

DRY USE

**PWT
TREATED™**
TREATED RIGHT™

USER GUIDE

Technical Data
for PWT Treated LVL





PWT Treated LVL

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, exterior columns, 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 (no strength reduction after treatment)

2.0E, 2800 F_b

Beam Sizes

1¾" x	-	-	9½"	11½"	14"	16"	18"
3½" x	-	-	9½"	11½"	14"	16"	-
*5¼" x	5½"	7¼"	9½"	11½"	14"	16"	-

Joists (Dimension Sizes)

1½" x	3½"	5½"	7¼"	9¼"	11¼"	-
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Column Sizes

3½" x	3½"	-	-
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*5¼" 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



PWT Treated LVL

Reference Design Values

DRY USE

True (Shear-Free) Modulus of Elasticity, $E = 2,000,000 \text{ psi}^{(1)(4)}$

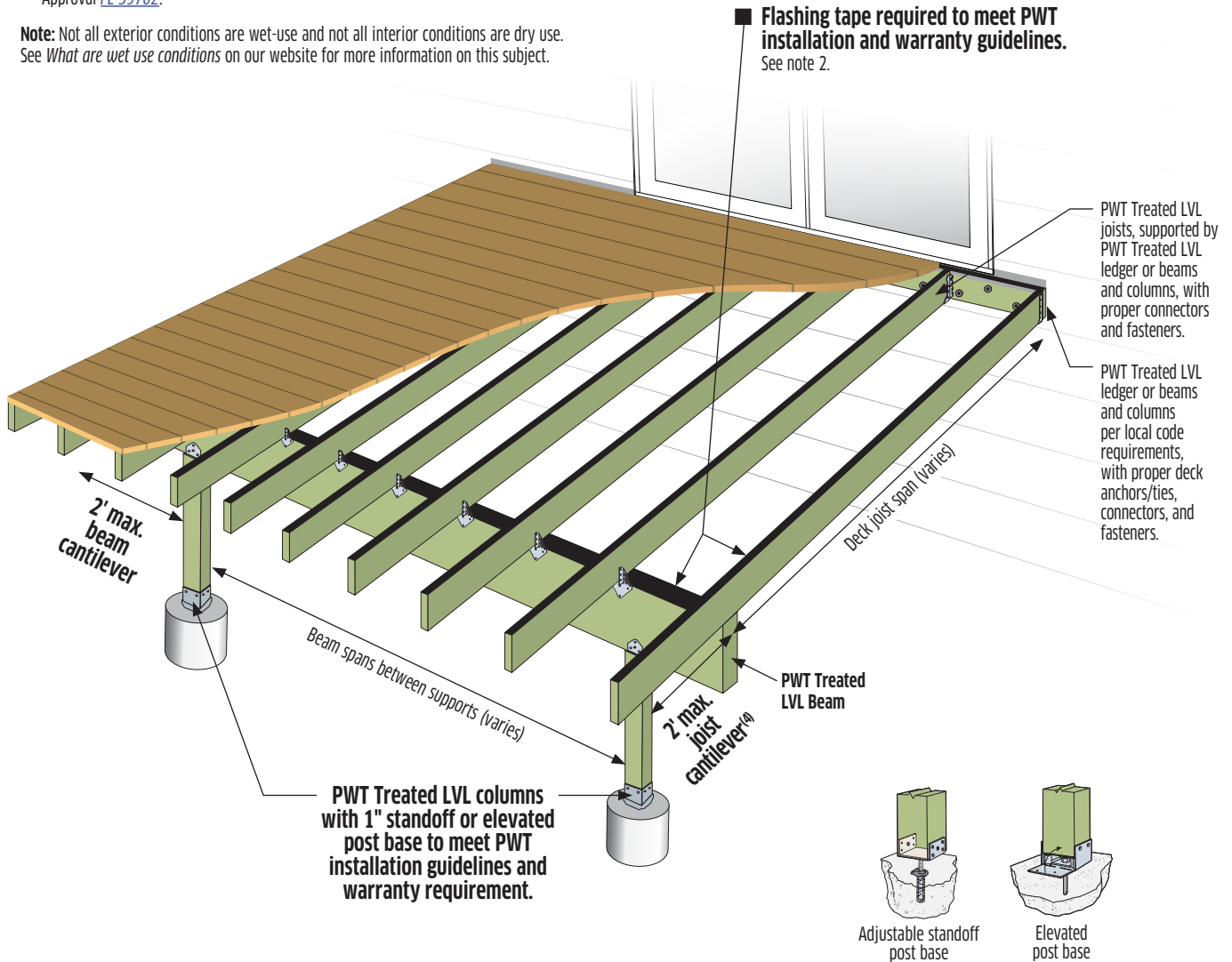
Bending (beam), $F_b = 2,800 \text{ psi}^{(2)(3)}$

Horizontal Shear (beam), $F_v = 285 \text{ psi}$

Compression perpendicular to grain [psi], $F_{c\perp} = 850 \text{ psi}$

- (1) Do not adjust for load duration.
- (2) Adjust by $(12/d)^{0.2}$, 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) See APA Product Report [PR-L329](#), ICC-ES Evaluation Report [ESR-2909](#), or Florida Product Approval [FL 39762](#).

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.



Notes:

1. For diagonal bracing, see *AWC Deck Construction Guide*, visit pacificwoodtech.com/treated.
2. For flashing tape recommendations, visit pacificwoodtech.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 CSD Software.

*Cantilever lengths in this guide are limited to 2 ft.
For longer cantilevers, please use sizing software.*

PWT Treated LVL

Joist Spans

Improved Performance

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

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

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

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

Code Minimums

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

Product	Nominal Size [in]	Actual Size [in]	With or Without 2' Cantilever		
			Joist Spacing (o.c.)		
			12"	16"	24"
PWT Treated LVL	2 x 6	1½ x 5½	11'- 1"	10'- 1"	8'- 11"
	2 x 8	1½ x 7¼	14'- 10"	13'- 6"	11'- 9"
	2 x 10	1½ x 9¼	18'- 11"	17'- 2"	15'- 0"
	2 x 12	1½ x 11¼	23'- 0"	20'- 11"	18'- 3"
Pressure Treated No. 2 Southern pine	2 x 8	1½ x 7¼	12'- 1"	11'- 2"	9'- 10"
	2 x 10	1½ x 9¼	15'- 2"	13'- 11"	11'- 7"
	2 x 12	1½ x 11¼	18'- 1"	16'- 4"	13'- 6"
Pressure Treated No. 2 Hem-fir (incised)	2 x 8	1½ x 7¼	11'- 8"	10'- 8"	9'- 4"
	2 x 10	1½ x 9¼	14'- 7"	13'- 3"	11'- 3"
	2 x 12	1½ x 11¼	17'- 6"	15'- 7"	12'- 11"

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

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

Notes:

1. End bearing length must be at least 1.5".
2. Minimum bearing at cantilever is 3".
3. Maximum cantilever 2' in addition to span shown.
4. Design conditions outside the scope of this guide may be designed using CSD software.
5. Joist tables are based upon 100% duration of load.
6. Spans based on hanger on ledger side and 3" bearing on LVL beam.



