

TECH GUIDE

DRY USE **PWT TREATED**

TREATED LAMINATED VENEER LUMBER

PWT FOCUSED ON EWP





Treated Laminated Veneer Lumber

Product Highlights

- PWT Treated LVL is the only manufacturer-treated LVL, and it is covered by a 25-year limited, transferable warranty.
- PWT Treated LVL is protected against damage caused by fungal rot, decay, and wood-destroying insects, including Formosan termites (interior or exterior usage).
- We use a proprietary and CODE APPROVED treatment system and process, utilizing TRU-CORE® technology.

The Product

- PWT Treated LVL may be used in exterior construction above-ground applications (UC3B) and for components that are difficult to maintain, repair, or replace and that are critical to the performance and safety of the entire system:
 - Deck substructures, sill plates, and fascia
- Treatment is added during the LVL manufacturing process, which fully penetrates throughout each veneer layer, offering complete protection from the inside out.
- No treatment gradient and double (2X) the preservative retention required in various standards around the world
- Additionally, envelope treated for best surface properties

Features and Benefits

- Non-corrosive!
 - PWT Treated LVL and its chemical additive do not corrode or damage hardware.
 - Choose appropriate coating on connectors for the project conditions.
- · Interior use
- · Stainable and paintable
- No added VOCs
- Code Reports ESR-2909, ESR-3834, PR-L329, and FL 39762

GRADE

2.0E 2800 Fb

BEAM SIZES

Width			Depth		
1¾" x	9½"	11%"	14"	16"	18"
3½" x	9½"	11%"	14"	16"	-
*5¼" x	9%"	11%"	14"	16"	-

JOISTS (DIMENSION SIZES)

Width			Depth		
1½" x	3%"	5½"	7¼"	9¼"	11¼"

*5%" members are industrial grade only; the product must be kept wrapped prior to installation, be flashed on-site, and should be clad when an architectural- or appearance-grade finish is required.

Product Identification

- · Product has a muted olive tint
- Stamp: "PWT TREATED"
- Special PWT Treated LVL paper wrap







Reference Design Values

DRY USE - 100% LOAD DURATION

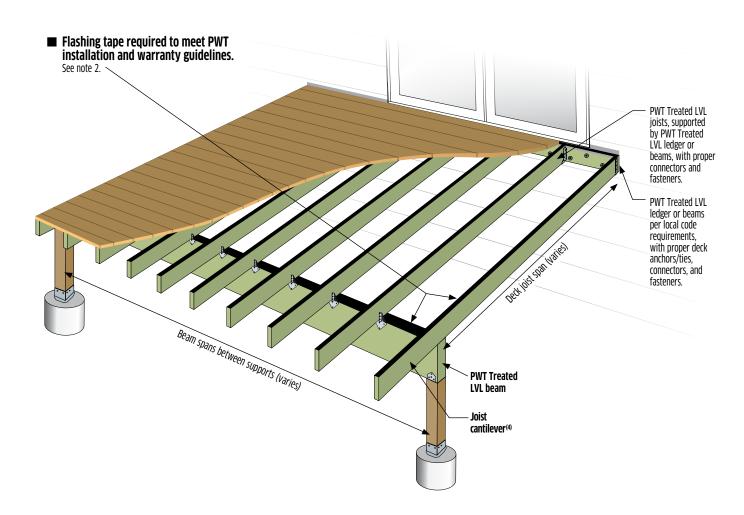
2.0E 2800Fb PWT Treated LVL	Beam Orientation (psi)	Plank Orientation (psi)
True (Shear-Free) Modulus of Elasticity, E(1)(4) =	2,000,000	2,000,000
Bending (beam), Fb ⁽²⁾⁽³⁾ =	2,800	2,800
Horizontal Shear (beam), F _V =	285	150
Compression perpendicular to grain [psi], $F_c^{(1)}$ =	850	650

- 1. Do not adjust for load duration.
- For Beam Orientation adjust by (12/d)^{0.2}, where d is the depth of the member [inches].
 For Plank Orientation adjust by (1.75/d)^{0.33} <= 1.00, where d is the depth of the
 member [inches].
- 3. Adjust by 1.04 for repetitive members as defined in the NDS.
- 4. True(Shear-Free) modulus of elasticity does not account for shear deformation.
- 5. PWT Treated LVL used as sill plate requires gasket seal.
- 6. See Product Reports APA <u>PR-L329</u> and ICC-ES <u>ESR-2909</u> for additional design criteria

Note: Not all exterior conditions are wet-use and not all interior conditions are dry use. See *What are wet use conditions* on our website for more information on this subject.

SYSTEM COMPARISON

Features	PWT Treated Deck Framing	Ordinary Pressure-Treated Lumber	Steel Deck Framing
25-Year Warranty	YES	NO	YES
Ability to Stain at Time of Installation	YES	Limited Results	NO
Available in Long Lengths	YES	NO	NO
Consistent Dimension (No Planing)	YES	NO	YES
Interior Use	YES	NO	_



Notes:

- 1. For diagonal bracing, see AWC Deck Construction Guide, visit pwtewp.com/treated.
- 2. For flashing tape recommendations, visit pwtewp.com/treated.
- 3. For fastener and hanger information, visit strongtie.com/deckcenter.
- 4. Design conditions outside of the scope of this guide may be designed using the Exacte by PWT software.

Joist cantilever lengths in this guide are limited to 2 feet.

For longer cantilevers, please use the

Exacte by PWT sizing software.

Joist Lengths

Improved Performance

DRY USE - 40 PSF LIVE LOAD AND 10 PSF DEAD LOAD - L/480

	Nominal	Actual	With or Without 2' Cantilever				
Product	Size	Size	Joist Spacing (o.c.)				
	[in]	[in]	12"	16"	24"		
	2 x 6	1½ x 5½	10' 6"	9' 6"	8' 3"		
PWT Treated LVL	2 x 8	1½ x 7¼	13' 9"	12' 6"	10' 11"		
PWI HEALEU LVL	2 x 10	1½ x 9¼	17' 7"	15' 11"	13' 10"		
	2 x 12	1½ x 11¼	21' 4"	19' 4"	16' 10"		
Dungarius Tunatad	2 x 8	1½ x 7¼	12' 4"	11' 1"	9' 1"		
Pressure Treated No. 2 Southern pine	2 x 10	1½ x 9¼	15' 2"	13' 2"	10' 9"		
No. 2 Jobthern pine	2 x 12	1½ x 11¼	17' 10"	15' 6"	12' 8"		
Pressure Treated No. 2 Hem-fir (incised)	2 x 8	1½ x 7¼	11' 10"	10' 5"	8' 6"		
	2 x 10	1½ x 9¼	14' 8"	12' 9"	10' 5"		
	2 x 12	1½ x 11¼	17' 0"	14' 9"	12' 1"		

DRY USE - 60 PSF LIVE LOAD AND 10 PSF DEAD LOAD - L/480

	Nominal	Actual	With or Without 2' Cantilever				
Product	Size	Size	Joist Spacing (o.c.)				
	[in]	[in]	12"	16"	24"		
	2 x 6	1½ x 5½	9' 2"	8' 3"	7' 3"		
PWT Treated LVL	2 x 8	1½ x 7¼	12' 0"	10' 11"	9' 6"		
PWI Ireateu LVL	2 x 10	1½ x 9¼	15' 4"	13' 10"	12' 1"		
	2 x 12	1½ x 11¼	18' 7"	16' 10"	14' 8"		
Burney Turney	2 x 8	1½ x 7¼	10' 10"	9' 5"	7' 8"		
Pressure Treated No. 2 Southern pine	2 x 10	1½ x 9¼	12' 10"	11' 2"	9' 1"		
No. 2 Journal of pine	2 x 12	1½ x 11¼	15' 1"	13' 1"	10' 9"		
Pressure Treated No. 2 Hem-fir (incised)	2 x 8	1½ x 7¼	10' 2"	8' 10"	7' 3"		
	2 x 10	1½ x 9¼	12' 5"	10' 9"	8' 10"		
	2 x 12	1½ x 11¼	14' 5"	12' 6"	10' 2"		

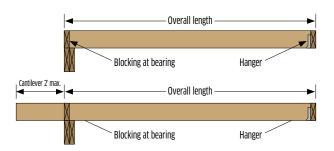
Code Minimums

DRY USE - 40 PSF LIVE LOAD AND 10 PSF DEAD LOAD - L/360

DRY OSE - 40 FSF LIVE LOAD AND 10 FSF DEAD LOAD - L/300								
	Nominal	Actual	With or Without 2' Cantilever					
Product	Size	Size [in]	Joist Spacing (o.c.)					
	[in]		12"	16"	24"			
	2 x 6	1½ x 5½	11' 6"	10' 6"	9' 2"			
DWT Treated IVI	2 x 8	1½ x 7¼	15' 2"	13' 9"	12' 0"			
PWT Treated LVL	2 x 10	1½ x 9¼	19' 4"	17' 7"	15' 4"			
	2 x 12	1½ x 11¼	23' 6"	21' 4"	18' 7"			
	2 x 8	1½ x 7¼	12' 10"	11' 1"	9' 1"			
Pressure Treated No. 2 Southern pine	2 x 10	1½ x 9¼	15' 2"	13' 2"	10' 9"			
No. 2 Journal II pille	2 x 12	1½ x 11¼	17' 10"	15' 6"	12' 8"			
Pressure Treated No. 2 Hem-fir (incised)	2 x 8	1½ x 7¼	12' 1"	10' 5"	8' 6"			
	2 x 10	1½ x 9¼	14' 8"	12' 9"	10' 5"			
	2 x 12	1½ x 11¼	17' 0"	14' 9"	12' 1"			

Notes:

- Spans are the overall length of a simple span. Up to a 2' cantilever can be added to the overall length at one end.
- 2. End bearing length must be at least 1.5".
- 3. Cantilever bearing length must be at least 3".
- 4. Joists require support across their full thickness or width.
- 5. Joist tables are based upon 100% duration of load.
- 6. Use the Exacte by PWT software for conditions outside the scope of this guide.
- 7. Lateral bracing for the compression edge must be provided.
- 8. Provide support to prevent lateral movement and rotation at the bearings.
- 9. The spans for Pressure Treated Dimension Lumber are provided as a reference only. Do not use these spans for specification or design.



