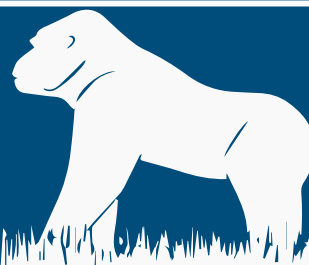


STRONG DURABLE
Gorilla Lam



Building relationships through building products.

Tri-State Forest Products

Tri-State Forest Products, Inc. is a full-line wholesale distributor offering a wide array of building materials, including high-quality engineered wood products such as I-joists and or Open-joist systems, LVL & Glulam beams.

We provide reliable jobsite delivery throughout Ohio, Indiana, Michigan, Kentucky, Tennessee, Eastern Illinois, Western Pennsylvania, Western West Virginia, and parts of Western New York.

Our team of professional engineered wood product specialists delivers complete floor and roof design solutions for both residential and commercial projects.



Sealer

Gorilla Lam LVL is fully sealed with a factory-applied premium sealer that mitigates water absorption and improves product stability during normal yard handling, distribution, and construction.

Sizing Software

We partner with Simpson Strong-Tie to support engineers, designers, and specifiers. iStruct Software®, featuring the isDesign® beam sizing module, incorporates U.S. (ASD) and Canadian (LSD) building codes, and provides printable design calculations and beam capacities. Users can model simple spans, point loads, cantilevers, and other common applications. Contact your Tri-State representative to request a complimentary copy of isDesign software.

Warranty

Gorilla Lam laminated veneer lumber carries a full limited lifetime warranty. For full details, please consult our website: www.murphylywood.com/technical

FROM TREE TO FINISHED PRODUCT

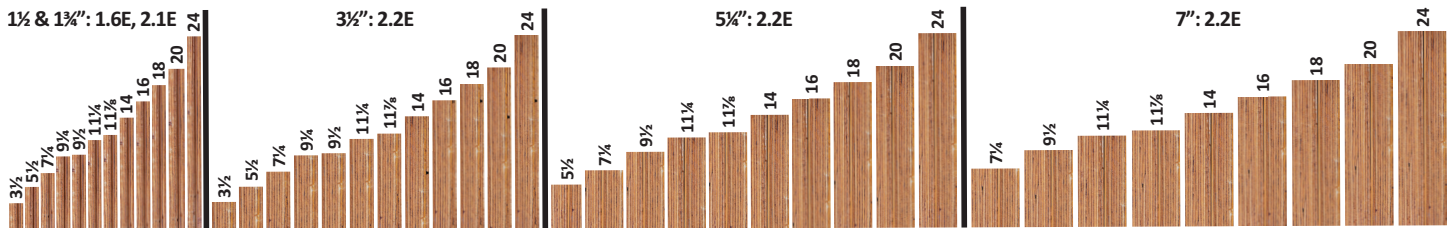
Gorilla Lam LVL Allowable Design Stresses

		1.6E LVL	2.1E LVL	2.2E LVL
True Modulus of Elasticity (MOE) ² - Edgewise or Flatwise	E (psi) =	1,600,000	2,100,000	2,200,000
Apparent Modulus of Elasticity (MOE) ² - Edgewise or Flatwise	E (psi) =	1,500,000	2,000,000	2,100,000
Bending - Edgewise ^{3,4}	F _b edge (psi) =	2,250	3,100	3,100
Bending - Flatwise ⁵	F _b flat (psi) =	2,250	3,100	3,100
Horizontal Shear - Edgewise	F _v edge (psi) =	285	290	290
Horizontal Shear - Flatwise	F _v flat (psi) =	150	150	150
Compression Perp. to Grain ² - Edgewise	F _{c perp} edge (psi) =	750	750	750
Compression Perp. to Grain ² - Flatwise	F _{c perp} flat (psi) =	450	550	550
Compression Parallel to Grain	F _{c para} (psi) =	2,350	3,200	3,200
Tension Parallel to Grain ⁶	F _t (psi) =	1,350	2,100	2,100
MOE for stability calculations ²	E _{min} (psi) =	789,446	1,036,148	1,085,488

Notes:

- These allowable design stresses apply to dry service conditions. Murphy LVL shall not be used for exterior conditions exposed to the elements.
- No increase is allowed for duration of load.
- The tabulated values are based on a reference depth of 12 inches. For other depths, when loaded edgewise, the allowable bending stress (F_b) shall be modified by a depth factor, K_d=(12/d)0.18
- A factor of 1.04 may be applied for repetitive members as defined in the National Design Specification for Wood Construction.
- Tabulated F_b flatwise values are based on a thickness of 1-3/4". For other thicknesses, when loaded flatwise, multiply F_b flatwise by (1.75/t)^{0.25}, where t is the LVL thickness in inches. For thicknesses less than 1-3/4", use the tabulated value.
- Tensile strength is based on a 3-foot gage length. For greater lengths, multiply F_t by (3/L)^{0.11}, where L = length in feet. For lengths less than three feet, use the tabulated value.
- See APA Product Report PR-L283 (www.murphyplywood.com/technical)

