



TECH GUIDE

PWT TREATED LVL

COLUMNS

PWT FOCUSED ON EWP

PWT Treated LVL Free-Standing Columns— Solid Sections

**Cladding is
required on all
PWT Treated LVL
columns**

(Does not apply to multi-ply or built-up columns)

MAXIMUM VERTICAL LOAD (LBS)

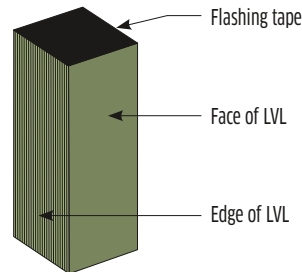
Column Height (ft)	Dry Use		Wet Use	
	3-1/2" x 3-1/2"	5-1/4" x 5-1/2"	3-1/2" x 3-1/2"	5-1/4" x 5-1/2"
6	10350	24498	5937	12207
7	8685	24491	5301	11880
8	7319	23719	4649	11466
9	6223	21039	4043	10949
10	5335	18489	3518	10317
12	4034	14241	2701	8791
14	3144	11023	2125	7227
16	-	8734	-	5869
18	-	7072	-	4814
20	-	5840	-	4004

Design Assumptions:

- Column Height is the clear height of the column between top and bottom supports.
- The vertical load capacity is for Solid, one-piece, columns.
- The vertical load capacity is the total vertical load applied to the column, including all dead loads. No lateral loads have been applied.
- The vertical capacity is for a full cross-section only. Notching and drilling are not allowed without further analysis by a professional engineer except as required for the proper installation of column caps, bases and other hold-downs. Bolts, lag screws and self-tapping screws shall only be inserted through the face of the column, the face of the veneers.
- The capacity assumes an eccentricity of 1/6 of the column depth or width, whichever controls.
- Columns are assumed to be braced in both directions at the top and bottom supports.
- The tabulated capacities have been limited by the bearing capacity of 2500 psi concrete. For bearing on a lower strength concrete or a wood plate, the designer shall check the required vertical load against the bearing capacity for the plate and increase the column size accordingly.
- Loads are based on a Load Duration Factor of 1.0.

FIGURE 1

Flashing or flashing tape is required on all upward facing surfaces. Flashing tape must have passed design standard AAMA 711, Level 3, Type A (no primer needed); perform in high- and low- temperature extremes; and have minimum UV protection of 90 days exposure. Flashing tape must be warranted for this specific application and must be installed per the manufacturer's instructions and as required by code. Flashing tape warranty must meet or exceed the PWT Treated LVL warranty to ensure compatibility of products and warranty.



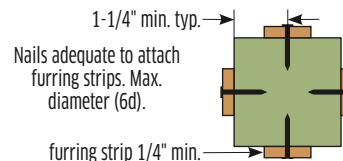
Do not wrap columns with moisture-trapping materials.

FIGURE 2

Cladding is required on all PWT Treated columns. Furring strips are required to keep the cladding from contacting the column. Furring strips must be preservative-treated or decay resistant. Follow manufacturer's installation instructions.

For proper ventilation and drainage, maintain a gap at the bottom of the cladding.

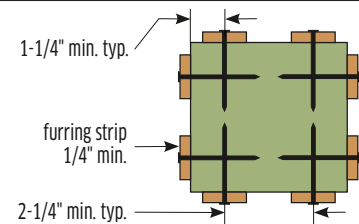
Furring strips for 3-1/2" x 3-1/2" Columns



Furring strips for 5-1/4" x 5-1/2" Columns

Furring strips less than or equal to 1/2" thick: fasten with 12d box or 0.120" x 3" power driven nails through both furring strips at 12" o.c. on each face.

Furring strips greater than 1/2" thick: prior to attaching furring strips fasten with 2 rows of 12d box or 0.120" x 3" power driven nails at 12" o.c. into the face of the LVL, staggered. Use 6d nails max to attach furring strips.



IMPORTANT NOTE: PWT Treated LVL is Laminated Veneer Lumber rated for exterior use (UC3B – nonground contact). 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.

Reference Design Values

100% LOAD DURATION

2.0E 2800Fb PWT Treated LVL	Dry Use (psi)	Wet Use (psi)
Modulus of Elasticity, $E^{(1)}$ ($\times 10^6$) =	2.0	1.4
Bending (beam), $F_b^{(2)}$ =	2,800	1,680
Compression parallel to grain, $F_c^{(1)}$ =	2,500	875

- 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 $(1.75/d)^{0.33} \leq 1.00$, where d is the depth of the member [inches].
- See Product Reports APA PR-L329 and ICC-ES ESR-2909 for additional design criteria.
- Dry use (dry service) for structural composite lumber products refers to an application where the in-service equilibrium moisture content of wood is less than 16%.

SYSTEM COMPARISON

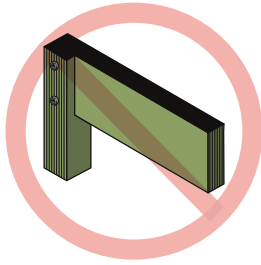
Features	PWT Treated LVL	Ordinary Pressure-Treated Lumber
25-Year Warranty	YES	Varies
Ability to Stain at Time of Installation	YES	Limited Results
Available in Long Lengths	YES	NO
Consistent Dimension (No Planing)	YES	NO
Interior Use	YES	NO

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.