DRY USE - 60 PSF LIVE LOAD AND 10 PSF DEAD LOAD - L/360

	Nominal	Actual	With or Without 2' Cantilever				
Product	Size	Size	Joist Spacing (o.c.)				
	[in]	[in]	12"	16"	24"		
	2 x 6	1½ x 5½	10' 1"	9' 2"	7' 11"		
PWT Treated LVL	2 x 8	1½ x 7¼	13' 3"	12' 0"	10' 6"		
PWI Ireateu LVL	2 x 10	1½ x 9¼	16' 10"	15' 4"	13' 4"		
	2 x 12	1½ x 11¼	20' 6"	18' 7"	16' 2"		
Burney Turney	2 x 8	1½ x 7¼	10' 10"	9' 5"	7' 8"		
Pressure Treated No. 2 Southern pine	2 x 10	1½ x 9¼	12' 10"	11' 2"	9' 1"		
No. 2 Journal of pine	2 x 12	1½ x 11¼	15' 1"	13' 1"	10' 9"		
Pressure Treated No. 2 Hem-fir (incised)	2 x 8	1½ x 7¼	10' 2"	8' 10"	7' 3"		
	2 x 10	1½ x 9¼	12' 5"	10' 9"	8' 10"		
	2 x 12	1½ x 11¼	14' 5"	12' 6"	10' 2"		

Important!

PWT Treated LVL may be used in severe above-ground UC3B applications. PWT Treated LVL has a moisture content of 6-8% when it leaves the factory. It is imperative that PWT Treated LVL remains protected from precipitation and high humidity until it is installed. Once installed and flashed as stated in the installation guidelines, it will remain dimensionally stable for many years to come.

Beam Spans

Improved Performance

DRY USE - 40 PSF LIVE LOAD AND 10 PSF DEAD LOAD - L/480

		Deck Joist Overall Length with 2' Cantilever [ft]									
Size	6	8	10	12	14	16	18				
[in]		Deck Joist Overall Length [ft]									
	10	12	14	16	18	20	22				
3½ x 9½	13'-8"	13'-0"	12'-5"	11'-11"	11'-5"	11'-1"	10'-9"				
3½ x 11%	17'-1"	16'-2"	15'-5"	14'-10"	14'-3"	13'-9"	13'-4"				
3½ x 14	20'-1"	19'-1"	18'-2"	17'-5"	16'-9"	16'-2"	15'-8"				
3½ x 16	22'-11"	21'-9"	20'-9"	19'-10"	19'-1"	18'-5"	17'-10"				
2-ply 1% x 18	25'-9"	24'-5"	23'-3"	22'-4"	21'-6"	20'-9"	20'-1"				
5¼ x 9½	15'-9"	14'-11"	14'-3"	13'-8"	13'-2"	12'-8"	12'-4"				
5¼ x 11%	19'-7"	18'-7"	17'-9"	17'-0"	16'-4"	15'-10"	15'-4"				
5¼ x 14	23'-0"	21'-10"	20'-10"	20'-0"	19'-3"	18'-7"	18'-0"				
5¼ x 16	26'-3"	24'-11"	23'-10"	22'-10"	22'-0"	21'-3"	20'-7"				
3-ply 1¾ x 18	29'-7"	28'-1"	26'-9"	25'-8"	24'-8"	23'-10"	23'-1"				

DRY USE - 60 PSF LIVE LOAD AND 10 PSF DEAD LOAD - L/480

		Deck Jo	ist Overall	Length wi	th 2' Cantil	ever [ft]					
Size	6	8	10	12	14	16	18				
[in]		Deck Joist Overall Length [ft]									
	10	12	14	16	18	20	22				
3½ x 9½	11'-11"	11'-4"	10'-10"	10'-4"	9'-11"	9'-7"	9'-4"				
3½ x 11%	14'-10"	14'-1"	13'-5"	12'-10"	12'-5"	11'-11"	11'-7"				
3½ x 14	17'-6"	16'-7"	15'-10"	15'-2"	14'-7"	14'-1"	13'-7"				
3½ x 16	19'-11"	18'-11"	18'-0"	17'-3"	16'-7"	16'-0"	15'-6"				
2-ply 1¾ x 18	22'-5"	21'-3"	20'-3"	19'-5"	18'-8"	18'-0"	17'-5"				
5¼ x 9½	13'-8"	13'-0"	12'-5"	11'-11"	11'-5"	11'-1"	10'-9"				
5¼ x 11%	17'-1"	16'-2"	15'-5"	14'-10"	14'-3"	13'-9"	13'-4"				
5¼ x 14	20'-1"	19'-1"	18'-2"	17'-5"	16'-9"	16'-2"	15'-8"				
5¼ x 16	22'-11"	21'-9"	20'-9"	19'-10"	19'-1"	18'-5"	17'-10"				
3-ply 1% x 18	25'-9"	24'-5"	23'-3"	22'-4"	21'-6"	20'-9"	20'-1"				

Code Minimums

DRY USE - 40 PSF LIVE LOAD AND 10 PSF DEAD LOAD - L/360

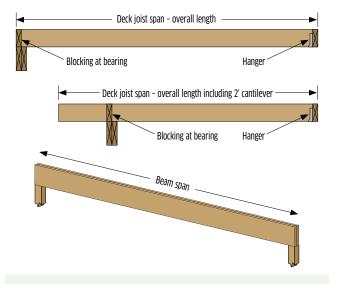
DRI OSE 401 SI EIVE EOND AND 101 SI DEND EOND E/300											
		Deck Joist Overall Length with 2' Cantilever [ft]									
Size	6	8	10	12	14	16	18				
[in]		Deck Joist Overall Length [ft]									
	10	12	14	16	18	20	22				
3½ x 9½	15'-1"	14'-4"	13'-8"	13'-1"	12'-8"	12'-2"	11'-10"				
3½ x 11%	18'-10"	17'-10"	17'-0"	16'-4"	15'-9"	15'-2"	14'-9"				
3½ x 14	22'-2"	21'-0"	20'-0"	19'-2"	18'-6"	17'-10"	17'-4"				
3½ x 16	25'-3"	24'-0"	22'-10"	21'-11"	21'-1"	20'-4"	19'-9"				
2-ply 1¾ x 18	28'-5"	26'-11"	25'-8"	24'-7"	23'-8"	22'-11"	22'-2"				
5¼ x 9½	17'-4"	16'-5"	15'-8"	15'-1"	14'-6"	14'-0"	13'-7"				
5¼ x 11%	21'-7"	20'-6"	19'-7"	18'-9"	18'-1"	17'-5"	16'-11"				
5¼ x 14	25'-5"	24'-1"	23'-0"	22'-1"	21'-3"	20'-6"	19'-11"				
5¼ x 16	29'-0"	27'-6"	26'-3"	25'-2"	24'-3"	23'-5"	22'-8"				
3-ply 1¾ x 18	32'-7"	30'-11"	29'-6"	28'-3"	27'-3"	26'-4"	25'-6"				

Notes:

- 1. Beams spans are defined as overall length, simple spans only.
- 2. Bearing length must be at least 3.5".
- 3. Beams require support across their full thickness or width.
- 4. Beam spans are based upon 100% duration of load.
- 5. Use the Exact by PWT software for conditions outside the scope of this guide.
- 6. Lateral bracing for the compression edge must be provided.
- 7. Provide support to prevent lateral movement and rotation at the bearings.