Available Gorilla Lam LVL Sizes



Design Values

Gorilla Lam LVL Design Values - 1.75" Thick Edgewise												
LVL Size	5%	5 1/2	7%	9%	9 1/2	11%	11 1/2	14	16	18	20	24
Max. Vert. Shear Edgewise (lbs)	1,776	1,861	2,453	3,130	3,214	3,806	4,018	4,737	5,413	6,090	6,767	8,120
Max. Moment Edgewise (ft-lbs)	2,410	2,623	4,336	6,756	7,092	9,648	10,645	14,364	18,315	22,694	27,491	38,309
EI x 10 ⁶ Edgewise (lbs-in ²)	44	51	117	242	263	436	513	840	1,254	1,786	2,450	4,234
Weight (lbs/ft)	2.36	2.47	3.26	4.16	4.27	5.06	5.34	6.30	7.19	8.09	8.99	10.79

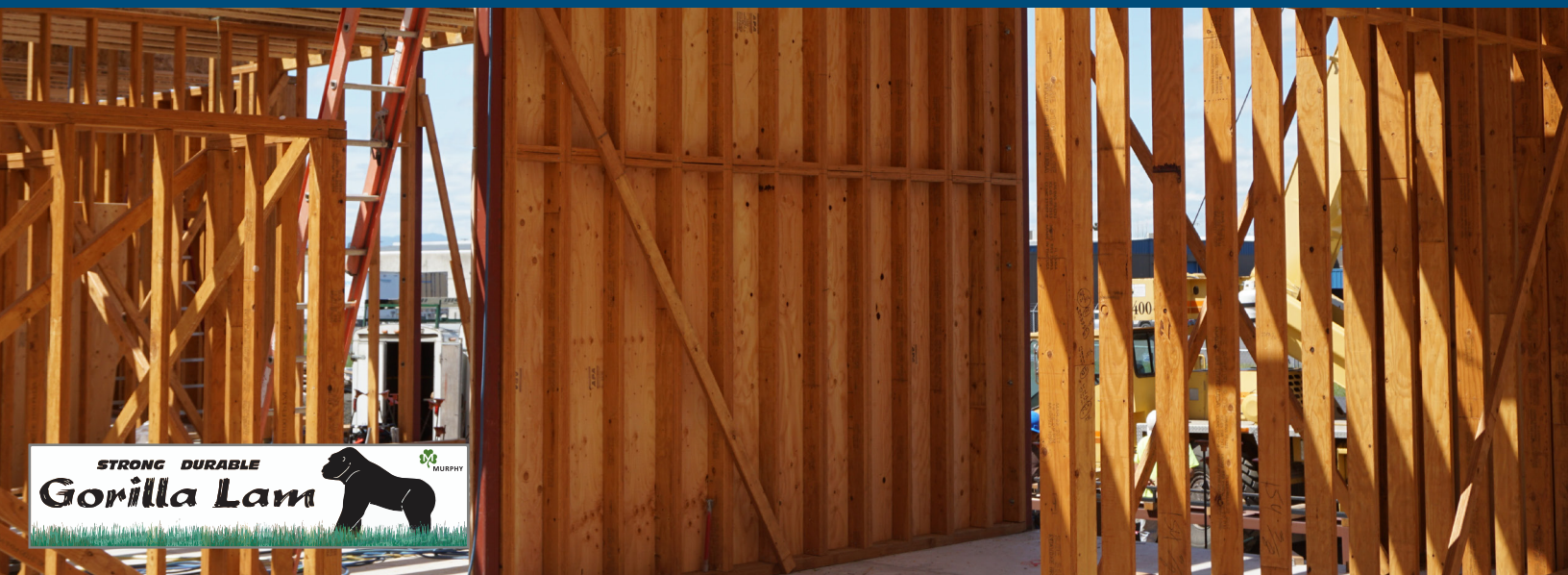
Notes:

- Allowable shear and moment values are for 100% Duration of Load and may be adjusted for other durations of load. EI shall not be adjusted for duration of load.
- For 2-Ply, 3-Ply and 4-Ply LVL members, the values in the tables may be multiplied by 2, 3 and 4 respectively.
- For 1-1/2" thick LVL members, allowable design values may be obtained by multiplying the table values by 0.857.
- 1-1/2" thick members 14" and deeper must be a minimum of two plies unless designed by a design professional for a specific application.
- 1-3/4" thick members 16" and deeper must be a minimum of two plies unless designed by a design professional for a specific application.
- Single ply 1-1/2" thick members are assumed to be laterally braced at 16" o.c. or less.
- Single ply 1-3/4" thick members are assumed to be laterally braced at 24" o.c. or less.

General notes about the information contained within:

- All tables assume dry conditions. Calculations are based on NDS, IBC, ICC ESR-293 and APA PR-L283.
- Table values assume that lateral support is provided at each support and continuously along the top edge and applicable compression edges of the beam. Continuous support is considered to be a maximum unbraced length of 24" for 1 3/4" thick or thicker beams or 16" for 1 1/2" thick beams.
- This information is intended to be used for preliminary design purposes and product comparisons: A complete structural analysis should be performed by a design professional.

Full design tables, installation information and product warranty can be found on our website:
<https://www.murphyplywood.com/engineered> (full documentation found in technical section)



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