PWT Treated LVL

Beam Spans

Improved Performance

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

Size [in]	Deck Joist Span with 2' Cantilever [ft]						
	6	8	10	12	14	16	18
	Deck Joist Simple Span [ft]						
	8	10	12	14	16	18	20
3½ x 9½	14'-7"	13'-6"	12'-8"	12'-0"	11'-6"	11'-0"	10'-8"
3½ x 11½	18'-3"	16'-11"	15'-11"	15'-1"	14'-5"	13'-10"	13'-5"
3½ x 14	21'-7"	20'-0"	18'-10"	17'-10"	17'-1"	16'-5"	15'-10"
3½ x 16	24'-9"	22'-11"	21'-7"	20'-6"	19'-7"	18'-10"	17'-6"
3½ x 18	27'-10"	25'-10"	24'-4"	23'-1"	22'-0"	19'-6"	17'-6"
5¼ x 5½	9'-5"	8'-8"	8'-2"	7'-8"	7'-4"	7'-1"	6'-9"
5¼ x 7¼	12'-6"	11'-7"	10'-11"	10'-4"	9'-10"	9'-5"	9'-1"
5¼ x 9½	16'-7"	15'-4"	14'-5"	13'-8"	13'-1"	12'-6"	12'-1"
5¼ x 11½	20'-10"	19'-4"	18'-2"	17'-2"	16'-5"	15'-9"	15'-3"
5¼ x 14	24'-8"	22'-10"	21'-6"	20'-4"	19'-5"	18'-8"	18'-0"
5¼ x 16	28'-3"	26'-2"	24'-7"	23'-4"	22'-4"	21'-5"	20'-8"
5¼ x 18	31'-10"	29'-6"	27'-9"	26'-4"	25'-2"	24'-2"	23'-4"

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

Size [in]	Deck Joist Span with 2' Cantilever [ft]						
	6	8	10	12	14	16	18
	Deck Joist Simple Span [ft]						
	8	10	12	14	16	18	20
3½ x 9½	12'-8"	11'-9"	11'-0"	10'-6"	10'-0"	9'-7"	9'-3"
3½ x 11½	15'-11"	14'-9"	13'-10"	13'-2"	12'-7"	12'-1"	11'-8"
3½ x 14	18'-10"	17'-6"	16'-5"	15'-7"	14'-11"	13'-10"	12'-5"
3½ x 16	21'-7"	20'-0"	18'-10"	17'-10"	15'-7"	13'-10"	12'-5"
3½ x 18	24'-4"	22'-7"	20'-11"	17'-11"	15'-7"	13'-10"	12'-5"
5¼ x 5½	8'-2"	7'-6"	7'-1"	6'-8"	6'-4"	6'-1"	5'-10"
5¼ x 7¼	10'-11"	10'-1"	9'-5"	8'-11"	8'-6"	8'-2"	7'-11"
5¼ x 9½	14'-5"	13'-4"	12'-6"	11'-10"	11'-4"	10'-11"	10'-6"
5¼ x 11½	18'-2"	16'-10"	15'-9"	15'-0"	14'-3"	13'-9"	13'-3"
5¼ x 14	21'-6"	19'-11"	18'-8"	17'-9"	16'-11"	16'-3"	15'-8"
5¼ x 16	24'-7"	22'-10"	21'-5"	20'-4"	19'-5"	18'-8"	18'-0"
5¼ x 18	27'-9"	25'-8"	24'-2"	22'-11"	21'-11"	20'-9"	18'-8"

Code Minimums

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

Size [in]	Deck Joist Span with 2' Cantilever [ft]						
	6	8	10	12	14	16	18
	Deck Joist Simple Span [ft]						
	8	10	12	14	16	18	20
3½ x 9½	16'-1"	14'-11"	14'-0"	13'-3"	12'-8"	12'-2"	11'-9"
3½ x 11½	20'-2"	18'-8"	17'-7"	16'-8"	15'-11"	15'-4"	14'-9"
3½ x 14	23'-10"	22'-1"	20'-9"	19'-8"	18'-10"	18'-1"	17'-6"
3½ x 16	27'-3"	25'-3"	23'-9"	22'-7"	21'-7"	19'-6"	17'-6"
3½ x 18	30'-9"	28'-6"	26'-9"	25'-2"	22'-0"	19'-6"	17'-6"
5¼ x 5½	10'-5"	9'-7"	9'-0"	8'-6"	8'-2"	7'-10"	7'-6"
5¼ x 7¼	13'-10"	12'-10"	12'-0"	11'-5"	10'-11"	10'-5"	10'-1"
5¼ x 9½	18'-3"	16'-11"	15'-11"	15'-1"	14'-5"	13'-10"	13'-4"
5¼ x 11½	23'-0"	21'-3"	20'-0"	19'-0"	18'-2"	17'-5"	16'-10"
5¼ x 14	27'-2"	25'-2"	23'-8"	22'-6"	21'-6"	20'-7"	19'-11"
5¼ x 16	31'-1"	28'-10"	27'-1"	25'-9"	24'-7"	23'-8"	22'-10"
5¼ x 18	35'-1"	32'-6"	30'-7"	29'-0"	27'-9"	26'-8"	25'-8"