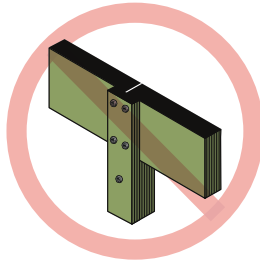
Cladding is required on all PWT Treated LVL columns

FIGURE 3

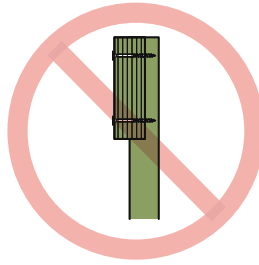
Don't notch such that bolts are through the edge



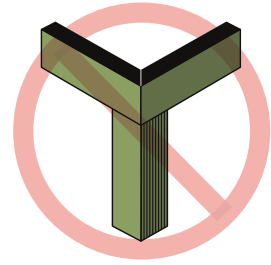
Don't notch at beam splices



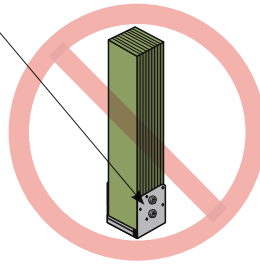
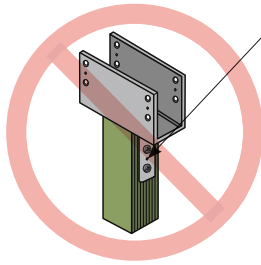
Don't support beams with screws or bolts



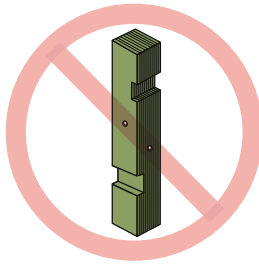
Don't miter beams



Don't install bolts in edge of LVL



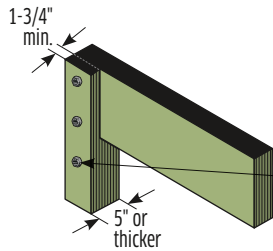
Don't drill holes or cut notches



The full thickness of all PWT LVL must be supported from below.

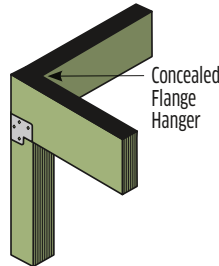
FIGURE 4

Notched Columns: 1-3/4" of column must extend to the top of the beam.
Flash all notch surfaces – top, side, and bottom.

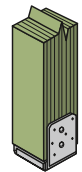
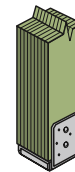
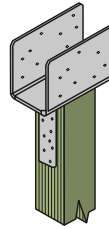


1/2" - diameter ASTM A307 (or better) bolts. Use washers on both faces.
Two bolts for beams ≤ 12" tall, three bolts for beams > 12" deep
Additional bolt must be installed 6" below the bottom of the beam centered on the face of the column.

Column and Corner Beams: fully support one beam, attach other beams to it.



Nails or screws with a maximum diameter of 0.175" can be placed in either the face or edge of the LVL



Bottom of column must be 1" above concrete and 8" above grade.
Flashing is required on all upward facing surfaces (not always shown for clarity).

Flashing or approved flashing tape is required on any upward facing surfaces and all notch surfaces.

PWT Treated LVL is treated throughout the piece (no gradient), "re-treatment" is not necessary.

PWT Treated LVL is lightly sealed to reduce the amount of moisture that is absorbed prior to installation.

Coating both ends with a sealer or paint is highly recommended.

ANCHOR Seal® is an example of product specifically designed for sealing end cuts.

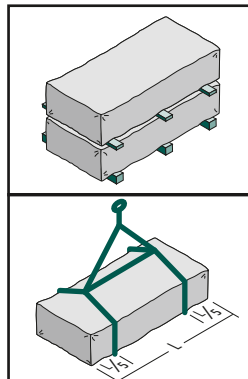


Storage Guidelines

Storage

- Store bundles with wood lying in flat orientation on a smooth, level, well-drained and supportive surface.
- Bundles should not be in contact with the ground.
- Place 2x or LVL spacers (at a maximum of 10' apart) between bundles and the ground and bundles stored on top of one another.

Bundles should remain wrapped, strapped and protected from the weather until time of installation.



Maintenance in exterior applications, (including, but not limited to, deck substructures)

PWT Treated™ LVL must not be installed or become in contact with the ground in use in a structure.

Regular efforts must be made to remove debris buildup around wood members, 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.



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.
- May be designed for either dry and wet use.

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 allowed
- Stainable and paintable
- No added VOCs
- Code Reports: *ESR-2909* (includes City of LA, California, and Florida supplements), *ESR-3834*, and *PR-L329*

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
- Meets FEMA Flood Damage-Resistant Materials Requirements for Class 4

Product Identification

- PWT Treated LVL has a muted olive tint



**PWT
TREATED**
TREATED RIGHT™
BY PWT™

PWT™
BUILD SOMETHING STRONGER

1850 Park Lane Burlington, WA 98233

TF 888.707.2285

pwtewp.com

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 the United 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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