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

APR 10 2014

ASSISTANT SECRETARY FOR HOUSING-
FEDERAL HOUSING COMMISSIONER

Manufactured Housing Consensus Committee

Dear Committee Member:

This is in further follow-up to HUD's letter of December 11, 2013 and our earlier letter of November 27, 2012, to the Manufactured Housing Consensus Committee (MHCC) concerning reductions in design values for Southern Pine Lumber (SPL) which is used in the construction of manufactured homes.

These changes in design values were previously issued as a March 2012 Addendum for certain sizes and species of SPL and later updated in a March 2013 Addendum to the 2001 edition of the National Design Specification for Wood Construction (NDS) to include all sizes and species of SPL. The NDS is incorporated by reference in 24 CFR 3280.304 of the Manufactured Home Construction and Safety Standards.

Initially, HUD intended to make these reduced design values effective on January 1, 2013. However, after receiving a recommendation from the MHCC at the October 2012 meeting to further delay implementation of the NDS 2012 Addendum, until it could be formally presented to the MHCC for its review, HUD elected to delay enforcement of the reduced design values until January 1, 2014, as further changes to the published Southern Pine design values were anticipated.

Because of the additional information we have asked the MHCC to consider, HUD has decided to further delay the effective date of these new design values until January 1, 2015. This delay will provide the MHCC with an opportunity to review all of the changes and provide its recommendations to the Secretary. A copy of the March 2013 Addendum is also enclosed for your review and consideration.

If you have any additional comments or questions, please contact me at (202) 402-7112.

Sincerely,

Pamela Beck Danner
Administrator
Office of Manufactured Housing Programs

Enclosure

cc: All Primary Inspection Agencies (PIAs)
All State Administrative Agencies (SAAs)

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

ASSISTANT SECRETARY FOR HOUSING-
FEDERAL HOUSING COMMISSIONER

DEC 11 2013

Manufactured Housing Consensus Committee

Dear Committee Member:

This is in further follow-up to HUD's letter of November 7, 2012, to the Manufactured Housing Consensus Committee (MHCC) concerning reductions in design values for certain sizes and species of Southern Pine Lumber which is used in the construction of manufactured homes. These changes in design values were initially issued as a March 2012 Addendum to the 2001 edition of the National Design Specification for Wood Construction which is incorporated by reference in 24 CFR 3280.304 of the Manufactured Home Construction and Safety Standards.

Initially, HUD intended to make these reduced design values effective on January 1, 2013. However, after receiving a recommendation from the MHCC at the October 2012 meeting to further delay implementation of the NDS 2012 Addendum, until it could be formally presented to the MHCC for its review, HUD elected to delay enforcement of the reduced design values until January 1, 2014, as further changes to the published Southern Pine design values were anticipated.

In March 2013, a revised Addendum to the 2001 NDS was published and superseded the design values for Southern Pine Lumber that were previously published in March 2012. The updated 2013 Addendum covered design values for all grades, species, and sizes of Southern Pine lumber while the prior Addendum was limited to smaller sizes of Southern Pine. A copy of the March 2013 Addendum is enclosed for your review and consideration. Additional information on this matter will be forthcoming from the Department.

If you have any additional comments or questions, please contact me at (202) 708-6423.

Sincerely,

FOR
Henry S. Czauski
Acting Deputy Administrator
Office of Manufactured Housing Programs

Enclosure

cc: All Primary Inspection Agencies (P!As)
All State Administrative Agencies (SAAs)

AMERICAN
WOOD
COUNCIL

March 2013

ADDENDUM

to the 2012 and previous versions of the *Design Values for Wood Construction*

(a supplement to the *National Design Specification® (NDS®) for Wood Construction*)

Effective June 1, 2013, design values for all grades of visually-graded Southern Pine and Mixed Southern Pine lumber, 2"- 4" thick will change. The design values to use with the *2012 NDS*, *2005 NDS*, and the *2001 NDS* are shown below (values that will change on June 1, 2013 are shown as underlined). These values supersede values published in the AWC March 2012 Addendum.