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

Size [in]	Deck Joist Span with 2' Cantilever [ft]						
	6	8	10	12	14	16	18
	Deck Joist Simple Span [ft]						
	8	10	12	14	16	18	20
3½ x 9½	14'-0"	12'-11"	12'-2"	11'-7"	11'-0"	10'-7"	10'-3"
3½ x 11½	17'-7"	16'-3"	15'-4"	14'-6"	13'-10"	13'-4"	12'-5"
3½ x 14	20'-9"	19'-3"	18'-1"	17'-2"	15'-7"	13'-10"	12'-5"
3½ x 16	23'-9"	22'-1"	20'-9"	17'-11"	15'-7"	13'-10"	12'-5"
3½ x 18	26'-9"	24'-10"	20'-11"	17'-11"	15'-7"	13'-10"	12'-5"
5¼ x 5½	9'-0"	8'-4"	7'-10"	7'-5"	7'-1"	6'-9"	6'-6"
5¼ x 7¼	12'-0"	11'-2"	10'-5"	9'-11"	9'-5"	9'-1"	8'-9"
5¼ x 9½	15'-11"	14'-9"	13'-10"	13'-1"	12'-6"	12'-0"	11'-7"
5¼ x 11½	20'-0"	18'-6"	17'-5"	16'-6"	15'-9"	15'-2"	14'-7"
5¼ x 14	23'-8"	21'-11"	20'-7"	19'-7"	18'-8"	17'-11"	17'-4"
5¼ x 16	27'-1"	25'-2"	23'-8"	22'-5"	21'-5"	20'-7"	18'-8"
5¼ x 18	30'-7"	28'-4"	26'-8"	25'-3"	23'-5"	20'-9"	18'-8"

Notes:

1. Beam span calculations assume simple spans.
2. Beam depth shall be greater than or equal to depth of joists with a flush beam condition.
3. Bearing length must be at least 1.75".
4. Beams require support across their full width.
5. Conditions outside the scope of this guide may be designed using CSD Software.
6. Beam spans are based upon 100% duration of load.
7. Beam spans developed using apparent E.

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.

PWT Treated LVL Columns

DRY USE – ALLOWABLE AXIAL LOAD [LB]

Load Duration	100%	115%	125%
Column Length (ft)	3½" x 3½"	3½" x 3½"	3½" x 3½"
6'-0"	10,500	11,200	11,625
7'-0"	8,825	9,325	9,600
8'-0"	7,450	7,800	8,000
9'-0"	6,350	6,600	6,750
10'-0"	5,450	5,650	5,750
11'-0"	4,725	4,875	4,950
12'-0"	4,125	4,225	4,300

Notes:

- Table values are based on:
 - Solid, one-piece column
 - Axial loads only
 - Load eccentricity of either 1/6 column width or thickness
 - Bracing in both directions at column ends
- For all other conditions, such as side loads and multiple-ply columns, consult a registered professional engineer.
- Column capacity may be limited by the capacity of wood plates, the slab, column caps/bases, etc.
- No drilling except for column cap or base installation. Follow hardware manufacturer's instructions.
- Calculations based on *ANSI/AWC NDS-2015*.

Columns – Reference Design Values⁽¹⁾

True (Shear-Free) Modulus of Elasticity, $E = 2,000,000 \text{ psi}^{(1)(3)}$

Apparent Modulus of Elasticity, $E = 1,900,000 \text{ psi}^{(1)}$

MOE for Stability Calculations, $E_{min} = 985,000 \text{ psi}^{(1)(4)}$

Bending (beam), $F_b = 2,800 \text{ psi} \times (12/d_1)^{0.2}^{(2)}$

$d_1 = \text{wide-face dimension [inches]}$

Bending (plank), $F_b = 2,800 \text{ psi} \times (12/d_2)^{0.33}^{(2)}$

$d_2 = \text{narrow-face dimension [inches]}$

Compression Parallel to Grain, $F_c = 2,500 \text{ psi}$

Compression perpendicular to grain [psi], $F_{c\perp} = 850 \text{ psi}^{(1)}$

Coefficient of Variation, $COV_E = 0.10$

- Do not adjust for load duration.
- Adjust by 1.04 for repetitive members as defined in the NDS.
- True (Shear-Free) modulus of elasticity does not account for shear deformation.
- E_{min} is calculated using the Apparent Modulus of Elasticity in accordance with the NDS.
- See Product Reports [PR-L329](#), [ESR-2909](#), and [FL 39762](#).



PWT Treated LVL Sill Plate

- All the features and benefits of PWT Treated LVL
- Long, straight, and true for quick installation and minimal waste
- Non-corrosive—does not require special galvanized hardware

REFERENCE DESIGN VALUES (DRY USE – 100% LOAD DURATION)

	Beam Orientation	Plank Orientation
Modulus of Elasticity, $E^{(1)(4)}$	2,000,000 psi	2,000,000 psi
Adjusted Modulus of Elasticity, $E_{min}^{(1)(5)}$	985,000 psi	985,000 psi
Bending Stress, $F_b^{(2)(3)}$	2,800 psi	2,800 psi
Compression Perpendicular to Grain, $F_{c\perp}^{(1)}$	850 psi	650 psi
Compression Parallel to Grain, $F_{c\parallel}$	2,500 psi	2,500 psi
Horizontal Shear, F_v	285 psi	150 psi

- Do not adjust for load duration.
- Adjust by $(12/d)^{0.2}$, where d is the depth of the member [inches].
- Adjust by 1.04 for repetitive members as defined in the NDS.
- True (Shear-Free) modulus of elasticity does not account for shear deformation.
- Reference modulus of elasticity for beam & column stability calculations in accordance with the NDS.
- PWT Treated used as sill plate requires gasket seal.
- See APA Product Reports [PR-L329](#) and [ESR-2909](#) for additional design criteria.

