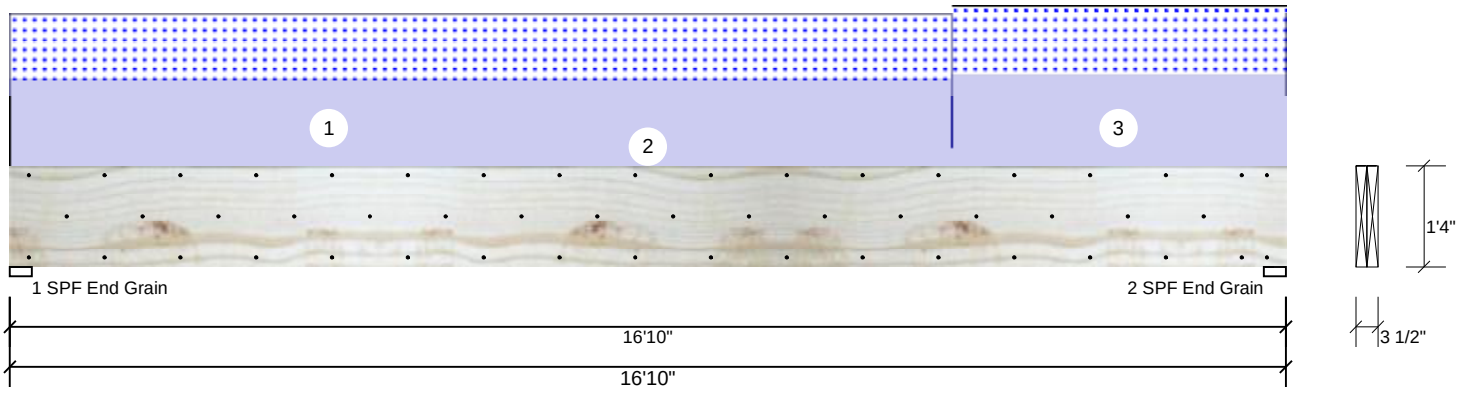
Client:	Weaver Development	Date:	11/19/2020
Project:	Bella (2 Car Garage)	Input by:	Christine Shivy
Address:		Job Name:	GDH
		Project #:	

GDH Kerto-S LVL 1.750" X 16.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	2443	1833	0	0
2	0	2487	1877	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	40%	2443 / 1833	4277	L	D+S
2 - SPF End Grain	3.500"	41%	2487 / 1877	4363	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	17133 ft-lb	8'5 5/16"	39750 ft-lb	0.431 (43%)	D+S	L
Unbraced	17133 ft-lb	8'5 5/16"	17187 ft-lb	0.997 (100%)	D+S	L
Shear	3537 lb	15'3 3/8"	13739 lb	0.257 (26%)	D+S	L
LL Defl inch	0.164 (L/1199)	8'5 1/8"	0.410 (L/480)	0.400 (40%)	S	L
TL Defl inch	0.383 (L/514)	8'5 1/8"	0.547 (L/360)	0.700 (70%)	D+S	L

Design Notes

1. Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
2. Refer to last page of calculations for fasteners required for specified loads.
3. Girders are designed to be supported on the bottom edge only.
4. Top loads must be supported equally by all plies.
5. Top must be laterally braced at a maximum of 6'10 1/8" o.c.
6. Bottom braced at bearings.
7. 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	Part. Uniform	0-0-0 to 12-5-0		Top	217 PLF	0 PLF	217 PLF	0 PLF	0 PLF	B1
2	Uniform			Top	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
3	Part. Uniform	12-5-0 to 16-10-0		Top	230 PLF	0 PLF	230 PLF	0 PLF	0 PLF	D1
	Self Weight				12 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

This design is valid until 2/26/2023

Manufacturer Info

Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(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