Table 4B Reference Design Values for Visually Graded Southern Pine Dimension Lumber (2" - 4" thick)[1,2,3,4,5] (Tabulated design values are for normal load duration and dry service conditions, unless specified otherwise. See NDS 4.3 for a comprehensive description of design value adjustment factors.)

USE WITH TABLE 4B ADJUSTMENT FACTORS

Species and commercial grade	Size classification	Design values in pounds per square inch (psi)							Specific Gravity[6]	Grading Rules Agency
		Bending	Tension parallel to grain	Shear parallel to grain	Compression perpendicular to grain	Compression parallel to grain	Modulus of Elasticity			
		F_b	F_t	F_v	$F_{c\perp}$	F_c	E	E_{min}	G	
SOUTHERN PINE										
Dense Select Structural	2" - 4" wide	2,700	1,900	175	660	2,050	1,900,000	690,000	0.55	SPIB
Select Structural		2,350	1,650	175	565	1,900	1,800,000	660,000		
Non-Dense Select Structural		2,050	1,450	175	480	1,800	1,600,000	580,000		
No.1 Dense		1,650	1,100	175	660	1,750	1,800,000	660,000		
No.1		1,500	1,000	175	565	1,650	1,600,000	580,000		
No.1 Non-Dense		1,300	875	175	480	1,550	1,400,000	510,000		
No.2 Dense		1,200	750	175	660	1,500	1,600,000	580,000		
No.2		1,100	675	175	565	1,450	1,400,000	510,000		
No.2 Non-Dense		1,050	600	175	480	1,450	1,300,000	470,000		
No.3 and Stud		850	400	175	565	850	1,300,000	470,000		
Construction	4" wide	875	500	175	565	1,600	1,400,000	510,000	0.55	
Standard		475	275	175	565	1,300	1,200,000	440,000		
Utility		225	125	175	565	850	1,200,000	440,000		
Dense Select Structural	5" - 6" wide	2,400	1,650	175	660	1,900	1,900,000	690,000	0.55	SPIB
Select Structural		2,100	1,450	175	565	1,800	1,800,000	660,000		
Non-Dense Select Structural		1,850	1,300	175	480	1,700	1,600,000	580,000		
No.1 Dense		1,500	1,000	175	660	1,650	1,800,000	660,000		
No.1		1,350	875	175	565	1,550	1,600,000	580,000		
No.1 Non-Dense		1,200	775	175	480	1,450	1,400,000	510,000		
No.2 Dense		1,050	650	175	660	1,450	1,600,000	580,000		
No.2		1,000	600	175	565	1,400	1,400,000	510,000		
No.2 Non-Dense		950	525	175	480	1,350	1,300,000	470,000		
No.3 and Stud		575	350	175	565	800	1,300,000	470,000		
Dense Select Structural	8" wide	2,200	1,550	175	660	1,850	1,900,000	690,000	0.55	SPIB
Select Structural		1,950	1,350	175	565	1,700	1,800,000	660,000		
Non-Dense Select Structural		1,700	1,200	175	480	1,650	1,600,000	580,000		
No.1 Dense		1,350	900	175	660	1,600	1,800,000	660,000		
No.1		1,250	800	175	565	1,500	1,600,000	580,000		
No.1 Non-Dense		1,100	700	175	480	1,400	1,400,000	510,000		
No.2 Dense		975	600	175	660	1,400	1,600,000	580,000		
No.2		925	550	175	565	1,350	1,400,000	510,000		
No.2 Non-Dense		875	500	175	480	1,300	1,300,000	470,000		
No.3 and Stud		525	325	175	565	775	1,300,000	470,000		

