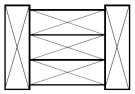
CASCADE MFG CO
www.cascade-mfg-co.com

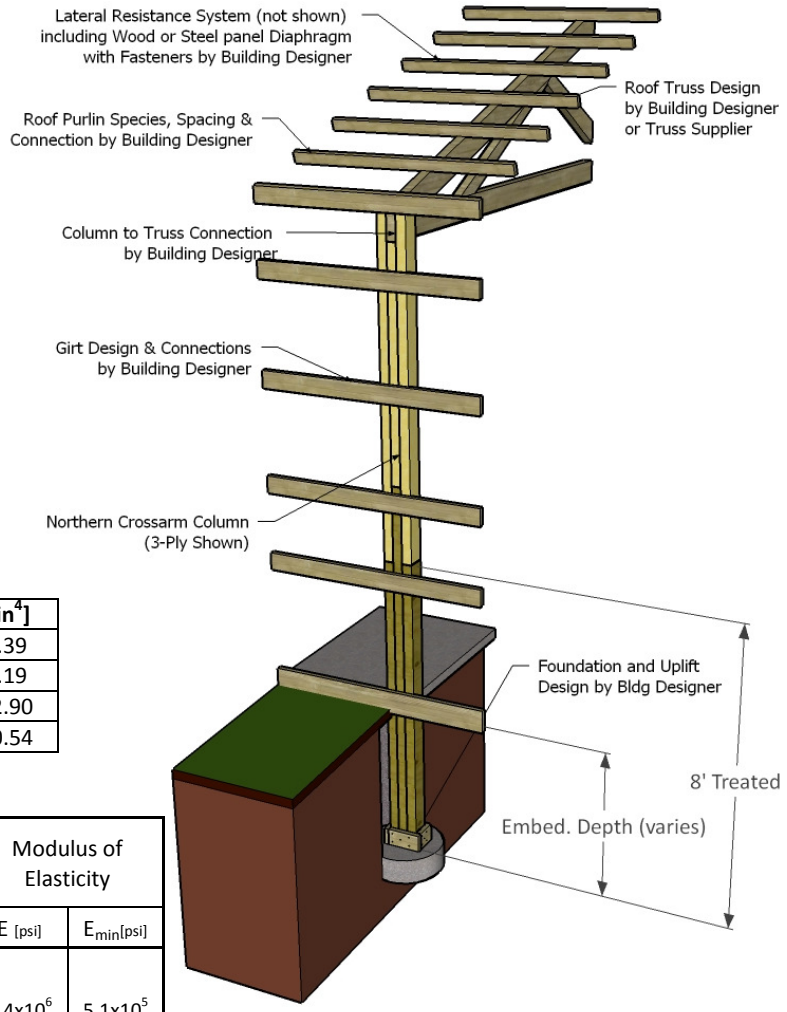
Designed and Manufactured in Compliance with EP559* & NDS 2012+

*Design Requirements and Bending Properties for Mechanically-Laminated Wood Assemblies
+Includes NDS Design Value Amendment for Southern pine Effective on June 1, 2013

Phone: 800/942-4685 Fax: 563/852-7391

Columns for Post Frame Buildings

- Designed in accordance with ANSI/ASAE EP559.1 AUG2010 with Structural Finger Joints so each ply performs like an un-spliced lamination
- Available in Southern Yellow Pine #1 or #2 with Column Bases Treated for ground embedment (MCA FDN)
- Sizes include 3Ply 2x6, 4Ply 2x6, 3Ply 2x8 and 4Ply 2x8
- Column Lengths of 12' up to 32' long (3Ply) or 40' long (4Ply)
- Intended for applications with weak axis lateral support, such as in a structurally braced wall or else use face plates on weak axis (as shown → )
- Refer to the EP559 standard for more complete information and guidance on proper design and use of these columns



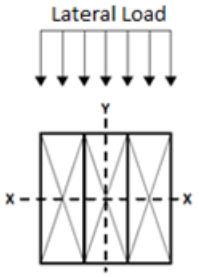
Column Section Properties

Column	Width (b)	Depth (d)	Area [in^2]	S_x [in^3]	I_x [in^4]
3Ply 2x6	4.5"	5.5"	24.75	22.69	62.39
4Ply 2x6	6.0"	5.5"	33.00	30.25	83.19
3Ply 2x8	4.5"	7.25"	32.63	39.42	142.90
4Ply 2x8	6.0"	7.25"	43.50	52.56	190.54

Column Design Values

	Partially Adjusted Bending	Compression Parallel to Grain	Shear Parallel to Grain	Modulus of Elasticity	
	$F_b \times C_r \times C_F$ [psi]	$F_{c//}$ [psi]	F_v [psi]	E [psi]	E_{min}[psi]
3Ply 2x6 SYP#2	1,350	1,400	175	$1.4x10^6$	$5.1x10^5$
4Ply 2x6 SYP#2	1,400				
3Ply 2x8 SYP#2	1,250	1,550			
4Ply 2x8 SYP#2	1,295				
3Ply 2x6 SYP#1	1,825	1,350	175	$1.6x10^6$	$5.8x10^5$
4Ply 2x6 SYP#1	1,890				
3Ply 2x8 SYP#1	1,690	1,500			
4Ply 2x8 SYP#1	1,750				

Design values from NDS 2012 and with 2013 amendments except where modified by provisions of the EP559 standard (C_r). Allowable column capacity for combined bending and axial loads may be calculated using NDS provisions in §3.9 and §15.3.2



Strong Axis bending from Top View

Notes from EP 559.1 for designers performing analysis with Northern Crossarm Columns:

1. The slenderness ratio (R_B) calculated using 60% of the actual member width, b in NDS Eq. 3.3-5 (§6.1.1)
2. The distance between lateral support locations (typically, wall girts) in the weak axis shall not be more than 39 inches (§6.2). Another option for lateral support is properly applied face plates (see above)

Note: Column sizing provided is intended to be used as a guide for quoting and does not constitute an engineered design. All final design and structural data must be coordinated and approved by a Registered Design Professional and the Building Designer.

Technical Support and Design Compliance Verification provided by:

HALBERG ENGINEERING LLC
Aaron J. Halberg, P.E.
Specialists in Post Frame Engineering ™
10335N DUFFY RD | HAYWARD WI 54843
www.halbergengineering.com
P: (866) 694-8602 | F: (866) 391-0916