DRY USE - 60 PSF LIVE LOAD AND 10 PSF DEAD LOAD - L/360

DRI OSE COTSI EITE EOND AND TOTSI DEAD EOND EJSCO										
		Deck Jo	ist Overall	Length wit	th 2' Cantil	ever [ft]				
Size	6	8	10	12	14	16	18			
[in]		Deck Joist Overall Length [ft]								
	10	12	14	16	18	20	22			
3½ x 9½	13'-2"	12'-6"	11'-11"	11'-5"	11'-0"	10'-7"	10'-3"			
3½ x 11%	16'-5"	15'-7"	14'-10"	14'-3"	13'-8"	13'-2"	12'-10"			
3½ x 14	19'-3"	18'-4"	17'-5"	16'-9"	16'-1"	15'-6"	15'-0"			
3½ x 16	22'-0"	20'-10"	19'-11"	19'-1"	18'-4"	17'-9"	17'-2"			
2-ply 1% x 18	24'-9"	23'-5"	22'-4"	21'-5"	20'-7"	19'-11"	19'-3"			
5¼ x 9½	15'-1"	14'-4"	13'-8"	13'-1"	12'-8"	12'-2"	11'-10"			
5¼ x 11%	18'-10"	17'-10"	17'-0"	16'-4"	15'-9"	15'-2"	14'-9"			
5¼ x 14	22'-2"	21'-0"	20'-0"	19'-2"	18'-6"	17'-10"	17'-4"			
5¼ x 16	25'-3"	24'-0"	22'-10"	21'-11"	21'-1"	20'-4"	19'-9"			
3-ply 1¾ x 18	28'-5"	26'-11"	25'-8"	24'-7"	23'-8"	22'-11"	22'-2"			



PWT Treated LVL Beams Loads 100%

DRY USE - ALLOWABLE UNIFORM LOADS - POUNDS PER LINEAL FOOT

					Beam			
Span (ft)	97		11	% "		4"	16	
Span (It)	LL (plf)		LL (plf)		LL (plf)		LL (plf)	
	Bearin	ıg (in)	Bearii	ng (in)		ng (in)	Bearin	g (in)
8	628	769	-	1010	-	1248	-	1494
	2.1 /		2.8 ,			/ 8.4	4.2 /	
10	337	502	628	763	-	932	-	1102
	200	297	379	/ 6.5 528	599	/ 7.9 712	3.8 / 860	873
12	1.5		2.2			7.2	3.6 /	
	128	188	244	361	390	521	566	664
14	1.5		1.7			/ 6.2	3.2 /	
16	87	126	166	244	267	395	390	506
16	1.5		1.5		2.2	5.4	2.8 /	6.9
18	61	88	118	172	190	280	279	398
10	1.5	/3	1.5		1.7		2.5 /	
20			87	125	140	204	207	303
			1.5 65	93	1.5	/ 3.5	2.1 / 157	228
22				/3		153	1.8 /	
			51	71	82	117	122	176
24			1.5			5/3	1.5 /	
20					65	91	96	137
26	,			•		73	1.5 /	3.2
28					52	72	77	109
				Г	1.5	5/3	1.5	
30							63	88
						I	52	71
32							1.5	
							1.3	J
34						I		
26								
36							'	

Table Usage:

- 1. Select the required Span.
- 2. Divide the design loads by the desired number of plies to verify each ply of the beam.
- 3. Select a beam that exceeds the Total Load (TL) and the Live Load (LL).
- 4. Check the bearing length (End / Intermediate) requirements.

Design Assumptions:

- 1. Span is the center-to-center distance between the supports and is valid for simple or equal, continuous span applications.
- 2. The values in the tables are for uniform loads only.
- 3. Total Load is for normal (100%) duration and has been adjusted to account for the self-weight of the member.
- 4. Live Load deflection has been limited to L/360.
- 5. Total deflection has been limited to L/240. Long term deflection (creep) has not been considered.
- 6. These tables assume full lateral support of the compression edge. Full support is considered to be a maximum unbraced length of 24."
- 7. Proper bearing must be provided. Bearing lengths are based on the strength of the PWT Treated LVL (850 psi).

Additional Notes:

- 1. The allowable loads represent the capacity of the member in pounds per lineal foot (plf) of length.
- 2. The designer shall check both the Total Load (TL) and the appropriate Live Load (LL) column.
- 3. Where the Live Load (LL) is blank, the Total Load (TL) governs the design.
- 4. If connecting multiple plies the member width shall be properly connected. Refer to the multiple-ply connections on page 16.
- 5. Do not use a product where the values are blank, "", without further analysis by a design professional.

PWT Treated LVL Beams Loads 100%

DRY USE - ALLOWABLE UNIFORM LOADS - POUNDS PER LINEAL FOOT

<u> </u>	OWADEE ONLY ON THE EGADS	T CONDSTENE LINEAR TOOT	3½" Beam or 2-ply		
Span (ft)	9½"	11%"	14"	16"	18"
Spail (IL)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)
	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in) - 2989 4.2 / 10.1	Bearing (in)
8	1257 1538	- 2021	- 2497	- 2989	- 3530
	2.1 / 5.2	2.8 / 6.8	3.5 / 8.4	4.2 / 10.1	5 / 11.9
10	675 1005	1257 1526	- 1864	- 2205	- 2571
	1.7 / 4.3	2.6 / 6.5	3.2 / 7.9	3.8 / 9.3	4.5 / 10.9
12	401 594	758 1057	1198 1424	1721 1746	- 2021
	1.5 / 3	2.2 / 5.4	3/7.2	3.6 / 8.9	4.2 / 10.3
14	257 377 1.5 / 3	489 723 1.7 / 4.3	780 1043 2.5 / 6.2	1132 1328 3.2 / 7.9	1561 1643 4 / 9.8
	1.5 / 5	333 489	535 790	780 1013	1084 1254
16	1.5 / 3	1.5 / 3.4	2.2 / 5.4	2.8 / 6.9	3.5 / 8.5
	123 176	237 344	381 560	559 797	780 987
18	1.5 / 3	1.5/3	1.7 / 4.3	2.5 / 6.1	3.1 / 7.6
20	90 127	174 250	281 409	414 606	579 796
20	1.5/3	1.5 / 3	1.5 / 3.5	2.1 / 5.2	2.8 / 6.8
22	68 93	131 186	213 307	314 457	441 646
	1.5 / 3	1.5 / 3	1.5/3	1.8 / 4.4	2.5 / 6.1
24	52 70	102 142	165 235	244 352	343 499
	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	2.1 / 5.2
26		80 110	130 183	193 275	272 392
		1.5/3	1.5 / 3	1.5 / 3.2	1.8 / 4.5
28		64 86	105 145 1.5 / 3	155 219 1.5 / 3	219 313 1.6 / 3.9
		1.5 / 3	85 116	1.5 / 5	179 253
30			1.5/3	1.5/3	1.5 / 3.4
			70 93	105 143	148 206
32			1.5/3	1.5 / 3	1.5 / 3
24			59 76	87 117	124 170
34	,	'	1.5/3	1.5/3	1.5 / 3
36				74 96	105 141
30				1.5 / 3	1.5 / 3

Table Usage:

- 1. Select the required Span.
- 2. Divide the design loads by the desired number of plies to verify each ply of the beam.
- 3. Select a beam that exceeds the Total Load (TL) and the Live Load (LL).
- 4. Check the bearing length (End / Intermediate) requirements.

Design Assumptions:

- 1. Span is the center-to-center distance between the supports and is valid for simple or equal, continuous span applications.
- 2. The values in the tables are for uniform loads only.
- 3. Total Load is for normal (100%) duration and has been adjusted to account for the self-weight of the member.
- 4. Live Load deflection has been limited to L/360.
- 5. Total deflection has been limited to L/240. Long term deflection (creep) has not been considered.
- 6. These tables assume full lateral support of the compression edge. Full support is considered to be a maximum unbraced length of 24."
- 7. Proper bearing must be provided. Bearing lengths are based on the strength of the PWT Treated LVL (850 psi).

Additional Notes:

- 1. The allowable loads represent the capacity of the member in pounds per lineal foot (plf) of length.
- 2. The designer shall check both the Total Load (TL) and the appropriate Live Load (LL) column.
- 3. Where the Live Load (LL) is blank, the Total Load (TL) governs the design.
- 4. If connecting multiple plies the member width shall be properly connected. Refer to the multiple-ply connections on page 16.
- 5. Do not use a product where the values are blank, "", without further analysis by a design professional.

PWT Treated LVL Beams Loads 100%

DRY USE - ALLOWABLE UNIFORM LOADS - POUNDS PER LINEAL FOOT

	5¼" Beam or 3-ply						
Span (ft)	9½"	11%"	14"	16"	18"		
Span (It)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)		
	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in)		
8	1886 2237	- 3032	Bearing (in) - 3746	- 4484 4.2 / 10.1	- 5295		
0	2.1 / 5	2.8 / 6.8	3.5 / 8.4	4.2 / 10.1	5 / 11.9		
10	1013 1506	1886 2290	- 2797	- 3308	- 3857		
10	1.7 / 4.3	2.6 / 6.5	3.2 / 7.9	3.8 / 9.3	4.5 / 10.9		
12	602 890	1137 1586	1797 2136	2582 2619	- 3031		
12	1.5/3	2.2 / 5.4	3 / 7.2	3.6 / 8.9	4.2 / 10.3		
14	386 564	734 1085	1171 1564	1698 1992	2342 2465		
2.7	1.5 / 3	1.7 / 4.3	2.5 / 6.2	3.2 / 7.9	4 / 9.8		
16	261 377	500 734	802 1185	1171 1520	1626 1881		
	1.5 / 3	1.5 / 3.4	2.2 / 5.4	2.8 / 6.9	3.5 / 8.5		
18	185 263	355 517	572 840	839 1196	1171 1481		
	1.5/3	1.5/3	1.7 / 4.3	2.5 / 6.1	3.1 / 7.6		
20	135 189	261 376	422 614	621 910	869 1195		
	1.5/3	1.5 / 3	1.5 / 3.5	2.1 / 5.2	2.8 / 6.8		
22	102 139	197 280	320 461	472 686	662 969		
	79 1.5 / 3 79 104	1.5 / 3 153 213	1.5 / 3	1.8 / 4.4 366 528	2.5 / 6.1 515 749		
24	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	2.1 / 5.2		
	62 79	120 165	196 275	290 413	409 589		
26	1.5/3	1.5 / 3	1.5 / 3	1.5 / 3.2	1.8 / 4.5		
	1.5 / 5	97 129	157 217	233 328	329 470		
28		1.5 / 3	1.5/3	1.5 / 3	1.6 / 3.9		
		79 102	128 174	190 264	269 379		
30	ļ.	1.5 / 3	1.5/3	1.5 / 3	1.5 / 3.4		
		65 81	106 140	157 214	223 310		
32		1.5/3	1.5/3	1.5/3	1.5 / 3		
24			88 114	131 176	186 255		
34	'		1.5/3	1.5/3	1.5 / 3		
26			75 93	111 145	157 212		
36		<u>'</u>	1.5/3	1.5/3	1.5 / 3		

Table Usage:

- Select the required Span.
- 2. Divide the design loads by the desired number of plies to verify each ply of the beam.
- 3. Select a beam that exceeds the Total Load (TL) and the Live Load (LL).
- 4. Check the bearing length (End / Intermediate) requirements.