PWT Treated LVL Beams 100%

DRY USE – ALLOWABLE UNIFORM LOADS* – POUNDS PER LINEAL FOOT

Span (ft)	Key	1½" Beam			3½" Beam or 2-ply					5¼" Beam or 3-ply					
		9½"	11½"	14"	9½"	11½"	14"	16"	18"	9½"	11½"	14"	16"	18"	
8	LL	687	-	-	1374	-	-	-	-	-	2061	-	-	-	-
	TL	746	979	1208	1492	1958	2416	2888	3404	2238	2937	3624	4332	5106	
	BRG	2 / 5	2.6 / 6.6	3.3 / 8.2	2 / 5	2.6 / 6.6	3.3 / 8.2	3.9 / 9.8	4.6 / 11.5	2 / 5	2.6 / 6.6	3.3 / 8.2	3.9 / 9.8	4.6 / 11.5	
10	LL	352	687	-	704	1374	-	-	-	1056	2061	-	-	-	
	TL	511	745	909	1022	1490	1818	2150	2504	1533	2235	2727	3225	3756	
	BRG	1.7 / 4.3	2.5 / 6.3	3.1 / 7.7	1.7 / 4.3	2.5 / 6.3	3.1 / 7.7	3.6 / 9.1	4.2 / 10.6	1.7 / 4.3	2.5 / 6.3	3.1 / 7.7	3.6 / 9.1	4.2 / 10.6	
12	LL	204	398	652	408	796	1304	-	-	612	1194	1956	-	-	
	TL	301	529	712	602	1058	1424	1710	1978	903	1587	2136	2565	2967	
	BRG	1.5 / 3.1	2.2 / 5.4	2.9 / 7.2	1.5 / 3.1	2.2 / 5.4	2.9 / 7.2	3.5 / 8.7	4 / 10.1	1.5 / 3.1	2.2 / 5.4	2.9 / 7.2	3.5 / 8.7	4 / 10.1	
14	LL	128	251	410	256	502	820	1226	-	384	753	1230	1839	-	
	TL	188	370	522	376	740	1044	1328	1634	564	1110	1566	1992	2451	
	BRG	1.5 / 3	1.8 / 4.4	2.5 / 6.2	1.5 / 3	1.8 / 4.4	2.5 / 6.2	3.2 / 7.9	3.9 / 9.7	1.5 / 3	1.8 / 4.4	2.5 / 6.2	3.2 / 7.9	3.9 / 9.7	
16	LL	86	168	275	172	336	550	820	1168	258	504	825	1230	1752	
	TL	125	246	398	250	492	796	1014	1254	375	738	1194	1521	1881	
	BRG	1.5 / 3	1.5 / 3.4	2.2 / 5.4	1.5 / 3	1.5 / 3.4	2.2 / 5.4	2.8 / 6.9	3.4 / 8.5	1.5 / 3	1.5 / 3.4	2.2 / 5.4	2.8 / 6.9	3.4 / 8.5	
18	LL	60	118	193	120	236	386	576	820	180	354	579	864	1230	
	TL	86	171	283	172	342	566	798	988	258	513	849	1197	1482	
	BRG	1.5 / 3	1.5 / 3	1.8 / 4.4	1.5 / 3	1.5 / 3	1.8 / 4.4	2.5 / 6.1	3 / 7.6	1.5 / 3	1.5 / 3	1.8 / 4.4	2.5 / 6.1	3 / 7.6	
20	LL		86	141		172	282	420	598		258	423	630	897	
	TL		123	205		246	410	616	796		369	615	924	1194	
	BRG		1.5 / 3	1.5 / 3.6		1.5 / 3	1.5 / 3.6	2.1 / 5.3	2.7 / 6.8		1.5 / 3	1.5 / 3.6	2.1 / 5.3	2.7 / 6.8	
22	LL		65	106		130	212	316	450		195	318	474	675	
	TL		91	152		182	304	460	656		273	456	690	984	
	BRG		1.5 / 3	1.5 / 3		1.5 / 3	1.5 / 3	1.8 / 4.4	2.5 / 6.2		1.5 / 3	1.5 / 3	1.8 / 4.4	2.5 / 6.2	
24	LL			81			162	244	346			243	366	519	
	TL			116			232	350	504			348	525	756	
	BRG			1.5 / 3			1.5 / 3	1.5 / 3.7	2.1 / 5.2			1.5 / 3	1.5 / 3.7	2.1 / 5.2	
26	LL			64			128	192	272			192	288	408	
	TL			90			180	272	392			270	408	588	
	BRG			1.5 / 3			1.5 / 3	1.5 / 3.1	1.8 / 4.5			1.5 / 3	1.5 / 3.1	1.8 / 4.5	
28	LL			51			102	154	218			153	231	327	
	TL			71			142	216	310			213	324	465	
	BRG			1.5 / 3			1.5 / 3	1.5 / 3	1.5 / 3.8			1.5 / 3	1.5 / 3	1.5 / 3.8	
30	LL							124	178				186	267	
	TL							172	250				258	375	
	BRG							1.5 / 3	1.5 / 3.4				1.5 / 3	1.5 / 3.4	
32	LL							102	146				153	219	
	TL							140	202				210	303	
	BRG							1.5 / 3	1.5 / 3				1.5 / 3	1.5 / 3	
34	LL								122					183	
	TL								166					249	
	BRG								1.5 / 3					1.5 / 3	
36	LL								102					153	
	TL								138					207	
	BRG								1.5 / 3					1.5 / 3	
38	LL														
	TL														
	BRG														
40	LL														
	TL														
	BRG														

* Can be applied to the beam in addition to its own weight.
Simple or multiple beam spans.
Beam load values developed with apparent E.

Key to Table:

LL = Maximum live load - limits deflection to L/360

TL = Maximum total load - limits deflections to L/240 (or a maximum of 0.3125" for beams 7¼" deep or less)

BRG = Required end / intermediate bearing length (inches), based on bearing stress of 850 psi.