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Species and commercial grade	Size classification	Design values in pounds per square inch (psi)							Specific Gravity[6]	Grading Rules Agency
		Bending F_b	Tension parallel to grain F_t	Shear parallel to grain F_v	Compression perpendicular to grain $F_{c\perp}$	Compression parallel to grain F_c	Modulus of Elasticity E	Modulus of Elasticity E_{min}	G	
SOUTHERN PINE (continued)										
Dense Select Structural	10" wide	1,950	1,300	175	660	1,800	1,900,000	690,000	0.55	SPIB
Select Structural		1,700	1,150	175	565	1,650	1,800,000	660,000		
Non-Dense Select Structural		1,500	1,050	175	480	1,600	1,600,000	580,000		
No.1 Dense		1,200	800	175	660	1,550	1,800,000	660,000		
No.1		1,050	700	175	565	1,450	1,600,000	580,000		
No.1 Non-Dense		950	625	175	480	1,400	1,400,000	510,000		
No.2 Dense		850	525	175	660	1,350	1,600,000	580,000		
No.2		800	475	175	565	1,300	1,400,000	510,000		
No.2 Non-Dense		750	425	175	480	1,250	1,300,000	470,000		
No.3 and Stud		475	275	175	565	750	1,300,000	470,000		
Dense Select Structural	12" wide	1,800	1,250	175	660	1,750	1,900,000	690,000	0.55	SPIB
Select Structural		1,600	1,100	175	565	1,650	1,800,000	660,000		
Non-Dense Select Structural		1,400	975	175	480	1,550	1,600,000	580,000		
No.1 Dense		1,100	750	175	660	1,500	1,800,000	660,000		
No.1		1,000	650	175	565	1,400	1,600,000	580,000		
No.1 Non-Dense		900	575	175	480	1,350	1,400,000	510,000		
No.2 Dense		800	500	175	660	1,300	1,600,000	580,000		
No.2		750	450	175	565	1,250	1,400,000	510,000		
No.2 Non-Dense		700	400	175	480	1,250	1,300,000	470,000		
No.3 and Stud		450	250	175	565	725	1,300,000	470,000		
MIXED SOUTHERN PINE										
Select Structural	2" - 4" wide	2,050	1,200	175	565	1,800	1,600,000	580,000	0.51	SPIB
No.1		1,450	875	175	565	1,650	1,500,000	550,000		
No.2		1,100	675	175	565	1,450	1,400,000	510,000		
No.3 and Stud		650	400	175	565	850	1,200,000	440,000		
Construction	4" wide	850	500	175	565	1,600	1,300,000	470,000	0.51	
Standard		475	275	175	565	1,300	1,200,000	440,000		
Utility		225	125	175	565	850	1,100,000	400,000		
Select Structural	5" - 6" wide	1,850	1,100	175	565	1,700	1,600,000	580,000	0.51	
No.1		1,300	750	175	565	1,550	1,500,000	550,000		
No.2		1,000	600	175	565	1,400	1,400,000	510,000		
No.3 and Stud		575	350	175	565	775	1,200,000	440,000		
Select Structural	8" wide	1,750	1,000	175	565	1,600	1,600,000	580,000	0.51	
No.1		1,200	700	175	565	1,450	1,500,000	550,000		
No.2		925	550	175	565	1,350	1,400,000	510,000		
No.3 and Stud		525	325	175	565	800	1,200,000	440,000		
Select Structural	10" wide	1,500	875	175	565	1,600	1,600,000	580,000	0.51	
No.1		1,050	600	175	565	1,450	1,500,000	550,000		
No.2		800	475	175	565	1,300	1,400,000	510,000		
No.3 and Stud		475	275	175	565	750	1,200,000	440,000		
Select Structural	12" wide	1,400	825	175	565	1,550	1,600,000	580,000	0.51	
No.1		975	575	175	565	1,400	1,500,000	550,000		
No.2		750	450	175	565	1,250	1,400,000	510,000		
No.3 and Stud		450	250	175	565	725	1,200,000	440,000		

1. **LUMBER DIMENSIONS.** Tabulated design values are applicable to lumber that will be used under dry conditions such as in most covered structures. For 2" to 4" thick lumber the DRY dressed sizes shall be used (see Table 1A) regardless of the moisture content at the time of manufacture or use. In calculating design values, the natural gain in strength and stiffness that occurs as lumber dries has been taken into consideration as well as the reduction in size that occurs when unseasoned lumber shrinks. The gain in load carrying capacity due to increased strength and stiffness resulting from drying more than offsets the design effect of size reductions due to shrinkage.