Design Assumptions:

- 1. Span is the center-to-center distance between the supports and is valid for simple or equal, continuous span applications.
- 2. The values in the tables are for uniform loads only.
- 3. Total Load is for normal (100%) duration and has been adjusted to account for the self-weight of the member.
- 4. Live Load deflection has been limited to L/360.
- 5. Total deflection has been limited to L/240. Long term deflection (creep) has not been considered.
- 6. These tables assume full lateral support of the compression edge. Full support is considered to be a maximum unbraced length of 24."
- 7. Proper bearing must be provided. Bearing lengths are based on the strength of the PWT Treated LVL (850 psi).

Additional Notes:

- 1. The allowable loads represent the capacity of the member in pounds per lineal foot (plf) of length.
- 2. The designer shall check both the Total Load (TL) and the appropriate Live Load (LL) column.
- 3. Where the Live Load (LL) is blank, the Total Load (TL) governs the design.
- 4. If connecting multiple plies the member width shall be properly connected. Refer to the multiple-ply connections on page 16.
- 5. Do not use a product where the values are blank, "", without further analysis by a design professional.

PWT Treated LVL Beams Loads 115%

DRY USE - ALLOWABLE UNIFORM LOADS - POUNDS PER LINEAL FOOT

DRI OSE ALL	OWADEL OWN ORM				Beam			
Cnan (ft)	97	2"	11	% "	1	4"	16	ıı .
Span (ft)	LL (plf)	TL (plf)	LL (plf)	TL (plf)	LL (plf)	TL (plf)	LL (plf)	TL (plf)
	Bearin	ıg (in)	Bearii	ng (in)		ng (in)	Bearin	
8	-	885	-	1163	-	1437	-	1720
	2.5		3.2			9.7	4.9 / 1	
10	506	587	-	878	-	1073	-	1269
	2/			7.4		/ 9.1	4.4 / 1	
12	301	397	568	609	- 24	819	-	1005
	1.6 193	253	2.5 , 367	446	585	/ 8.3 600	4.2 / 1	764
14	1.5		2.2			/ 7.1	3.7 /	
	130	170	250	328	401	458	- 5.7 /	583
16	1.5		1.8			/ 6.2	3.2 /	
10	92	119	177	231	286	360	419	459
18	1.5		1.5	3.6	2.2	5.5	2.9 /	
20	67	86	130	168	211	275	310	371
	1.5	/3	1.5			/ 4.7	2.6 /	
22			98	126	160	207	236	305
			1.5			/ 3.9	2.3 /	
24			76 1.5	96	124	159 / 3.3	183 2 / 4	237
			60	75 75	98	124	145	186
26			1.5			5/3	1.7 /	
			1.3	, 3	78	98	116	148
28						/3	1.5 /	
30					64	79	95	119
30					1.5	/3	1.5 /	
32							78	97
						T	1.5 /	
34							65 1.5 /	80
							1.5 /	3
36								

Table Usage:

- 1. Select the required Span.
- 2. Divide the design loads by the desired number of plies to verify each ply of the beam.
- 3. Select a beam that exceeds the Total Load (TL) and the Live Load (LL).
- 4. Check the bearing length (End / Intermediate) requirements.

Design Assumptions:

- 1. Span is the center-to-center distance between the supports and is valid for simple or equal, continuous span applications.
- 2. The values in the tables are for uniform loads only.
- 3. Total Load is for Snow (115%) duration and has been adjusted to account for the self-weight of the member.
- 4. Live Load deflection has been limited to L/240.
- 5. Total deflection has been limited to L/180. Long term deflection (creep) has not been considered.
- 6. These tables assume full lateral support of the compression edge. Full support is considered to be a maximum unbraced length of 24."
- 7. Proper bearing must be provided. Bearing lengths are based on the strength of the PWT Treated LVL (850 psi).

Additional Notes:

- 1. The allowable loads represent the capacity of the member in pounds per lineal foot (plf) of length.
- 2. The designer shall check both the Total Load (TL) and the appropriate Live Load (LL) column.
- 3. Where the Live Load (LL) is blank, the Total Load (TL) governs the design.
- 4. If connecting multiple plies the member width shall be properly connected. Refer to the multiple-ply connections on page 16.
- 5. Do not use a product where the values are blank, "", without further analysis by a design professional.

PWT Treated LVL Beams Loads 115%

DRY USE - ALLOWABLE UNIFORM LOADS - POUNDS PER LINEAL FOOT

			3½" Beam or 2-ply		
Span (ft)	9½"	11%"	14"	16"	18"
Spail (IL)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)
	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in)
8	- 1770	- 2326	- 2874	- 3440	- 3553
	2.5 / 6	3.2 / 7.9	4 / 9./	4.9 / 11.6	5.1 / 12
10	1013 1175	- 1757	- 2146	- 2539	- 2839
10	2/5	3/7.4	3.7 / 9.1	4.4 / 10.7	5 / 12
12	602 795	1137 1218	- 1639	- 2010	- 2326
	1.6 / 4.1	2.5 / 6.2	3.4 / 8.3	4.2 / 10.2	4.9 / 11.8
14	386 506	734 892	1171 1201	- 1529	- 1892
	1.5 / 3	2.2 / 5.3	2.9 / 7.1	3.7 / 9.1	4.6 / 11.2
16	261 340	500 656	802 916	- 1167	- 1445
	1.5 / 3	1.8 / 4.5	2.5 / 6.2	3.2 / 7.9	4/9.8
18	185 238 1.5 / 3	355 463	572 721	839 919 2.9 / 7.1	- 1138 3.5 / 8.7
	135 172	1.5 / 3.6 261 337	2.2 / 5.5	621 742	869 918
20	1.5 / 3	1.5/3	1.9 / 4.7	2.6 / 6.4	3.2 / 7.9
	102 127	197 252	320 414	472 610	662 756
22	1.5 / 3	1.5/3	1.6 / 3.9	2.3 / 5.8	2.9 / 7.1
	79 96	153 193	248 318	366 474	515 633
24	1.5/3	1.5 / 3	1.5 / 3.3	2 / 4.9	2.6 / 6.5
	62 74	120 150	196 249	290 372	409 529
26	1.5/3	1.5 / 3	1.5/3	1.7 / 4.2	2.4 / 6
20		97 118	157 197	233 297	329 423
28	'	1.5 / 3	1.5/3	1.5 / 3.7	2.1 / 5.2
30		79 94	128 158	190 239	269 343
30		1.5 / 3	1.5 / 3	1.5 / 3.2	1.8 / 4.5
32		65 76	106 129	157 195	223 281
J2		1.5 / 3	1.5/3	1.5/3	1.6 / 4
34			88 105	131 161	186 232
34			1.5 / 3	1.5 / 3	1.5 / 3.5
36			75 87	111 134	157 194
			1.5 / 3	1.5 / 3	1.5 / 3.2

Table Usage:

- 1. Select the required Span.
- 2. Divide the design loads by the desired number of plies to verify each ply of the beam.
- 3. Select a beam that exceeds the Total Load (TL) and the Live Load (LL).
- 4. Check the bearing length (End / Intermediate) requirements.

Design Assumptions:

- 1. Span is the center-to-center distance between the supports and is valid for simple or equal, continuous span applications.
- 2. The values in the tables are for uniform loads only.
- 3. Total Load is for Snow (115%) duration and has been adjusted to account for the self-weight of the member.
- 4. Live Load deflection has been limited to L/240.
- 5. Total deflection has been limited to L/180. Long term deflection (creep) has not been considered.
- 6. These tables assume full lateral support of the compression edge. Full support is considered to be a maximum unbraced length of 24."
- 7. Proper bearing must be provided. Bearing lengths are based on the strength of the PWT Treated LVL (850 psi).

Additional Notes:

- 1. The allowable loads represent the capacity of the member in pounds per lineal foot (plf) of length.
- 2. The designer shall check both the Total Load (TL) and the appropriate Live Load (LL) column.
- 3. Where the Live Load (LL) is blank, the Total Load (TL) governs the design.
- 4. If connecting multiple plies the member width shall be properly connected. Refer to the multiple-ply connections on page 16.
- 5. Do not use a product where the values are blank, "", without further analysis by a design professional.

