

# Supplement No. 1

# **WWPA WESTERN LUMBER GRADING RULES 2011**

**Grading Rule Changes For:  
Beams and Stringers  
Posts and Timbers  
Measurement of Characteristics**



**SUPPLEMENT NO. 1  
WESTERN LUMBER GRADING RULES 2011**

The following grade rule changes have been adopted by Western Wood Products Association and have been approved by the Board of Review of the American Lumber Standard Committee, Inc.

**EFFECTIVE JULY 1, 2011**

Replace Sections 70.00 through 70.13; **TIMBERS, BEAMS and STRINGERS** from page 149 through 154 with the following:

**TIMBERS**

**■ 70.00          BEAMS and STRINGERS**

**All Species  
5" and Thicker**

**Width More Than 2" Greater Than Thickness**

Grades of Beams and Stringers are designed for construction uses where material larger than Joists and Planks is required. The various grades are used in all types of building – home, industrial, farm and in special engineered construction such as bridges, auditoriums, stadiums and the like. Some grades are selected for appearance and strength. Other grades are designed for serviceability with strength and appearance qualities available in graduated increments to provide reliable and economical construction.

There are four grade choices: SELECT STRUCTURAL, NO. 1, NO. 2 and NO. 3. All are graded full length. Knots appearing on narrow faces are limited to the same displacement as knots specified at edges of wide faces. The Select Structural, No. 1 and No. 2 grades are assigned design values as shown in Table 2.

## STANDARD SIZES for BEAMS and STRINGERS

### Thicknesses and Widths

Nominal	Surfaced Dry		Surfaced Unseasoned	
	Inch	mm <sup>(1)</sup>	Inch	mm <sup>(1)</sup>
5" & 6"	1/2 off	13 off	1/2 off	13 off
7" to 15"	3/4 off	19 off	1/2 off	13 off
16" and larger	1 off nominal	25 off nominal	1/2 off nominal	13 off nominal

(1) See Section 723.00.

Standard lengths are 6' and longer in multiples of 1'.

(BEAMS and STRINGERS)

### ■ 70.10 SELECT STRUCTURAL

Select Structural Beams and Stringers are graded primarily for strength properties, but most pieces of this grade are suitable for exposed uses where both strength and good appearance are desired.

Characteristics and limiting provisions are:

- Checks – Seasoning checks, single or opposite each other with a sum total equal to 1/4 the thickness.
- Grain – Medium. See Section 170.00.

Knots – Sound, tight and well-spaced, are permitted in sizes not to exceed the following or equivalent displacement:

Nominal Width	At Edge Wide Face	Centerline Wide Face
8"	1 7/8"	2"
10"	2"	2 5/8"
12"	2 1/8"	3 1/8"
14"	2 3/8"	3 3/8"
16"	2 1/2"	3 5/8"
18"	2 3/4"	3 5/8"
20"	2 7/8"	3 7/8"
22"	3"	4"
24"	3 1/8"	4 1/4"

The size of knots on wide faces may be increased proportionately from the size permitted at the edge to the size permitted at the centerline.

Pin Holes – Limited.

Pitch Streaks.

Pockets – Medium pitch pockets.

Shake – 1/6 the thickness on end.

Skips – Occasional skips 1/16" deep, 2' in length.

Slope of Grain – 1 in 14.

Splits – Splits equal in length to 1/2 the width of the piece or equivalent of end checks.

Stain – Stained sapwood. Firm heart stain, 10% of width or equivalent.

Torn Grain – Heavy.

Wane – 1/8 of any face, or equivalent slightly more for a short distance.

## ■ 70.11

## NO. 1

No. 1 Beams and Stringers, like the Select Structural grade, consists of many pieces of fine appearance suitable for exposed uses. The strength qualities of this grade make it desirable for use in almost all classes of heavy construction.

Characteristics and limiting provisions are:

Checks – Seasoning checks, single or opposite each other with a sum total equal to 1/4 the thickness.

Grain – Medium. See Section 170.00.

Holes – In Cedar species, holes from any cause 1/2 the size of allowable knots are permitted.