PWT Treated LVL Beams 115%

DRY USE – ALLOWABLE UNIFORM LOADS* – POUNDS PER LINEAL FOOT

Span (ft)	Key	1¾" Beam			3½" Beam or 2-ply					5¼" Beam or 3-ply				
		9½"	11½"	14"	9½"	11½"	14"	16"	18"	9½"	11½"	14"	16"	18"
8	LL	-	-	-	-	-	-	-	-	-	-	-	-	-
	TL	859	1127	1390	1718	2254	2780	3322	3916	2577	3381	4170	4983	5874
	BRG	2.3 / 5.8	3 / 7.6	3.8 / 9.4	2.3 / 5.8	3 / 7.6	3.8 / 9.4	4.5 / 11.2	5.3 / 13.2	2.3 / 5.8	3 / 7.6	3.8 / 9.4	4.5 / 11.2	5.3 / 13.2
10	LL	528	-	-	1056	-	-	-	-	1584	-	-	-	-
	TL	588	858	1047	1176	1716	2094	2474	2882	1764	2574	3141	3711	4323
	BRG	2 / 5	2.9 / 7.3	3.5 / 8.9	2 / 5	2.9 / 7.3	3.5 / 8.9	4.2 / 10.5	4.9 / 12.2	2 / 5	2.9 / 7.3	3.5 / 8.9	4.2 / 10.5	4.9 / 12.2
12	LL	306	597	-	612	1194	-	-	-	918	1791	-	-	-
	TL	403	609	820	806	1218	1640	1970	2278	1209	1827	2460	2955	3417
	BRG	1.6 / 4.1	2.5 / 6.2	3.3 / 8.3	1.6 / 4.1	2.5 / 6.2	3.3 / 8.3	4 / 10	4.6 / 11.6	1.6 / 4.1	2.5 / 6.2	3.3 / 8.3	4 / 10	4.6 / 11.6
14	LL	192	376	-	384	752	-	-	-	576	1128	-	-	-
	TL	252	446	601	504	892	1202	1530	1882	756	1338	1803	2295	2823
	BRG	1.5 / 3	2.1 / 5.3	2.9 / 7.1	1.5 / 3	2.1 / 5.3	2.9 / 7.1	3.6 / 9.1	4.5 / 11.2	1.5 / 3	2.1 / 5.3	2.9 / 7.1	3.6 / 9.1	4.5 / 11.2
16	LL	129	252	412	258	504	824	-	-	387	756	1236	-	-
	TL	168	330	458	336	660	916	1168	1446	504	990	1374	1752	2169
	BRG	1.5 / 3	1.8 / 4.5	2.5 / 6.2	1.5 / 3	1.8 / 4.5	2.5 / 6.2	3.2 / 7.9	3.9 / 9.8	1.5 / 3	1.8 / 4.5	2.5 / 6.2	3.2 / 7.9	3.9 / 9.8
18	LL	91	177	290	182	354	580	864	-	273	531	870	1296	-
	TL	116	230	361	232	460	722	920	1138	348	690	1083	1380	1707
	BRG	1.5 / 3	1.5 / 3.6	2.2 / 5.6	1.5 / 3	1.5 / 3.6	2.2 / 5.6	2.8 / 7.1	3.5 / 8.7	1.5 / 3	1.5 / 3.6	2.2 / 5.6	2.8 / 7.1	3.5 / 8.7
20	LL		129	211		258	422	630	898		387	633	945	1347
	TL		166	275		332	550	742	918		498	825	1113	1377
	BRG		1.5 / 3	1.9 / 4.7		1.5 / 3	1.9 / 4.7	2.5 / 6.4	3.1 / 7.9		1.5 / 3	1.9 / 4.7	2.5 / 6.4	3.1 / 7.9
22	LL		97	159		194	318	474	674		291	477	711	1011
	TL		124	205		248	410	610	756		372	615	915	1134
	BRG		1.5 / 3	1.6 / 3.9		1.5 / 3	1.6 / 3.9	2.3 / 5.8	2.9 / 7.1		1.5 / 3	1.6 / 3.9	2.3 / 5.8	2.9 / 7.1
24	LL			122			244	364	520			366	546	780
	TL			157			314	472	634			471	708	951
	BRG			1.5 / 3.3			1.5 / 3.3	2 / 4.9	2.6 / 6.6			1.5 / 3.3	2 / 4.9	2.6 / 6.6
26	LL			96			192	286	408			288	429	612
	TL			122			244	368	528			366	552	792
	BRG			1.5 / 3			1.5 / 3	1.7 / 4.2	2.4 / 5.9			1.5 / 3	1.7 / 4.2	2.4 / 5.9
28	LL			77			154	230	328			231	345	492
	TL			96			192	292	420			288	438	630
	BRG			1.5 / 3			1.5 / 3	1.5 / 3.6	2.1 / 5.1			1.5 / 3	1.5 / 3.6	2.1 / 5.1
30	LL							186	266				279	399
	TL							234	338				351	507
	BRG							1.5 / 3.1	1.8 / 4.5				1.5 / 3.1	1.8 / 4.5
32	LL							154	220				231	330
	TL							190	276				285	414
	BRG							1.5 / 3	1.6 / 3.9				1.5 / 3	1.6 / 3.9
34	LL								182					273
	TL								228					342
	BRG								1.5 / 3.5					1.5 / 3.5
36	LL								154					231
	TL								188					282
	BRG								1.5 / 3.1					1.5 / 3.1
38	LL													
	TL													
	BRG													
40	LL													
	TL													
	BRG													

* Can be applied to the beam in addition to its own weight.
Simple or multiple beam spans.
Beam load values developed with apparent E.

Key to Table:

LL = Maximum live load - limits deflection to L/360
TL = Maximum total load - limits deflections to L/240 (or a maximum of 0.3125" for beams 7¼" deep or less)
BRG = Required end / intermediate bearing length (inches), based on bearing stress of 850 psi.