PWT Treated LVL Beams Loads 115%

DRY USE - ALLOWABLE UNIFORM LOADS - POUNDS PER LINEAL FOOT

			5¼" Beam or 3-ply		
Span (ft)	9%"	11%"	14"	16"	18"
Spail (II)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)
	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in)
8	- 2655	- 3489	Bearing (in) - 4311	- 5160 4.9 / 11.6	- 5330
	2.5 / 6	3.2 / 7.9	4 / 9.7	4.9 / 11.6	5.1 / 12
10	1520 1763	- 2636	- 3219	- 3808	- 4259
10	2/5	3 / 7.4	3.7 / 9.1	4.4 / 10.7	5 / 12
12	904 1192	1706 1827	- 2459	- 3016	- 3490
	1.6 / 4.1	2.5 / 6.2	3.4 / 8.3	4.2 / 10.2	4.9 / 11.8
14	579 759	1102 1338	1757 1802	- 2294	- 2838
	1.5/3	2.2 / 5.3	2.9 / 7.1	3.7 / 9.1	4.6 / 11.2
16	392 510	750 984	1204 1375	- 1751	- 2167
	1.5 / 3 277 357	1.8 / 4.5 533 695	2.5 / 6.2 859 1082	3.2 / 7.9 1259 1379	4 / 9.8
18	1.5 / 3	1.5 / 3.6	2.2 / 5.6	2.9 / 7.1	3.5 / 8.7
	203 258	392 506	633 825	931 1113	1304 1378
20	1.5 / 3	1.5 / 3	1.9 / 4.7	2.6 / 6.4	3.2 / 7.9
	153 191	296 379	480 621	708 916	994 1134
22	1.5/3	1.5 / 3	1.6 / 3.9	2.3 / 5.8	2.9 / 7.1
24	118 145	229 289	372 477	550 711	773 949
24	1.5/3	1.5/3	1.5 / 3.3	2 / 4.9	2.6 / 6.5
26	93 111	181 225	294 373	435 558	613 793
20	1.5/3	1.5/3	1.5/3	1.7 / 4.2	2.4 / 6
28	75 87	145 177	236 296	350 445	494 635
	1.5/3	1.5 / 3	1.5 / 3	1.5 / 3.7	2.1 / 5.2
30		118 141	193 238	286 359	404 514
		1.5 / 3	1.5/3	1.5 / 3.2	1.8 / 4.5
32		97 114	159 193	236 293	334 421
		1.5 / 3	1.5/3	1.5/3	1.6 / 4
34		01 72	133 158	197 242	280 348
		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5 236 291
36		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.2
		1.J / J	1.J / J	1.J / J	1.J / J.L

Table Usage:

- 1. Select the required Span.
- 2. Divide the design loads by the desired number of plies to verify each ply of the beam.
- 3. Select a beam that exceeds the Total Load (TL) and the Live Load (LL).
- 4. Check the bearing length (End / Intermediate) requirements.

Design Assumptions:

- 1. Span is the center-to-center distance between the supports and is valid for simple or equal, continuous span applications.
- 2. The values in the tables are for uniform loads only.
- 3. Total Load is for Snow (115%) duration and has been adjusted to account for the self-weight of the member.
- 4. Live Load deflection has been limited to L/240.
- 5. Total deflection has been limited to L/180. Long term deflection (creep) has not been considered.
- 6. These tables assume full lateral support of the compression edge. Full support is considered to be a maximum unbraced length of 24."
- 7. Proper bearing must be provided. Bearing lengths are based on the strength of the PWT Treated LVL (850 psi).

Additional Notes:

- 1. The allowable loads represent the capacity of the member in pounds per lineal foot (plf) of length.
- 2. The designer shall check both the Total Load (TL) and the appropriate Live Load (LL) column.
- 3. Where the Live Load (LL) is blank, the Total Load (TL) governs the design.
- 4. If connecting multiple plies the member width shall be properly connected. Refer to the multiple-ply connections on page 16.
- 5. Do not use a product where the values are blank, "", without further analysis by a design professional.

PWT Treated LVL Beams Loads 125%

DRY USE - ALLOWABLE UNIFORM LOADS - POUNDS PER LINEAL FOOT

	OWADEL OWN OWN		TER EINERET OUT		Beam			
Span (ft)	91/2	/ II 2	11	.78"	14	1 "	16	
Spail (IL)	LL (plf)	TL (plf)	LL (plf)	TL (plf)	LL (plf)	TL (plf)	LL (plf)	
	Bearin	g (in)	Beari	ng (in)	Bearin	ng (in)	Bearin	g (in)
8	943	962	-	1264	-	1562	-	1777
	2.7 /			/ 8.5	4.4 /		5/	
10	506	639	943	955	-	1167	-	1380
	301	397	568	/ 8.1 662	4.1 /	891	4.9 /	1093
12	1.6			/ 6.7	3.7		4.6 /	
	193	253	367	484	585	653	4.0 /	831
14	1.5			/ 5.8	3.2 /		4/	
4.5	130	170	250	328	401	498	585	635
16	1.5	/3	1.8	/ 4.5	2.8 /	6.8	3.5 /	
18	92	119	177	231	286	375	419	500
10	1.5			/ 3.6	2.3 /		3.1 /	
20	67	86	130	168	211	275	310	403
	1.5	/ 3		126	1.9 /		2.8 /	
22			98	126	160	207	236	307
			76	96	124	159	183	237
24				5/3	1.5 /		2/	
			60	75	98	124	145	186
26	,			/3	1.5		1.7 /	
28					78	98	116	148
					1.5		1.5 /	
30					64	79	95	119
				T	1.5	/3	1.5 /	
32							78 1.5	97
				1			65	80
34				1			1.5	
							1.5	, ,
36				1				

Table Usage:

- 1. Select the required Span.
- 2. Divide the design loads by the desired number of plies to verify each ply of the beam.
- 3. Select a beam that exceeds the Total Load (TL) and the Live Load (LL).
- 4. Check the bearing length (End / Intermediate) requirements.

Design Assumptions:

- 1. Span is the center-to-center distance between the supports and is valid for simple or equal, continuous span applications.
- 2. The values in the tables are for uniform loads only.
- 3. Total Load is for Roof (125%) duration and has been adjusted to account for the self-weight of the member.
- 4. Live Load deflection has been limited to L/240.
- 5. Total deflection has been limited to L/180. Long term deflection (creep) has not been considered.
- 6. These tables assume full lateral support of the compression edge. Full support is considered to be a maximum unbraced length of 24."
- 7. Proper bearing must be provided. Bearing lengths are based on the strength of the PWT Treated LVL (850 psi).

Additional Notes:

- 1. The allowable loads represent the capacity of the member in pounds per lineal foot (plf) of length.
- 2. The designer shall check both the Total Load (TL) and the appropriate Live Load (LL) column.
- 3. Where the Live Load (LL) is blank, the Total Load (TL) governs the design.
- 4. If connecting multiple plies the member width shall be properly connected. Refer to the multiple-ply connections on page 16.
- 5. Do not use a product where the values are blank, "", without further analysis by a design professional.

PWT Treated LVL Beams Loads 125%

DRY USE - ALLOWABLE UNIFORM LOADS - POUNDS PER LINEAL FOOT

	OWADEL ONII OKM LOADS	TOURDS FER LINEAL FOOT	3½" Beam or 2-ply		
Cnan (ft)	9½"	11%"	14"	16"	18"
Span (ft)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)
	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in)
8	1886 1925	- 2529	- 3125	- 3555	- 3553
	2.7 / 6.5	3.5 / 8.5	4.4 / 10.5	5.1 / 12	5.1 / 12
10	1013 1278	1886 1911	- 2334	- 2761	- 2839
-10	2.2 / 5.4	3.3 / 8.1	4.1 / 9.9	4.9 / 11.7	5/12
12	602 795	1137 1324	- 1783	- 2186	- 2363
	1.6 / 4.1	2.7 / 6.7	3.7 / 9.1	4.6 / 11.1	5/12
14	386 506	734 968	1171 1307	- 1663	- 2023
	1.5 / 3 261 340	2.3 / 5.8	3.2 / 7.8 802 997	4 / 9.9 1171 1270	4.9 / 12
16	1.5 / 3				
	185 238	1.8 / 4.5 355 463	2.8 / 6.8	3.5 / 8.6 839 1000	4.4 / 10.7 1171 1238
18	1.5 / 3	1.5 / 3.6	2.3 / 5.8	3.1 / 7.7	3.9 / 9.5
	135 172	261 337	422 550	621 807	869 1000
20	1.5 / 3	1.5 / 3	1.9 / 4.7	2.8 / 6.9	3.5 / 8.5
	102 127	197 252	320 414	472 614	662 823
22	1.5/3	1.5 / 3	1.6 / 3.9	2.3 / 5.8	3.1 / 7.8
	79 96	153 193	248 318	366 474	515 671
24	1.5 / 3	1.5 / 3	1.5 / 3.3	2 / 4.9	2.8 / 6.9
26	62 74	120 150	196 249	290 372	409 529
20	1.5 / 3	1.5 / 3	1.5/3	1.7 / 4.2	2.4 / 6
28		97 118	157 197	233 297	329 423
20		1.5 / 3	1.5 / 3	1.5 / 3.7	2.1 / 5.2
30		79 94	128 158	190 239	269 343
		1.5/3	1.5/3	1.5 / 3.2	1.8 / 4.5
32		65 76	106 129	157 195	223 281
		1.5 / 3	1.5/3	1.5/3	1.6 / 4
34			88 105 1.5 / 3	131 161	186 232
			75 87	1.5 / 3	1.5 / 3.5 157 194
36			1.5/3	1.5 / 3	1.5 / 3.2
			1.3 / 3	1.3 / 3	1.J / 3.2

Table Usage:

- 1. Select the required Span.
- 2. Divide the design loads by the desired number of plies to verify each ply of the beam.
- 3. Select a beam that exceeds the Total Load (TL) and the Live Load (LL).
- 4. Check the bearing length (End / Intermediate) requirements.

Design Assumptions:

- 1. Span is the center-to-center distance between the supports and is valid for simple or equal, continuous span applications.
- 2. The values in the tables are for uniform loads only.
- 3. Total Load is for Roof (125%) duration and has been adjusted to account for the self-weight of the member.
- 4. Live Load deflection has been limited to L/240.
- 5. Total deflection has been limited to L/180. Long term deflection (creep) has not been considered.
- 6. These tables assume full lateral support of the compression edge. Full support is considered to be a maximum unbraced length of 24."
- 7. Proper bearing must be provided. Bearing lengths are based on the strength of the PWT Treated LVL (850 psi).

