt Roofing Manual 1997			Out of print-status unclear.
21 ROC	ASTM C-36	2001	*1999	Replaced by C1396 – 2004
21 ROC	ASTM D-3953	1997		2005
21 ROC	ASTM D-4442	1997	*1997	2003
21 ROC	ASTM D-4444	1998		2003
21 ROC	ASTM E773	2001	*1997	2001
21 ROC	ASTM E774	1997	*1997	Withdrawn - No Replacement
21 ROC	ANSI/HPVA HP-1	2000		2004
21 ROC	ANSI/HPVA SG-96	1996	*1996	1996
21 ROC	NES/NER 272	1997	*1997	August 2004

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ROP/ROC	Referenced Edition				Available Edition
21 ROC	TPI – 95		1990		Replaced by: ANSI/TPI-1 2002, National Design Standard for Metal Plate Connected Wood Truss Construction
21 ROC	USDOC	PS-1-95	1995	*1995	1995
21 ROC	USDOC	PS-2-92	1992	*1992	1992
21 ROC	USDOC	PS-20-99	1999		1999

57 ROP 3280.504(c) This proposal allows omission of the attic ventilation in humid and fringe climates.

While non-vented roof assemblies may be a viable alternative in hot and humid climates, performance data on such designs over time is still not available. Further, the required detailing with such a design (i.e., insulation detailing, controlling surface temperatures in the assembly to prevent condensation) may be less forgiving than a traditional ventilation approach in terms of durability. The MHCC should consider some of the issues with this proposal, including:

1. Elimination of attic ventilation may lead to higher attic and surface temperatures. The effects of the increased temperatures may have an affect on shingle durability. Certain shingle manufacturers void or reduce the warranties when applied over a roof without attic ventilation (e.g., CertainTeed and Owens Corning).

2. The Manufactured Housing Research Alliance authored a report entitled, “Attic Ventilation Design Strategies for Manufactured Homes”. The research concluded that homes in hot, humid climates may benefit the most from alternative attic design strategies, including an un-vented attic design.

3. Providing roof ventilation is still part of the best practices for many professional organizations including the American Institute of Architects (AIA), CertainTeed, Owens Corning, and the 2003 International Residential Code.

4. 2001 ASHRAE Fundamentals Handbook, states:

“The commonly stated rules for attic and cathedral ceiling construction - ventilation and vapor retarder toward the inside –pertain to cold climates and not to warm, humid climates with indoor air conditioning. Common sense suggests that venting with relatively humid outdoor air means higher levels of moisture in the attic or cathedral ceiling. Higher moisture levels in vented attics in hot, humid climates do not lead to moisture damage in sheathing or framing. However, higher moisture levels in attic cavities may affect chilled surfaces of the ceiling and cold surfaces of mechanical equipment. When cooling ducts are located in the attic space, attic ventilation with humid outdoor air may increase the chance of condensation on the ducts.”

“As in all climates, airtight construction is desirable. In warm, humid climates, airtight construction usually reduces the latent load. Insulation and interior finishes should be selected and installed with an understanding that vapor diffusion is primarily inward.”

5. “Alleviating Moisture Problems in Hot, Humid Climate Housing” (Chandra et al., 2004) notes unvented attics with shingle roofs have had some problems with high moisture in attic and buckled shingles. The issue of how to best insulate the underside of the roof decking is also raised.

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6. Recent proposals to the International Residential Code (IRC) have spurred much debate regarding attic ventilation. The 2003/2004 code cycle saw the adoption of the following provision by Ronald Majette of the Department of Energy:

R806.4 Conditioned attic assemblies: Un-vented conditioned attic assemblies (spaces between the ceiling joists of the top story and the roof rafters) are permitted under the following conditions:

1. No interior vapor retarders are installed on the ceiling side (attic floor) of the un-vented attic assembly.
2. An air-impermeable insulation is applied in direct contact to the underside/interior of the structural roof deck. "Air-impermeable" shall be defined by ASTM E283.
3. In the warm humid locations as defined in N1101.2.1:
 - a. For asphalt roofing shingles: A 1 perm or less vapor retarder (determined using Procedure B of ASTM E 96) is placed to the exterior of the structural roof deck; i.e. just above the roof structural sheathing.
 - b. For wood shingles and shakes: a minimum continuous 1/4-inch air space separates the shingles/shakes and the roofing felt placed over the structural sheathing.
4. In zones 3 through 8 as defined in N1101.2 sufficient insulation is installed to maintain the monthly average temperature of the condensing surface above 45°F. The condensing surface is defined as either the structural roof deck or the interior surface of an air-impermeable insulation applied in direct contact to the underside/interior of the structural roof deck. "Air-impermeable" is quantitatively defined by ASTM E283. For calculation purposes, an interior temperature of 68°F is assumed. The exterior temperature is assumed to be the monthly average outside temperature.