2. **STRESS-RATED BOARDS.** Information for various grades of Southern Pine stress-rated boards of nominal 1", 1¼", and 1½" thickness, 2" and wider is available from the Southern Pine Inspection Bureau (SPIB) in the *Standard Grading Rules for Southern Pine Lumber.*

3. **SPRUCE PINE.** To obtain recommended design values for Spruce Pine graded to SPIB rules, multiply the appropriate design values for Mixed Southern Pine by the corresponding conversion factor shown below and round to the nearest 100,000 psi for E; to the nearest 10,000 psi for E_{min}; to the next lower multiple of 5 psi for F_v and $F_{c\perp}$; to the next lower multiple of 50 psi for F_b, F_t, and F_c if 1,000 psi or greater, 25 psi otherwise.

CONVERSION FACTORS FOR DETERMINING DESIGN VALUES FOR SPRUCE PINE

	Bending F_b	Tension parallel to grain F_t	Shear parallel to grain F_v	Compression perpendicular to grain $F_{c\perp}$	Compression parallel to grain F_c	Modulus of Elasticity E and E_{min}
Conversion Factor	0.78	0.78	0.98	0.73	0.78	0.82

4. **SIZE FACTOR.** For sizes wider than 12", use size factors for F_b, F_t, and F_c specified for the 12" width. Use 100% of the F_v, $F_{c\perp}$, E, and E_{min} specified for the 12" width.
5. When individual species or species groups are combined, the design values to be used for the combination shall be the lowest design values for each individual species or species group for each design property.
6. Specific gravity, G, based on weight and volume when oven-dry.

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

WASHINGTON, DC 20410-8000

ASSISTANT SECRETARY FOR HOUSING-
FEDERAL HOUSING COMMISSIONER

NOV 27 2012

Manufactured Housing Consensus Committee
c/o Robert Solomon, Project Manager
National Fire Protection Association
1 Batterymarch Park
Quincy MA 02619-7471

Dear Committee Member:

Thank you for your letter of November 2, 2012 to Secretary Donovan concerning reductions in certain structural design values for Southern Pine lumber, which is used in the construction of manufactured homes. The changes in design values were issued in an Addendum to a Supplement to the 2001 edition of the National Design Specification for Wood Construction (NDS) effective June 1, 2012. On May 17, 2012, HUD notified the public that the changes warranted a delay in the date of enforcement of the reduced design values until January 1, 2013.

The Manufactured Housing Consensus Committee (MHCC) recently met in October and recommended that HUD further delay implementation of the NDS Addendum until it is presented to the MHCC or issued as an emergency rule pursuant to Section 604(b)(5) of the Manufactured Housing Improvement Act of 2000 Act.

After a thorough review of this matter, HUD has determined to further delay enforcement of these new design values until January 1, 2014. It is our understanding that further changes to the published reduced design values are anticipated and no specific timetable has been established for implementing these revisions. This delay will provide HUD with an opportunity to monitor changes made to the standards and will provide the MHCC with an opportunity to review the changes and provide recommendations to the Secretary.

If you have any additional comments or questions, please contact Henry S. Czauski, Acting Deputy Administrator, Office of Manufactured Housing Programs at (202) 708-6423.

Sincerely,

Carol J. Galante
Acting Assistant Secretary for Housing –
Federal Housing Commissioner