Additional Notes:

- 1. The allowable loads represent the capacity of the member in pounds per lineal foot (plf) of length.
- 2. The designer shall check both the Total Load (TL) and the appropriate Live Load (LL) column.
- 3. Where the Live Load (LL) is blank, the Total Load (TL) governs the design.
- 4. If connecting multiple plies the member width shall be properly connected. Refer to the multiple-ply connections on page 16.
- 5. Do not use a product where the values are blank, "", without further analysis by a design professional.

PWT Treated LVL Beams Loads 125%

DRY USE - ALLOWABLE UNIFORM LOADS - POUNDS PER LINEAL FOOT

	OWADLE ONII OKW LOADS	TOURDS FER LINEAL FOOT	5¼" Beam or 3-ply		
Cnan /ft)	9½"	11%"	14"	16"	18"
Span (ft)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)	LL (plf) TL (plf)
	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in)	Bearing (in)
8	2830 2887	- 3794	- 4688	- 5333	- 5330
	2.7 / 6.5	3.5 / 8.5	4.4 / 10.5	5.1 / 12	5.1 / 12
10	1520 1917	2830 2867	- 3501	- 4141	- 4259
10	2.2 / 5.4	3.3 / 8.1	4.1 / 9.9	4.9 / 11.7	5 / 12
12	904 1192	1706 1987	- 2675	- 3280	- 3545
	1.6 / 4.1	2.7 / 6.7	3.7 / 9.1	4.6 / 11.1	5/12
14	579 759	1102 1453	1757 1960	- 2495	- 3035
	1.5 / 3	2.3 / 5.8	3.2 / 7.8	4/9.9	4.9 / 12
16	392 510	750 984	1204 1496	1757 1905	
	1.5 / 3 277 357	1.8 / 4.5 533 695	2.8 / 6.8 859 1126	3.5 / 8.6 1259 1501	4.4 / 10.7 1757 1858
18	1.5 / 3	1.5 / 3.6	2.3 / 5.8	3.1 / 7.7	3.9 / 9.5
	203 258	392 506	633 825	931 1211	1304 1500
20	1.5 / 3	1.5 / 3	1.9 / 4.7	2.8 / 6.9	3.5 / 8.5
	153 191	296 379	480 621	708 922	994 1235
22	1.5/3	1.5 / 3	1.6 / 3.9	2.3 / 5.8	3.1 / 7.8
24	118 145	229 289	372 477	550 711	773 1007
24	1.5 / 3	1.5 / 3	1.5 / 3.3	2 / 4.9	2.8 / 6.9
26	93 111	181 225	294 373	435 558	613 793
20	1.5 / 3	1.5 / 3	1.5/3	1.7 / 4.2	2.4 / 6
28	75 87	145 177	236 296	350 445	494 635
	1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.7	2.1 / 5.2
30		118 141	193 238	286 359	404 514
		1.5 / 3	1.5/3	1.5 / 3.2	1.8 / 4.5
32		97 114	159 193	236 293	334 421
		1.5/3	1.5/3	1.5 / 3 197 242	1.6 / 4
34		81 92	133 158 1.5 / 3		280 348
		1.5 / 3	1.5 / 3	1.5 / 3	1.5 / 3.5 236 291
36		1.5/3	1.5 / 3	1.5 / 3	1.5 / 3.2
		1.3 / 3	1.3 / 3	1.J / 3	1.J / 3.2

Table Usage:

- 1. Select the required Span.
- 2. Divide the design loads by the desired number of plies to verify each ply of the beam.
- 3. Select a beam that exceeds the Total Load (TL) and the Live Load (LL).
- 4. Check the bearing length (End / Intermediate) requirements.

Design Assumptions:

- 1. Span is the center-to-center distance between the supports and is valid for simple or equal, continuous span applications.
- 2. The values in the tables are for uniform loads only.
- 3. Total Load is for Roof (125%) duration and has been adjusted to account for the self-weight of the member.
- 4. Live Load deflection has been limited to L/240.
- 5. Total deflection has been limited to L/180. Long term deflection (creep) has not been considered.
- 6. These tables assume full lateral support of the compression edge. Full support is considered to be a maximum unbraced length of 24."
- 7. Proper bearing must be provided. Bearing lengths are based on the strength of the PWT Treated LVL (850 psi).

Additional Notes:

- 1. The allowable loads represent the capacity of the member in pounds per lineal foot (plf) of length.
- 2. The designer shall check both the Total Load (TL) and the appropriate Live Load (LL) column.
- 3. Where the Live Load (LL) is blank, the Total Load (TL) governs the design.
- 4. If connecting multiple plies the member width shall be properly connected. Refer to the multiple-ply connections on page 16.
- 5. Do not use a product where the values are blank, "", without further analysis by a design professional.

Stair Stringers

Improved Performance

MAXIMUM STRINGER RUN DRY USE – 40 PSF LIVE LOAD AND 12 PSF DEAD LOAD

Tread Width	3(6"	42"	44"	48"			
Ctringer Denth		Number of Stringers						
Stringer Depth	2	3	3	3	3			
2-ply 1½" x 11¼"	14'-8"	14'-8"	13'-11"	13'-9"	13'-4"			
2-ply 1¾" x 11%"	15'-6"	15'-6"	14'-8"	14'-6"	14'-1"			
2-ply 1¾" x 14"	21'-4"	21'-4"	20'-3"	20'-0"	19'-5"			

Code Minimums

MAXIMUM STRINGER RUN DRY USE – 40 PSF LIVE LOAD AND 12 PSF DEAD LOAD

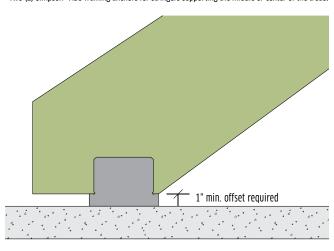
Tread Width	3(6"	42"	44"	48"		
Ctringer Denth	Number of Stringers						
Stringer Depth	2	3	3	3	3		
2-ply 1½" x 11¼"	11'-8"	11'-8"	11'-1"	10'-11"	10'-7"		
2-ply 1¾" x 11%"	12'-3"	12'-3"	11'-8"	11'-6"	11'-2"		
2-ply 1¾" x 14"	16'-11"	16'-11"	16'-1"	15'-10"	15'-5"		

Design Assumptions:

- 1. Stringer run refers to the horizontal projection of the stairs.
- Table values are based on a maximum step rise of 7¾" and a minimum step run of 10". Consult local building codes for restrictions on riser and tread dimensions.
- 3. Table values are limited by deflection equal to L/360 at live load or L/240 at total load.
- 4. Stringer runs are based on 100% duration of load.
- 5. Verify compliance with the local building code.
- 6. For stringers not covered by these tables consult with the design professional.
- 7. These spans are for dry use conditions only.
- 8. Stringers shall be separated from concrete or masonry with 1" stand-off.
- Spans have been limited by the capacity of framing anchors at the stringer to header connection listed below.

One (1) Simpson® A35 framing anchor for stringers supporting the ends of the tread.

Two (2) Simpson® A35 framing anchors for stringers supporting the middle or center of the tread.



For details on holes in LVL beams see pwtewp.com.

Installation & Maintenance instructions, on page 18, must be followed.

MAXIMUM STRINGER RUN DRY USE – 60 PSF LIVE LOAD AND 12 PSF DEAD LOAD

Tread Width	3	6"	42"	44"	48"		
Stringer Depth	Number of Stringers						
	2	3	3	3	3		
2-ply 1½" x 11¼"	12'-10"	12'-10"	12'-2"	12'-0"	11'-8"		
2-ply 1¾" x 11%"	13'-6"	13'-6"	12'-10"	12'-7"	12'-3"		
2-ply 1¾" x 14"	18'-8"	18'-8"	17'-8"	17'-3"	15'-9"		

MAXIMUM STRINGER RUN DRY USE – 60 PSF LIVE LOAD AND 12 PSF DEAD LOAD

Tread Width	3(6"	42"	44"	48"		
Stringer Depth	Number of Stringers						
	2	3	3	3	3		
2-ply 1½" x 11¼"	10'-2"	10'-2"	9'-8"	9'-6"	9'-3"		
2-ply 1¾" x 11%"	10'-9"	10'-9"	10'-2"	10'-0"	9'-9"		
2-ply 1¾" x 14"	14'-10"	14'-10"	14'-1"	13'-10"	13'-6"		

General Guidelines:

- 1. Stringers are not stable until treads and risers are securely in place.
- 2. To minimize squeaks, install treads with panel adhesive in addition to nails or screws.
- 3. A 12'-7" floor-to-floor height (or between landings) is the maximum allowed by the IRC.
- 4. General guidelines for calculating Step Rise and Run:

Table values are based on a maximum step rise of 7%" and a minimum step run of 10". The rise times the run should equal approximately 75".

Two times the rise plus one run should equal approximately 25". Rise plus run should be 17" to 18".

- 5. If only cut stringers are used, a minimum of three stringers are required.
- Single ply stringers are acceptable; however, 3" minimum stringer width is recommended. Use appropriate thickness based upon in-use exposure and climate.