The above proposal has many more requirements for designing an unvented attic than the MHCC's proposal to change the MHCSS and is still considered a debatable topic throughout the homebuilding industry. The 2005/2006 IRC code cycle has a proposal by David Roodvoets representing ARMA to delete this new section as follows:

Reason: This new Section R806.4-2003-04 became part of the very complicated set of code changes that were covered under EC48-03-04. Although verbal public comment was made to remove this section, the change was made with this section intact. This section has many problems, and the best way to deal with them is to delete the entire section. An air impermeable insulation is not a moisture impermeable insulation. This section allows this insulation to be against a wood deck with a shingled roof and impermeable membrane installed over the wood. Moisture from the interior of the building could easily permeate the insulation and condense in the wood. This will occur when the dew point falls in the wood, which is a common occurrence. The moisture will build up, since it cannot escape and will result in rotting wood. This could create a hazardous situation with concealed rotted wood on a roof deck. Nails can easily pull from the rotted wood and the roof covering could be blown off. The deck could collapse and those working on the deck could be injured. Warm humid locations often have conditions where the temperature of the outside roof surface is below the dew point temperature. Many buildings will have adequate moisture, and temperature to create a driving force to the outside surface. There are many conditions where moisture will become trapped in the wood.

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34 ROC	3280.507	There does not appear to be any change to this section.
33 ROC*	3280.508(e)	<p>This proposal updates the ASHRAE Handbook of Fundamentals to the 1997 edition.</p> <p><i>Note: The most recent version of this reference is the 2005. If the 2005 is referenced, updates would be required to other sections in the MHCSS and conforming revisions to the MIS as well.</i></p> <p><i>Note: Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections, AAMA 1503.1-1988 has a 1998 version.</i></p>
77 ROP	3280.705(j)	<p>This proposal revises the term ‘home’ to ‘home dwelling unit’ and deletes the provision not permitting the connection beneath an exit door and the provisions for when more than one connection is provided.</p> <p><i>This proposal may create a possible fire safety hazard by compromising the exit door if a gas leak at the connection beneath the door were to detonate.</i></p>
42 ROC	3280.709(h)	<p>This proposal provides requirements for site installed water heaters.</p> <p><i>The proposal would seem to allow all water heaters to be site installed. Is this the intent? Is it appropriate to allow the site installation of all water heaters? Also, the proposal lists 6 requirements in the opening paragraph and only 5 requirements follow – this may be an editorial issue only.</i></p>
103 ROP	Subpart K	This proposal provides a new section addressing multiple single family manufactured housing units in a single family attached dwelling. In addition to the items below, a reference to the On-Site Rule may be appropriate.
	3280.1002(a)	<p>This section provides for the definition of a common wall.</p> <p><i>The definition provided is not that of a common wall, but of an exterior wall located less than 3 ft. from another exterior wall/property line. In the construction of traditional townhouses, a common wall is a fire wall with a 2 hr rating that is continuous from the foundation to the underside of the roof sheathing. A fire wall is to be designed to allow collapse of construction on either side without collapse of the wall. Please reexamine the use of the term ‘common wall’.</i></p>
	3280.1003(a)	<p>This section would establish separation requirements between units.</p> <p><i>The separation between units in the case described is not through the use of a common wall, but by means of a fire rated exterior wall. The exterior walls must have a 1-hr fire resistive rating with exposure from both sides. In addition, openings must not be permitted in an exterior wall with a fire separation distance of less than 3ft. Will there be allowances for projections extending into the fire separation distance?</i></p> <p><i>The ASMT E119 does not have a proposed publication date. 2005 is the most recent edition.</i></p>
	3280.1003(b)	This section deals with penetrations in fire rated assemblies.

* indicates the change was part of the Final Rule published November 30, 2005

** indicates the change was part of the 2nd Group of Standards Changes forwarded to the Department

Suggest changing title to Rated Penetrations.

Reference to common wall should be changed.

Although openings are not permitted in fire rated walls, through penetrations are permitted provided certain precautions are taken. For further consideration and discussion.

3280.1003(c) This section provides for the common wall requirements.

Same comment regarding the use of the term common wall.

3280.1003(d) This section provides parapet requirements.

In this case the parapet is an extension of the fire-rated exterior wall.

3280.1004 This section provides exterior wall requirements.

Recommend that the second reference to 3280.504 in the first sentence be removed. Same comment regarding the reference to common wall.