ROSBORO LAMINATED DECKING™

COST-EFFECTIVE DECKING SOLUTION FOR MASS TIMBER

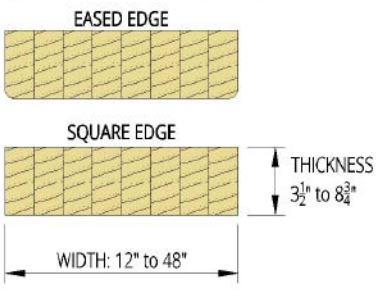
Rosboro Laminated Decking™ is a cost-effective alternative compared to other mass timber floor and roof systems such as CLT (Cross Laminated Timber).

With all laminations oriented on the strong axis RLD is **stronger than CLT**, allowing you to use smaller sections and **reduce project costs**. 3 ½" RLD can replace 3-ply CLT while 5 ½" RLD replaces 5-ply CLT in most floor and roof applications.

The exposed surface is available with either architectural or industrial appearance to fit a variety of project needs. Designed for single and multi-span applications, Rosboro Laminated Decking provides a high-strength, visually appealing base for any Mass Timber structure.

FEATURES AND BENEFITS OF LAMINATED DECKING

- Easier to handle and install than bulky panel systems
- Wide face of lumber is not exposed, greatly reducing the visibility of checking
- Ideal for floor or roof designs that include a space between panels in the exposed ceiling for utility chases
- Bearing support only required perpendicular to span allowing for the use of floor-to-ceiling curtain wall systems below panel edges
- Can be pre-fabricated with all connections and openings just like CLT
- 1-hour and 2-hour fire rated conformance
- Wide range of size options make RLD the most cost effective wood roof and floor decking on the market



ROSBORO LAMINATED DECKING™

AVAILABLE SIZES

- Thickness: 3 ½", 5 ½", 6 ¾", and 8 ¾"
- Widths: 12" through 48"
- Length: 10' to 60'

Design Values

Product	Layup Combination	Bending 4 or more lams (psi)			Comp Perp to Grain $F_{c\perp}$ (psi)	Shear Parallel to Grain F_{vy} (psi)	MOE (10^6 psi)	
		F_{by}	C_{fu}[1]	F'_{by}		4 or more	Apparent	TRUE
3-1/2" Decking	EWS 1	1,450	1.147	1,663	560	230	1.5	1.6
5-1/2" Decking	EWS 1	1,450	1.091	1,581	560	230	1.5	1.6
6-3/4" Decking	EWS 1	1,450	1.066	1,546	560	230	1.5	1.6
8-3/4" Decking	EWS 1	1,450	1.036	1,502	560	230	1.5	1.6

Notes:

1. Flat-use factor (C_{fu}) per 2015 NDS Secion 5.3.7.
2. Applicable to dry-use service conditions (C_M = 1.0).
3. Applicable to in service temperature conditions ≤ 100°F (C_t = 1.0).
4. Values assume minimum 12 inch decking width.

Design Properties

Depth (in)	Weight (psf)	Maximum Resistive Shear (lbf)			Maximum Resistive Moment (ft-lb)			EI (10^6 in^2-lb)
		100%	115%	125%	100%	115%	125%	
3 1/2	10.2	6440	7406	8050	3395	3904	4243	64
5 1/2	16.0	10120	11638	12650	7972	9168	9965	250
6 3/4	19.7	12420	14283	15525	11738	13499	14672	461
8 3/4	25.5	16100	18515	20125	19163	22038	23954	1005

Notes:

1. Beam weight is assumed to be 35 pcf.
2. Tabulated Maximum Resistive Shear and Maximum Resistive Moment values are reported per one foot of decking width.

DIAPHRAGM DESIGN

Shear design values for Rosboro Laminated Decking in horizontal wood diaphragm assemblies are governed by the allowable unit shear capacity values as specified in AWC Special Design Provisions for Wind and Seismic (SDPWS) 2015 Edition. Due to the nature of Rosboro Laminated Decking construction, diaphragms using wood structural panels are considered to be **Fully Blocked** achieving the values given in SDPWS Table 4.2A. Rosboro Laminated Decking is also capable of achieving the higher shear capacities of **High Load Diaphragms** with the increased nailing specifications given in SDPWS Table 4.2B.

FIRE RATED DESIGN

Rosboro Laminated Decking floor and roof diaphragms take advantage of the natural char capabilities of the Doug Fir wood species. By evaluating the design thickness of the decking to include the Effective Char Depth set forth by NDS-18 Chapter 16 for one-sided fire exposure, Rosboro Laminated Decking can be utilized in both 1-HR and 2-HR assemblies without the need for sacrificial laminations

EXPANSION GAP ALLOWANCE

Rosboro Laminated Decking should be installed with ¼" expansion gaps between adjacent panels to allow for the potential of shrinkage or expansion during acclimation. After the panels have sufficiently acclimatized, these gaps can be filled with an elastomeric material to provide a more uniform finished appearance if desired.