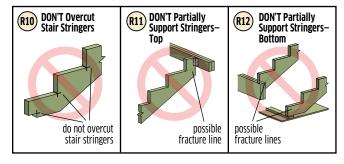
Laying Out the Bottom of a Stair Stringer With Building Hardware

Installation recommendations:

- Place the finished stair stringer into its proper position, without nailing it (this may require two or more people or in some cases, a crane, to lift the heavy objects).
- 2. Place the hardware or base plate below the stringer and mark its exact location.
- 3. Remove the stair stringer and fasten the base plate securely to the concrete foundation.
- 4. Install stair stringer.

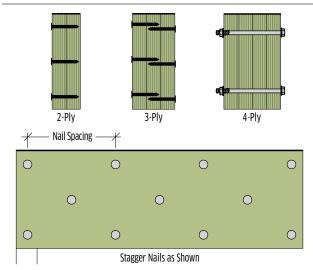
Note:

A raised base plate will inhibit moisture in the concrete slab (or surrounding area) from absorbing into and eventually destroying the wooden stringer.



PWT Treated Multiple-Ply Beam Assembly Combinations of 13/4" Plies

NAILS AND BOLTS



ALLOWABLE UNIFORM SIDE LOAD (PLF)

Number of Plies w/ Thickness	3¼" x 0.1	131" Nails	16d Common Nails 3½" x 0.162"		
	2 Rows at 12" o.c.	3 Rows at 12" o.c.	2 Rows at 12" o.c.	3 Rows at 12" o.c.	
2-Ply (2-1¾")	390	585	565	845	
3-Ply (3-1¾")	290	435	425	635	
4-Ply (4-1¾")	Use bolts for this condition (see note 1).				

Notes:

- 1. For 1½" thick PWT Treated LVL, the Maximum Uniform Side Loads must be multiplied by 0.86.
- 2. The table values for nails may be doubled for 6" o.c. and tripled for 4" o.c. nail spacings.
- 3. The nail schedules shown apply to both sides of a three-ply beam.
- 4. The table values apply to bolts meeting the requirements of ANSI/ASME Standard B18.2.1. A standard cut washer, or metal plate or strap of equal or greater dimensions, shall be provided between the wood and the bolt head and between the wood and the nut. The distance from the edge of the beam to the bolt holes must be at least 2" for ½" bolts. Bolt holes shall be the same diameter as the bolt.
- 5. 7" wide beams must be equally loaded from both sides and/or top loaded.
- 6. Beams wider than 7" must be designed by the engineer of record.
- 7. Load duration factors may be applied to the table values.
- 8. For proprietary fastener alternatives, consult the manufacturer's literature.

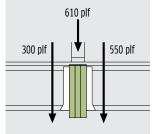
Minimum fastener schedule for top-loaded beams:

2-ply and 3-ply beams 12" deep or less: 2 rows 3¼" x 0.131" at 12" o.c. 2-ply and 3-ply beams deeper than 12": 3 rows 3¼" x 0.131" at 12" o.c. 4-ply, all beam depths: 2 rows ½" bolts at 24" o.c.

How to Use the Maximum Uniform Side Load Table

EXAMPLE: THREE 13/" PLIES LOADED FROM BOTH SIDES AND ABOVE

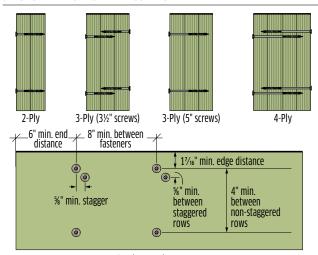
- Use allowable load tables or Exacte by PWT software to size the beam to carry a total load of (300 + 610 + 550) = 1460 plf.
- Select the row based on the number of plies being designed. 3-Ply (3-1 3/4") for this example. Scan across the row from left to right for a table value greater than 550 plf, which is the greatest side load carried by the beam. The fourth value in the row indicates that 3 rows of 16d common nails at 12" o.c. will accommodate a side load of 635 plf, which is greater than the 550 plf required. Use 3 rows of 16d common nails at 12" o.c., from both sides, to assemble the beam.



All fasteners and carrying hardware must be exterior type and code accepted.

See strongtie.com/deckcenter for more information.

STRONG-DRIVE® SDWS TIMBER SCREWS



Spacing Requirements

ALLOWABLE UNIFORM LOAD APPLIED TO EITHER OUTSIDE MEMBER (PLF)

	Nominal Screw Length [in]	Structural Composite Lumber							
Number of Plies		SDWS Timber Screws @ 12" o.c.		SDWS Timber Screws @ 16" o.c.		SDWS Timber Screws @ 24" o.c.			
		2 Rows	3 Rows	2 Rows	3 Rows	2 Rows	3 Rows		
2-ply	3½	1020	1530	765	1148	510	765		
3-ply	3½	765	1148	574	861	383	574		
3-ply	5	1215	1823	911	1367	608	911		
4-ply	6	1080	1620	810	1215	540	810		

Notes:

- 1. Each ply is assumed to carry load in proportion to its width.
- 2. Loads may be applied to either the head side and/or point side concurrently.
- 3. Tables are based on Simpson Strong-Tie Fastening Systems Catalog C-F-2019TECHSUP.
- 4. Please consult strongtie.com for the latest fastener details and data.

SCREW DATA

Model No.	Nominal Screw Length [in]	Thread Length [in]		
SDWS22312DBB	3½	1½		
SDWS22500DB	5	2¾		
SDWS22600DB	6	2¾		

Notes:

 The SDWS TIMBER screws listed are coated with double-barrier coating that provides corrosion resistance equivalent to hot-dip galvanization, making them suitable for certain exterior and preservative-treated wood applications as described in the evaluation report.

Installation

- SDWS TIMBER screws install best with a low speed ½" drill and a T-40 6-lobe bit. The
 matched bit included with the screws is recommended for best results.
- Screw heads that are countersunk flush to the wood surface are acceptable if the screw has not spun out.
- Individual screw locations may be adjusted up to 3" to avoid conflicts with other hardware or to avoid lumber defects.

Fastener Guidelines Proper connectors and fasteners:

Appropriate connectors and fasteners must be used for the conditions-of-use to avoid failure due to corrosion or overloading.

In all exterior applications or any other conditions where excess moisture is present, high quality, exterior grade, stainless steel or hot dipped galvanized or durable grade fasteners are required.

SCREWS

LVL Thickness	LVL Depth	LVL Orientation	Screw Size	Shank Diameter [in]	Minimum End Distance [in]	Minimum Screw Spacing [in]
			#7	0.128	0.5	1
41/"			#8	0.130	0.75	1.5
1½" Minimum	Ali	Edge	#9	#9 0.134 1.75	3	
Millinoni			#10 SD Connector*	0.169	0.75	2
				#12 and larger size	s not recommended	
		Edge	#10 SD Connector	0.169	3	3
	7¼" Minimum		#12	0.175	3	3
1¾"			LedgerLOK	0.230	3	3
Minimum			0.25"*	0.250	3	3
			0.27"*	0.270	3	3
			% x 4" Lag*	0.375	3	3
			#8	0.130	0.75	2
4478			#9	0.134	1.75	3
1½" Minimum	All	Face	#10 SD Connector	0.169	2.5	5
WIIIIIIIIII			#12	0.175	2.5	4
			predrilling recommended for larger sizes			
			LedgerLOK	0.230	2.5	3
1¾"	All	Face	0.25"	0.250	2.5	2
Minimum	All	race	0.27"*	0.276	2.5	3
			% x 4" Lag*	0.375	3	4

Notes:

- 1. Edge distance shall be sufficient to prevent splitting.
- 2. Fastener sizes and closest on-center spacing not specifically described above are beyond the scope of this publication.
- 3. Assumes self-tapping heads.

*predrilling required

NAILS

LVL Thickness	LVL Depth	LVL Orientation	Nail Size	Nail Diameter [in]	Minimum End Distance [in]	Minimum Nail Spacing [in]
1½" Minimum	7¼" Minimum		8d & smaller	0.131	2.5	3
		Edge	10d & 12d	0.148	3.5	4
	Millinoni		16d	0.162	3.5	5
	All	Face	12d & smaller	0.148	1.5	3
	All	race	16d	0.162	1.5	5

Notes:

- 1. Minimum fastener spacing values apply to a single row of nails driven into the edge of LVL.
- 2. Edge distance shall be sufficient to prevent splitting
- 3. Fastener sizes and closest on-center spacing not specifically described above are beyond the scope of this publication.
- 4. Tabulated closest on-center spacing for face orientation is applicable to nails that are installed in rows parallel to the grain (length) of the LVL. For nails installed in rows perpendicular to the direction of grain (width/depth) of the LVL, the closest on-center spacing for face orientation shall be sufficient to prevent splitting of the LVL.

PWT Treated LVL Requirements for Installation & Maintenance

1. Observation and installation:

Before and during construction inspect all components for damage or improper installation.

Except for sill plates, stair stringers, and ledgers, the LVL must be used for permanent construction applications only, above ground, at least 8 inches above the ground and/or ground cover and/or ground vegetation and/or splash zone, completely separated from concrete and other porous materials by using a barrier material impermeable to water in accordance with PWT's Installation Guide. Sill plates must be separated by a sill plate gasket in proper installations to avoid direct contact with concrete and the ground. Ledger must be separated from concrete by sill gasket or self-adhering butyl or rubberized-asphalt flashing. Stair stringers must be installed with a 1" standoff or uplift post base to avoid direct contact with concrete and the ground.

2. Preventing trapped moisture:

Fully enclosed exterior structures or assemblies must allow for moisture to escape through proper ventilation. DO NOT wrap exterior PWT Treated LVL with materials that may trap moisture, such as wood, metal, or plastic trim, without proper ventilation and drainage.