PWT Treated LVL Beams 125%

DRY USE – ALLOWABLE UNIFORM LOADS* – POUNDS PER LINEAL FOOT

Span (ft)	Key	1¾" Beam			3½" Beam or 2-ply					5¼" Beam or 3-ply				
		9½"	11½"	14"	9½"	11½"	14"	16"	18"	9½"	11½"	14"	16"	18"
8	LL	-	-	-	-	-	-	-	-	-	-	-	-	-
	TL	934	1225	1512	1868	2450	3024	3612	4258	2802	3675	4536	5418	6387
	BRG	2.5 / 6.3	3.3 / 8.3	4.1 / 10.2	2.5 / 6.3	3.3 / 8.3	4.1 / 10.2	4.9 / 12.2	5.7 / 14.4	2.5 / 6.3	3.3 / 8.3	4.1 / 10.2	4.9 / 12.2	5.7 / 14.4
10	LL	528	-	-	1056	-	-	-	-	1584	-	-	-	-
	TL	639	933	1138	1278	1866	2276	2690	3134	1917	2799	3414	4035	4701
	BRG	2.2 / 5.4	3.2 / 7.9	3.8 / 9.6	2.2 / 5.4	3.2 / 7.9	3.8 / 9.6	4.5 / 11.4	5.3 / 13.2	2.2 / 5.4	3.2 / 7.9	3.8 / 9.6	4.5 / 11.4	5.3 / 13.2
12	LL	306	597	-	612	1194	-	-	-	918	1791	-	-	-
	TL	403	662	892	806	1324	1784	2142	2478	1209	1986	2676	3213	3717
	BRG	1.6 / 4.1	2.7 / 6.7	3.6 / 9.1	1.6 / 4.1	2.7 / 6.7	3.6 / 9.1	4.3 / 10.9	5 / 12.6	1.6 / 4.1	2.7 / 6.7	3.6 / 9.1	4.3 / 10.9	5 / 12.6
14	LL	192	376	616	384	752	1232	-	-	576	1128	1848	-	-
	TL	252	485	654	504	970	1308	1664	2048	756	1455	1962	2496	3072
	BRG	1.5 / 3	2.3 / 5.8	3.1 / 7.8	1.5 / 3	2.3 / 5.8	3.1 / 7.8	3.9 / 9.9	4.9 / 12.1	1.5 / 3	2.3 / 5.8	3.1 / 7.8	3.9 / 9.9	4.9 / 12.1
16	LL	129	252	412	258	504	824	1232	-	387	756	1236	1848	-
	TL	168	330	499	336	660	998	1270	1572	504	990	1497	1905	2358
	BRG	1.5 / 3	1.8 / 4.5	2.7 / 6.8	1.5 / 3	1.8 / 4.5	2.7 / 6.8	3.5 / 8.6	4.3 / 10.7	1.5 / 3	1.8 / 4.5	2.7 / 6.8	3.5 / 8.6	4.3 / 10.7
18	LL	91	177	290	182	354	580	864	1232	273	531	870	1296	1848
	TL	116	230	380	232	460	760	1000	1238	348	690	1140	1500	1857
	BRG	1.5 / 3	1.5 / 3.6	2.3 / 5.8	1.5 / 3	1.5 / 3.6	2.3 / 5.8	3.1 / 7.7	3.8 / 9.5	1.5 / 3	1.5 / 3.6	2.3 / 5.8	3.1 / 7.7	3.8 / 9.5
20	LL		129	211		258	422	630	898		387	633	945	1347
	TL		166	275		332	550	808	1000		498	825	1212	1500
	BRG		1.5 / 3	1.9 / 4.7		1.5 / 3	1.9 / 4.7	2.8 / 6.9	3.4 / 8.5		1.5 / 3	1.9 / 4.7	2.8 / 6.9	3.4 / 8.5
22	LL		97	159		194	318	474	674		291	477	711	1011
	TL		124	205		248	410	618	824		372	615	927	1236
	BRG		1.5 / 3	1.6 / 3.9		1.5 / 3	1.6 / 3.9	2.3 / 5.8	3.1 / 7.8		1.5 / 3	1.6 / 3.9	2.3 / 5.8	3.1 / 7.8
24	LL			122			244	364	520			366	546	780
	TL			157			314	472	676			471	708	1014
	BRG			1.5 / 3.3			1.5 / 3.3	2 / 4.9	2.8 / 7			1.5 / 3.3	2 / 4.9	2.8 / 7
26	LL			96			192	286	408			288	429	612
	TL			122			244	368	528			366	552	792
	BRG			1.5 / 3			1.5 / 3	1.7 / 4.2	2.4 / 5.9			1.5 / 3	1.7 / 4.2	2.4 / 5.9
28	LL			77			154	230	328			231	345	492
	TL			96			192	292	420			288	438	630
	BRG			1.5 / 3			1.5 / 3	1.5 / 3.6	2.1 / 5.1			1.5 / 3	1.5 / 3.6	2.1 / 5.1
30	LL							186	266				279	399
	TL							234	338				351	507
	BRG							1.5 / 3.1	1.8 / 4.5				1.5 / 3.1	1.8 / 4.5
32	LL							154	220				231	330
	TL							190	276				285	414
	BRG							1.5 / 3	1.6 / 3.9				1.5 / 3	1.6 / 3.9
34	LL								182					273
	TL								228					342
	BRG								1.5 / 3.5					1.5 / 3.5
36	LL								154					231
	TL								188					282
	BRG								1.5 / 3.1					1.5 / 3.1
38	LL													
	TL													
	BRG													
40	LL													
	TL													
	BRG													

* Can be applied to the beam in addition to its own weight.
Simple or multiple beam spans.
Beam load values developed with apparent E.

Key to Table:

LL = Maximum live load - limits deflection to L/360

TL = Maximum total load - limits deflections to L/240 (or a maximum of 0.3125" for beams 7¼" deep or less)

BRG = Required end / intermediate bearing length (inches), based on bearing stress of 850 psi.

PWT Treated LVL

Stair Stringers

Improved Performance

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

Tread Width	36"		42"	44"	48"
Stringer Depth	2 Stringers	3 Stringers	3 Stringers	3 Stringers	3 Stringers
2-ply 1½" x 11¼"	10'-10"	12'-6"	11'-8"	11'-8"	10'-10"
2-ply 1¾" x 11¾"	12'-6"	14'-2"	14'-2"	13'-4"	13'-4"
2-ply 1¾" x 14"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"

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

Tread Width	36"		42"	44"	48"
Stringer Depth	2 Stringers	3 Stringers	3 Stringers	3 Stringers	3 Stringers
2-ply 1½" x 11¼"	9'-2"	10'-10"	10'-0"	10'-0"	10'-0"
2-ply 1¾" x 11¾"	10'-10"	12'-6"	12'-6"	11'-8"	11'-8"
2-ply 1¾" x 14"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"

Code Minimums

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

Tread Width	36"		42"	44"	48"
Stringer Depth	2 Stringers	3 Stringers	3 Stringers	3 Stringers	3 Stringers
1½" x 11¼"	8'-4"	10'-0"	9'-2"	9'-2"	9'-2"
1¾" x 11¾"	10'-0"	11'-8"	10'-10"	10'-10"	10'-10"
1¾" x 14"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"

Stair Stringer Notes:

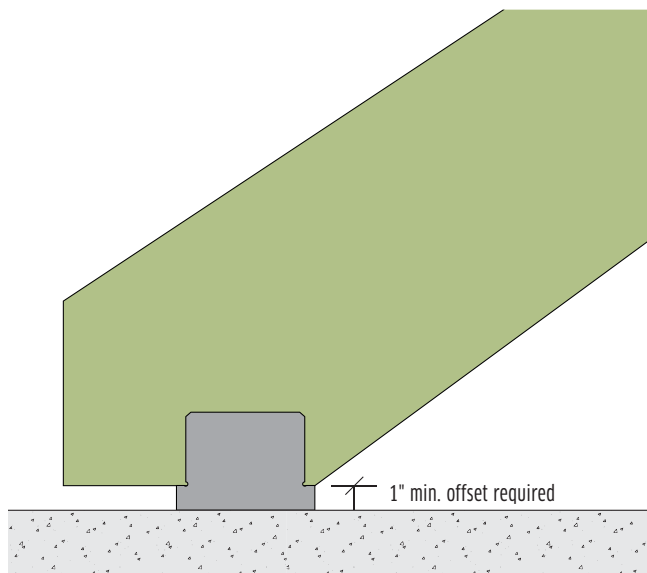
1. Table values are based on a maximum step rise of 7¾" and a minimum step run of 10".
2. Verify compliance with the local building code.
3. Table values are limited by deflection equal to L/360 at live load or L/240 at total load.
4. Stringer runs are based on 100% duration of load.
5. For other design loads, stair constructions, or attachment details, consult with the design professional.
6. Stringers are unstable until treads are installed.