Knots – Sound, tight and well-spaced, are permitted in sizes not to exceed the following or equivalent displacement:

Nominal Width	At Edge Wide Face	Centerline Wide Face
8"	2 <sup>5</sup> / <sub>8</sub> "	3"
10"	2 <sup>7</sup> / <sub>8</sub> "	3 <sup>3</sup> / <sub>4</sub> "
12"	3 <sup>1</sup> / <sub>4</sub> "	4 <sup>1</sup> / <sub>2</sub> "
14"	3 <sup>1</sup> / <sub>2</sub> "	5"
16"	3 <sup>3</sup> / <sub>4</sub> "	5 <sup>1</sup> / <sub>4</sub> "
18"	3 <sup>7</sup> / <sub>8</sub> "	5 <sup>5</sup> / <sub>8</sub> "
20"	4 <sup>1</sup> / <sub>8</sub> "	5 <sup>7</sup> / <sub>8</sub> "
22"	4 <sup>3</sup> / <sub>8</sub> "	6 <sup>1</sup> / <sub>4</sub> "
24"	4 <sup>1</sup> / <sub>2</sub> "	6 <sup>1</sup> / <sub>2</sub> "

The size of knots on wide faces may increase proportionately from the size permitted at the edge to the size permitted at the centerline.

Pin Holes – Limited.

Pitch Streaks.

Pockets – Pitch pockets.

Shake – 1/6 the thickness on end.

Skip – Occasional skips 1/8" deep, 2' in length.

Slope of Grain – 1 in 10.

Splits – Equal in length to the width of the piece or equivalent of end checks.

Stain – Stained sapwood. Firm stained heartwood.

Torn Grain—Heavy.

Wane – 1/4 of any face, or equivalent slightly more for a short distance.

(BEAMS and STRINGERS)

■ 70.12

NO. 2

No. 2 Beams and Stringers are used in all general construction. The grade is designed for the many uses where higher strength properties are not needed and where serviceability is important.

Characteristics and limiting provisions are:

Checks – Seasoning checks.

Grain – Medium. See Section 170.00.

Knots – Sound, not firmly fixed or holes, well spaced, are permitted in sizes not to exceed the following or equivalent displacement:

Nominal Width	Anywhere on Wide Face
8"	4½"
10"	5⅝"
12"	6⅞"
14"	7½"
16"	8⅛"
18"	8⅝"
20"	9⅛"
22"	9½"
24"	10"

Unsound knots are limited to 1/2 the size of other knots.

The size of knots on wide faces may be increased proportionately from the size permitted at the edge to the size permitted at the centerline.

Pitch Streaks.

Pockets – Pitch or bark pockets.

Shake – 1/2 length, 1/2 thickness. If through at ends, limited as splits.

Skips – 1/8" deep, 2' in length, or 1/16" skip full length.

Slope of Grain – 1 in 6.

Splits – Medium or equivalent end checks.

Stain – Stained wood.

Torn Grain.

Unsound Wood – Small spots of unsound wood, well scattered, 1/6 the face width.

Wane – 1/3 of any face, or equivalent slightly more for a short distance.

White Specks – Firm, 1/3 width, or equivalent.

(BEAMS and STRINGERS)

■ 70.13

NO. 3

No. 3 Beams and Stringers are designed for use in construction where higher grade requirements are not needed. All pieces of this grade must be usable full length, therefore, No. 3 combines usefulness with economical construction.

Characteristics and limiting provisions are:

Checks – Seasoning checks.

Knots – Sound, unsound, or not firmly fixed, or holes from any cause, not larger than 3/4 the cross section.

Pitch Streaks.

Pockets – Pitch or bark pockets.

Shake – Full length if not continuous.

Skips –  $\frac{1}{8}$ " in both width and thickness if surfaced,  
or  $\frac{1}{2}$ " scant if rough.

Splits –  $\frac{1}{4}$  the length.

Stain – Stained wood.

Torn Grain.

Unsound Wood – Scattered.

Wane –  $\frac{1}{3}$  of any face, or equivalent slightly more  
for a short distance.

White Speck and Honeycomb – Firm.

**Replace Sections 80.00 through 80.13; POSTS and TIMBERS from page 155 through 159 with the following:**

**■ 80.00            POSTS and TIMBERS**  
**All Species**  
**5" x 5" and Larger**  
**Width Not More Than 2" Greater**  
**Than Thickness**

Grades of Posts and Timbers are designed for construction uses where material larger than Joists, Planks and Studs is required. The various grades are used in all types of building – home, industrial, farm and special engineered construction, such as bridges, auditoriums, stadiums, and the like. Some grades are selected for appearance and strength. Other grades are designed for serviceability with strength and appearance qualities available in graduated increments to provide reliable, but economical construction.

There are four grade choices: SELECT STRUCTURAL, NO. 1, NO. 2 and NO. 3. All are graded full length. Except as provided in the grade descriptions, knots appearing on narrow faces are limited to the same displacement as knots specified for the wide face. The Select Structural, No. 1 and No. 2 grades are assigned design values as shown in Table 3. These grades are designed to provide high compression values.

