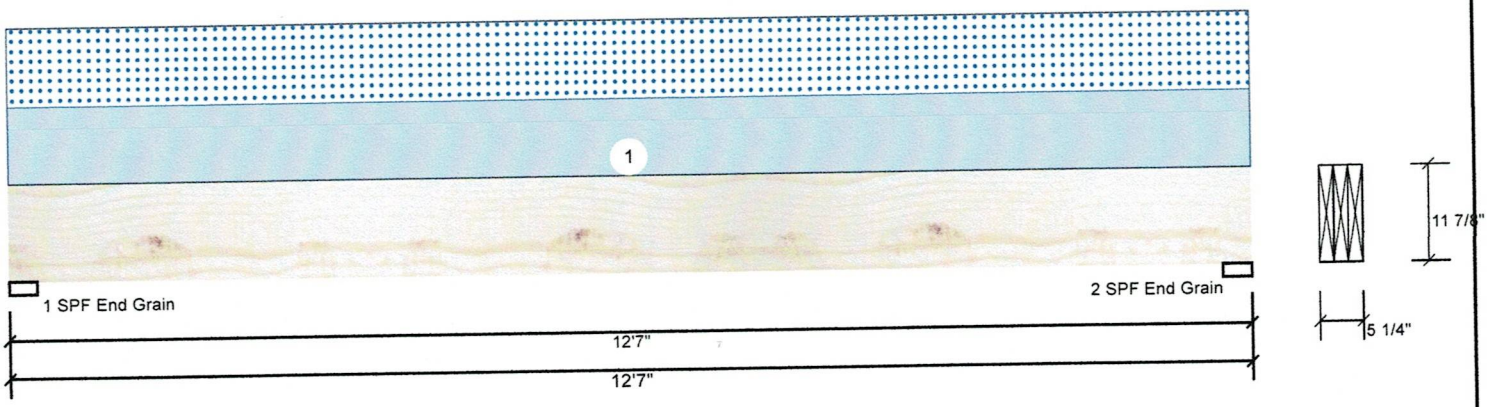
isDesign™

Client:
Project:
Address:

Date: 9/20/2018
Designer: Neal Baggett
Job Name: Angier Office
Project #:

BM1 Kerto-S LVL 1.750" X 11.875" 3-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	3371	3284	0	0
2	0	3371	3284	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	42%	3371 / 3284	6656	L	D+S
2 - SPF End Grain	3.500"	42%	3371 / 3284	6656	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	19440 ft-lb	6'3 1/2"	35719 ft-lb	0.544 (54%)	D+S	L
Unbraced	19440 ft-lb	6'3 1/2"	35719 ft-lb	0.544 (54%)	D+S	L
Shear	5366 lb	11'4 3/8"	15295 lb	0.351 (35%)	D+S	L
LL Defl inch	0.191 (L/762)	6'3 1/2"	0.404 (L/360)	0.470 (47%)	S	L
TL Defl inch	0.387 (L/376)	6'3 1/2"	0.606 (L/240)	0.640 (64%)	D+S	L

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Multiple plies must be fastened together as per manufacturer's details.
3 Top loads must be supported equally by all plies.
4 Top must be continuously braced.
5 Bottom braced at bearings.
6 Lateral slenderness ratio based on single ply width.

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Top	522 PLF	0 PLF	522 PLF	0 PLF	0 PLF	
	Self Weight				14 PLF					

Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Lumber

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Metsä Wood
3071 Commerce Dr, Suite E
Fort Gratiot, MI 48059
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

COMTECH