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

Tread Width	36"		42"	44"	48"
Stringer Depth	2 Stringers	3 Stringers	3 Stringers	3 Stringers	3 Stringers
1½" x 11¼"	7'-6"	8'-4"	8'-4"	8'-4"	7'-6"
1¾" x 11¾"	9'-2"	10'-0"	10'-0"	9'-2"	9'-2"
1¾" x 14"	12'-6"	14'-2"	13'-4"	13'-4"	13'-4"

7. To minimize squeaks, install treads with panel adhesive in addition to nails or screws.
8. Stringers shall be separated from concrete or masonry with 1" stand-off.
9. If only cut stringers are used, a minimum of three stringers are required.
10. Stringer run refers to the horizontal projection of the stairs.
11. Single ply stringers are acceptable; however, 3" minimum stringer width is recommended. Use appropriate thickness based upon in-use exposure and climate.
12. Stringer run values developed with apparent E.

Laying out the bottom of a stair stringer with building hardware



Installation recommendations:

1. 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:

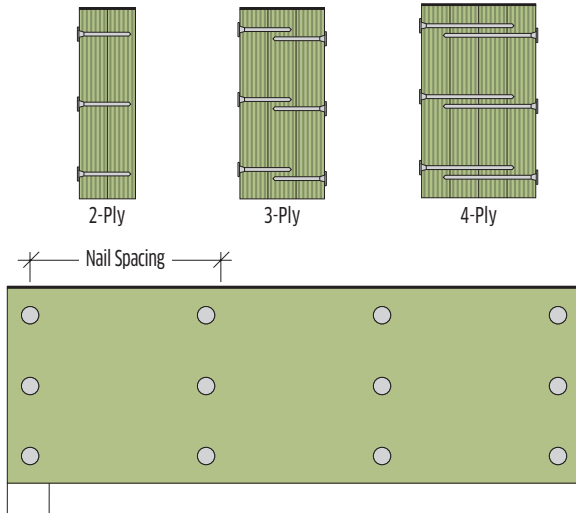
A raised base plate will inhibit moisture in the concrete slab (or surrounding area) from absorbing into and eventually destroying the wooden stringer.

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

PWT Treated Multiple-Ply Beam Assembly

Combinations of 1 3/4" Plies

NAILS



ALLOWABLE UNIFORM SIDE LOAD (PLF)

	3/4" x 0.131" Nails		16d Common Nails 3/2" 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 (2-1 3/4")	390	585	565	845
3-Ply (3-1 3/4")	290	435	425	635
4-Ply (4-1 3/4")	Use bolts for this condition (see note 1).			

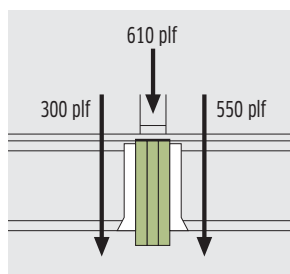
Notes:

- Minimum fastener schedule for smaller side loads and top-loaded beams:
 2-ply and 3-ply beams 12" deep or less: 2 rows 3/4" x 0.131" at 12" o.c.
 2-ply and 3-ply beams deeper than 12": 3 rows 3/4" x 0.131" at 12" o.c.
 4-ply, all beam depths: 2 rows 1/2" bolts at 24" o.c.
- The table values for nails may be doubled for 6" o.c. and tripled for 4" o.c. nail spacings.
- The nail schedules shown apply to both sides of a three-ply beam.
- 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 1/2" bolts. Bolt holes shall be the same diameter as the bolt.
- 7" wide beams must be loaded from both sides and/or top-loaded.
- Beams wider than 7" must be designed by the engineer of record.
- Load duration factors may be applied to the table values.
- For proprietary fastener alternatives, consult the manufacturer's literature.

How to Use the Maximum Uniform Side Load Table

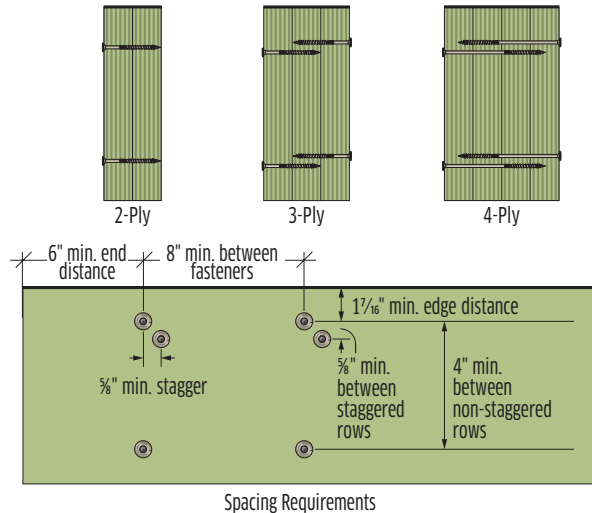
EXAMPLE: THREE 1 3/4" PLYS LOADED FROM BOTH SIDES AND ABOVE

- Use allowable load tables or sizing software to size the beam to carry a total load of (300 + 610 + 550) = 1460 plf.
- Refer to the Condition B row in the table. 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



ALLOWABLE UNIFORM LOAD APPLIED TO EITHER OUTSIDE MEMBER (PLF)

	Nominal Screw Length [in]	Structural Composite Lumber					
		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	3 1/2	1020	1530	765	1148	510	765
3-ply	3 1/2	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:

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

SCREW DATA

Model No.	Nominal Screw Length [in]	Thread Length [in]
SDWS22312DBB	3 1/2	2
SDWS22500DB	5	2 3/4
SDWS22600DB	6	2 3/4

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 1/2" 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.