3. Flashing in exterior applications, including, but not limited to, deck substructures:

Flashing or approved flashing tape is required on any upward horizontal surfaces of the PWT Treated LVL. Flashing tape must have passed design standard AAMA 711-13, Level 3, Class A, perform in high and low temperature extremes, and have minimum UV protection of 90 days of exposure. Deck drainage systems that cover upward horizontal surfaces of PWT Treated LVL joists and beams, preventing wetting from occurring, are acceptable substitutions for flashing on the joists and beams. Proper flashing is required

over ledger boards to meet code. Failure to use proper flashing, approved flashing tape, and/or proper deck drainage systems will void the warranty. Failure to apply flashing in accordance with the manufacturers' written installation instructions and as required by code will void the warranty.

4. Maintenance in exterior applications, including, but not limited to, deck substructures:

PWT Treated LVL must not be installed or come in contact with the ground in use in a structure. Regular efforts must be made to remove debris buildup around wood members and metal connectors and fasteners. Mold fungi and mildew cause discoloration of the wood surface, commonly appearing as a colored, fuzzy or powdery surface growth that can quickly spread over surfaces with high moisture levels. Mold and mildew will not impact the strength or stiffness of a wood member, but the presence of mold indicates a high-moisture condition. Excessive moisture content for long periods can cause damage to any exterior-use wood product.

5. Proper connectors and fasteners:

Appropriate connectors and fasteners must be used for the conditionsof-use to avoid failure due to corrosion or overloading. In all exterior applications or any other conditions where excess moisture is present, high-quality, exterior-grade, stainless steel or hot-dipped galvanized or durable grade fasteners are required.

- See Installation Guide for a complete list of installation and maintenance instructions. It can be found at pwtewp.com/treated.
- PWT Treated LVL that is used in a way that does not satisfy all the requirements above and in the Installation Guide is not covered by this limited warranty.



PWT Treated LVL Frequently Asked Questions

- 1. What is PWT Treated LVL and how does the treatment get into the wood? Pacific Woodtech has teamed up with Kop-Coat to create the only commercially available fully treated LVL. Called "TRU-CORE" technology," this process was developed to move treatment chemicals through wood; the migration process is accelerated when energy, such as heat from an LVL press, is added.
- 2. What is the difference between PWT Treated LVL and traditional treatment processes? The difference is that traditional processes use VOCs and/or incising to drive treatment into only the outer 0.4" perimeter of a wood member, while the patented TRU-CORE® technology can drive treatment into the entire member (no gradient) without adding regulated mineral solvents or water-based drivers, which can affect strength and/or void warranties in engineered wood products.
- So you are saying that your process treats the entire wood member uniformly throughout its cross section without adding VOCs or mineral solvents AND retains the full strength of the wood fiber? Yes.
- 4. What Use Category would this be per the AWPA? PWT Treated LVL can be used in exterior construction above-ground applications (UC3B) and for components that are difficult to maintain, repair or replace and are critical to the performance and safety of the entire system.
- 5. What type of applications do you see for PWT Treated LVL? Any above-ground interior or exterior use such as deck beams and deck joists. It is also a great product for treated sill plates, when used with a foam gasket for separation from the concrete, which is required by code. PWT Treated LVL should not be used in "ground contact."
- 6. I thought that Douglas-fir LVL does not accept treatment well; is that true? Many western species, including Douglas-fir, are "refractory species," which means they have different anatomical properties, such as pore size and structure, making traditional treating processes difficult. However, when you look at the physiology of dry Douglas-fir, you will see that with some modern technology, it can be treated quite easily. Kop-Coat's TRU-CORE* technology offers full penetration of Douglas-fir using modern preservatives. See <u>ESR-3834</u> for additional details.
- 7. Is the treatment still "moving" through the wood member after the LVL is shipped? No, the treatment continues to normalize for about 24 hours after the LVL is pressed. After that time, the process has stabilized within the product.
- 8. Why hasn't anybody done this before?
 - Kop-Coat developed the technology and applied for its first patent on this technology in 2004. To date, there are over 90 commercial wood treatment penetration programs across the globe. Other companies have tried to develop similar penetration technologies but have failed.
- 9. Do the active treatment chemicals degrade over time? All organic molecules degrade over time regardless of treatment process. The ones selected for TRU-CORE® technology retain their strength for 30 to 60 years in use this is a significant improvement over traditional treatment processes where only the outer layer of wood fiber is treated.
- 10. How can I tell PWT Treated LVL from untreated LVL? The LVL will also be stamped/marked "PWT TREATED" and will have a muted olive-colored sealer that is different than the standard Pacific Woodtech "honey brown" sealer on untreated LVL.
- **11. Does PWT Treated LVL have an odor?** There are no solvents or VOCs in the treatment, so the genuine smell of wood is retained.

- 12. Can PWT Treated LVL be used indoors? Yes, the active chemicals used in the treatment process are below EPA levels for indoor use.
- 13. Do you have an SDS sheet for PWT Treated LVL? Yes, it is posted on our website
- **14. Is there any risk when handling PWT Treated LVL? What precautions should be taken?** The risks associated with touching/handling PWT Treated LVL are no worse than those of untreated LVL. Always wear proper PPE per the safety data sheet:
 - Handle in accordance with good industrial hygiene and safety practice.
 - Keep away from open flames, hot surfaces and sources of ignition.
 - Ensure adequate ventilation or use appropriate respiratory protection to avoid wood dust inhalation.
 - Do not eat, drink or smoke when handling this product.
 - Remove and wash contaminated clothing before reuse.
- 15. What would happen if someone were to ingest PWT Treated LVL? What precautions should be taken after such exposure? The hazards are no worse than those of untreated LVL. Per the SDS: Ingestion is not an expected route of exposure. Rinse mouth. Immediate medical attention is not required.
- 16. Do I have to re-treat cut ends, notches and holes? No, since PWT Treated LVL is treated throughout the piece (no gradient), retreatment is not necessary. However, it is recommended to recoat cuts with a sealer or paint to minimize swelling, as moisture will wick into end-grain fibers more quickly than edges and faces.
- Can I stain or paint PWT Treated LVL? Yes, PWT Treated LVL can be stained or painted.
- 18. Do I need flashing? Proper flashing is required over ledger boards to meet code. Refer to building code requirements for ledger boards. Flashing (metal or plastic) or approved flashing tape is required on any upward horizontal surfaces of the PWT Treated LVL to satisfy the warranty. Flashing tape must have passed design standard AAMA 711-13, Level 3, Class A, perform in high- and low-temperature extremes, and have minimum UV protection of 120 days of exposure. Deck drainage systems that cover upward horizontal surfaces of PWT Treated LVL joists and beams, preventing wetting from occurring, are acceptable substitutions for flashing on the joists and beams. Failure to use proper flashing, approved flashing tape and/or proper deck drainage systems will void the warranty. Failure to apply flashing in accordance to the manufacturers' written installation instructions and as required by code will void the warranty.
- 19. Can I put cladding over PWT Treated LVL beams and joists? Cladding is allowed if it will not trap moisture, as this will reduce the performance and life expectancy of even treated wood products.
- 20. How should I dispose of PWT Treated LVL? PWT Treated LVL can be disposed of in the same manner as untreated LVL.
- 21. I have heard of ACQ (alkaline copper quaternary), copper azole (CA) and MCA (micronized copper azole) for pressure treated wood. What treating chemicals are in PWT Treated LVL? ACQ, CA and MCA are chemicals used for post-manufacture pressure treating of wood products. PWT Treated LVL uses a PTI-based system. PTI stands for Propiconazole (fungicide), Tebuconazole (fungicide) and Imidacloprid (Insecticide). Our PWT Treated LVL has twice the PTI retentions required for UC3B, with no gradient that you would see in pressure-treated lumber. PTI is very common. It has been around for over 20 years. These PTI protection systems are used for many types of wood products, including decking, fencing, siding, windows, sheathing, flooring, framing and other wood and wood-based building materials.





Software Tools

for PWT Treated LVL

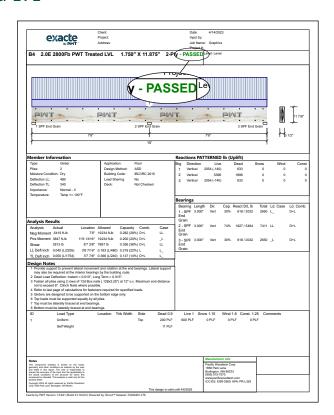
PWT provides designers and specifiers with the superior information services to complement our products by providing software tools that do the math to ensure the right product is used.

With an easy-to-use graphic user interface for entering data and a single click to get a Pass or Fail, Exacte by PWT provides clear results. Our goal with this program is to provide customers with peace of mind when it comes to making decisions about their projects. We want them to know that they are getting the right product for each application in their building.

At PWT, we understand how important it is for specifiers to get the right product for their project every time. With Exacte by PWT, you can have confidence that your project will turn out exactly how you imagined it!

Exacte by PWT features:

- User-friendly single-member sizing program with impeccable graphics
- Uses the spans and loads to define if a PWT engineered wood product Passes or Fails. Requires little or no training for architects, engineers, designers, inspectors, builders, and technical support specialists to design and specify individual PWT products
- No charge for Exacte single-member users after registration





BY PMT

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pwtewp.com/treated

For product catalog and complete warranty details or for more information on the full line of PWT products or the nearest distributor, visit pwtewp.com.

PWT Treated LVL is manufactured in theUnited States.

CAL PROP 65 WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov.wood.

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