## STANDARD SIZES for POSTS and TIMBERS

### Thicknesses and Widths

Nominal	Surfaced Dry		Surfaced Unseasoned	
	<u>Inch</u>	<u>mm<sup>(1)</sup></u>	<u>Inch</u>	<u>mm<sup>(1)</sup></u>
5" & 6"	1/2 off	13 off	1/2 off	13 off
7" to 15"	3/4 off	19 off	1/2 off	13 off
16" and larger	1 off nominal	25 off nominal	1/2 off nominal	13 off nominal

(1) See Section 723.00.

Standard lengths are 6' and longer in multiples of 1'.

(POSTS and TIMBERS)

### ■ 80.10 SELECT STRUCTURAL

Select Structural Posts and Timbers are graded primarily for strength properties, but most pieces of this grade are suitable for exposed uses where both strength and good appearance are desired.

Characteristics and limiting provisions are:

Checks – Seasoning checks, single or opposite each other with a sum total equal to 1/2 the thickness of the piece.

Grain – Medium. See Section 170.00.

Knots – Sound, tight and well spaced. Knot size limitations are permitted in the following sizes or their equivalent displacement:

Wide Face Width	Anywhere on Wide Face
5"	1"
6"	1 $\frac{1}{4}$ "
8"	1 $\frac{5}{8}$ "
10"	2"
12"	2 $\frac{3}{8}$ "
14"	2 $\frac{1}{2}$ "
16"	2 $\frac{3}{4}$ "
18"	3"

Pin Holes – Limited.

Pitch Streaks.

Pockets – Medium pitch pockets.

Shake –  $\frac{1}{3}$  the thickness on end.

Skip – Occasional skips  $\frac{1}{16}$ " deep, 2' in length.

Slope of Grain – 1 in 12.

Splits – Splits equal in length to  $\frac{3}{4}$  the thickness of the piece or equivalent of end checks.

Stain – Stained sapwood. Firm heart stain, 10% of width or equivalent.

Torn Grain – Heavy.

Wane –  $\frac{1}{8}$  of any face, or equivalent slightly more for a short distance.

(POSTS and TIMBERS)

## ■ 80.11

## NO. 1

No. 1 Posts and Timbers, like the Select Structural grade, consist of many pieces of fine appearance suitable for exposed uses. The strength qualities of this grade make it desirable for use in almost all classes of heavy construction.

Characteristics and limiting provisions are:

Checks – Seasoning checks, single or opposite each other with a sum total equal to 1/2 the thickness.

Grain – Medium. See Section 170.00.

Holes – In Cedar species, holes from any cause 1/2 the allowable knot size are permitted.

Knots – Sound, tight and well spaced. Knot size limitations are permitted in the following sizes or their equivalent displacement:

Wide Face Width	Anywhere on Wide Face
5"	1½"
6"	1⅞"
8"	2½"
10"	3⅛"
12"	3¾"
14"	4"
16"	4¼"
18"	4½"

Pin Holes – Limited.

Pitch Streaks.

Pockets – Pitch pockets.

Shake – 1/3 the thickness on end.

Skip – Occasional skips ⅛" deep, 2' in length.

Slope of Grain – 1 in 10.

Split – Splits equal in length to width of the piece or equivalent of end checks.

Stain – Stained sapwood. Firm stained heartwood.

Torn Grain – Heavy.

Wane – 1/4 of any face or equivalent slightly more for a short distance.

■ 80.12

NO. 2

No. 2 Posts and Timbers are used in all general construction. The grade is designed for the many uses where heavy material is needed and where serviceability is important.

Characteristics and limiting provisions are:

Checks – Seasoning checks.

Grain – Medium. See Section 170.00.

Knots – Sound, not firmly fixed, or holes, well spaced. Knot size limitations are permitted in the following sizes or their equivalent displacement:

Wide Face Width	Anywhere on Wide Face
5"	2½"
6"	3"
8"	3¾"
10"	5"
12"	6"
14"	6½"
16"	7"
18"	7½"

Unsound knots are limited to 1/2 the size of other knots.

Pitch Streaks.

Pockets – Pitch or bark pockets.

Shake – 1/2 length, 1/2 thickness. If through at ends, limited as splits.

Skips – 1/8" deep, 2' in length, or 1/16" skip full length.

Slope of Grain – 1 in 6.

Splits – Medium or equivalent end checks.

Stain – Stained wood.

Torn Grain.

Unsound Wood – Small spots of unsound wood, well scattered, 1/6 the face width.

Wane – 1/3 of any face, or equivalent slightly more for a short distance.

White Speck – Firm white specks, 1/3 width or equivalent.

(POSTS and TIMBERS)

■ **80.13**

**NO. 3**

Characteristics and limiting provisions are identical to those shown in Section 70.13.



0816/S-1/07-11/4500