To review the PWT Treated Installation Guide, please visit pacificwoodtech.com/treated.

Fastener Guidelines

Pre-drilling may reduce splitting.

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]
1½" Minimum	All	Edge	#7	0.128	0.5	1
			#8	0.130	0.75	1.5
			#9	0.134	1.75	3
			#10 SD Connector*	0.169	0.75	2
			#12 and larger sizes not recommended			
1¾" Minimum	7¼" Minimum	Edge	#10 SD Connector	0.169	3	3
			#12	0.175	3	3
			LedgerLOK	0.230	3	3
			0.25"	0.250	3	3
			0.27"	0.270	3	3
¾ x 4" Lag*	0.375	3	3			
1½" Minimum	All	Face	#8	0.130	0.75	2
			#9	0.134	1.75	3
			#10 SD Connector	0.169	2.5	5
			#12	0.175	2.5	4
			pre-drilling recommended for larger sizes			
1¾" Minimum	All	Face	LedgerLOK	0.230	2.5	3
			0.25"	0.250	2.5	2
			0.27"	0.276	2.5	3
			¾ x 4" Lag*	0.375	3	4

Notes:

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

*pre-drilling 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	Edge	8d & smaller	0.131	2.5	3
			10d & 12d	0.148	3.5	4
			16d	0.162	3.5	5
	All	Face	12d & smaller	0.148	1.5	3
			16d	0.162	1.5	5

Notes:

- Minimum fastener spacing values apply to a single row of nails driven into the edge of LVL.
- Edge distance shall be sufficient to prevent splitting
- Fastener sizes and closest on-center spacing not specifically described above are beyond the scope of this publication.
- 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, ledgers and columns, 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. Columns and 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 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.

6. See Installation Guide for additional installation information.

7. PWT Treated LVL that is used in a way that does not satisfy all the above requirements is not covered by this limited warranty.

PWT Treated™ LVL 25-Year Limited Warranty

Subject to the terms and conditions of this limited warranty, Pacific Woodtech Corporation ("PWT") warrants to the original purchaser or a permitted transferee (the "Purchaser") that, during the warranty period, and when used under normal use and service conditions in connection with (1) above-ground, interior or exterior LVL applications for permanent use in structures (residential, multifamily, or commercial) in the United States of America or Canada, and/or (2) for the adequacy of design values as published by PWT, PWT Treated LVL framing components shall be free from material defects in workmanship and materials and will not become structurally unfit for the intended applications due to damage caused by termites or as a result of fungal rot, decay, or damage from wood destroying insects. The term of this limited warranty shall be twenty-five (25) years from the date of original purchase for permanent use in or attached to a house or other building structure.

Please see pacificwoodtech.com for details about PWT Treated's 25-year warranty.

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.
- 3. 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 AWPAs?** 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, deck joists, deck columns (when on piers of 8" or greater in height, with a 1" offset). 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 [ESR-3834](#) 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.
- 17. 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



The Most Powerful Software Tools in the Market
iStruct® software suite, featuring isPlan® and isDesign®

Pacific Woodtech Corporation provides customers with the best information services in the industry—and supplies its customer base with software tools for performing daily engineering and drawing functions required in today’s market.

isPlan® features:

- Draw and design floor, roof, and DECK framing plans with engineered wood products
- Includes structural analysis and reporting, take-offs, quotes, and cutting optimization with inventory integration
- Automatically develops loads and produces bold, color graphic layouts in 2D and 3D
- Specially engineered for companies with dedicated design staffs
- Supports the full Pacific Woodtech product line
- Includes isDesign— the single-member beam design for custom or complex loading situations

Single-member sizing:

- Beams, columns, and joists
- Concentrated loads
 - Hot tubs, planter boxes, etc.
- Improved system design

Deck framing layouts:

- Complete materials list
- Design outputs for building officials
- 3D structure modeling

Layout Name		deck test					
Design Method		ASD					
Description		Deck Test					
Created		June 19, 2019					
Builder							
Sales Rep							
Designer		Matt Casse					
Shipping							
Project		1					
Builder's Project		Pacific Woodtech Corp.					
		1850 Park Lane					
		Burlington, WA					
		98233					
Ground Floor		ASD (USA)					
Design Method		IBC/IRC 2015					
Building Code							
Floor							
Loads							
Live		40					
Dead		10					
Deflection Joist							
LL Span L/		480					
TL Span L/		240					
LL Cant 2L/		480					
TL Cant 2L/		240					
Deflection Girder							
LL Span L/		480					
TL Span L/		240					
LL Cant 2L/		480					
TL Cant 2L/		240					
Decking		SPF Plywood					
Fastener		1802 JKN Nailed					
		Nailed Only					

1. LB - Lateral bracing is required along the top of the beams where this symbol is present. The number "4" in the label represents the maximum on center spacing in feet for the required lateral bracing. This number may vary for different beams. If you are unsure how to apply the lateral bracing please contact the design professional for this job.

Ground Floor							
Label	Description	Width	Depth	Qty	Piles	Pos	Length
J1	1.5E PWT/LVL	1.5	9.25			31	493.0
J2	1.5E PWT/LVL	1.5	9.25			31	163.0
J3	1.5E PWT/LVL	1.5	9.25			6	425.0
B1	1.5E PWT/LVL	1.5	9.25			6	293.0
B2	1.5E PWT/LVL	1.5	9.25			6	293.0
B3	1.5E PWT/LVL	1.5	9.25			6	293.0
Column							
Label	Description	Width	Depth	Qty	Piles	Pos	Length
C1	1.5E PWT/LVL 3.5' X 3"	9.5	5.25			1	7
C2	1.5E PWT/LVL 3.5' X 3"	9.5	5.25			1	7
C3	1.5E PWT/LVL 3.5' X 3"	9.5	5.25			1	7

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This layout is to be used as an installation guide only. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them.

The strength and uniformity of steel. The workability of wood.

Featuring the world's first manufacturer-treated LVL with protection through every layer using innovative TRU-CORE® technology.

PWT Treated™ saves you time and materials because it's straight, stable, and uniform-sized.

Plus, it's stiffer and stronger with longer spans for better views—and it's stainable!

Backed by a 25-year warranty, PWT Treated is quickly becoming the builder's material of choice.

Find out how this premium, preferred framing system can be built into your next project: sales@pacificwoodtech.com.

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