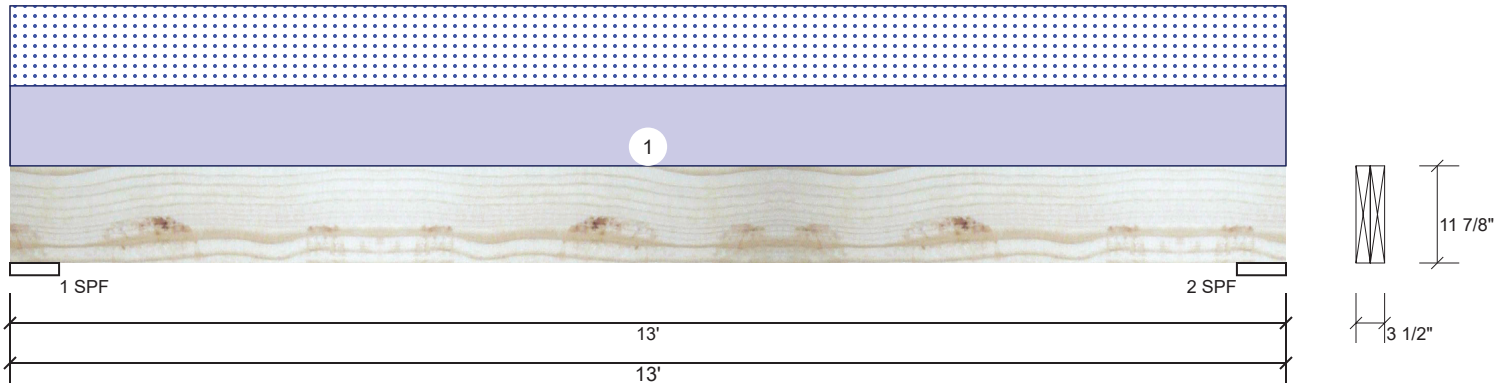
Client:	Signature Home Builders	Date:	3/30/2020
Project:		Input by:	Hampton Horrocks
Address:	34 Bumpas Creek Access, Dunn, NC	Job Name:	Denning Residence
		Project #:	J0320-1253

BM1 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	1913	1853	0	0
2	0	1913	1853	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.000"	42%	1913 / 1853	3765	L	D+S
2 - SPF	6.000"	42%	1913 / 1853	3765	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	10645 ft-lb	6'6"	22897 ft-lb	0.465 (46%)	D+S	L
Unbraced	10645 ft-lb	6'6"	10665 ft-lb	0.998 (100%)	D+S	L
Shear	2938 lb	1'5 1/8"	10197 lb	0.288 (29%)	D+S	L
LL Defl inch	0.156 (L/930)	6'6"	0.303 (L/480)	0.520 (52%)	S	L
TL Defl inch	0.318 (L/458)	6'6"	0.606 (L/240)	0.520 (52%)	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 laterally braced at a maximum of 8'5 5/8" o.c.
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	285 PLF	0 PLF	285 PLF	0 PLF	0 PLF	C1
	Self Weight				9 PLF					

NORTH CAROLINA PROFESSIONAL SEAL 20809 ENGINEER PHILIP EDWARD ROBBINS

03/31/2020

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

Job# PER200768
P.E. Robbins, P.E.
1777 State Route 167
Victoria IL 61485

This design is valid until 11/13/2022

Manufacturer Info

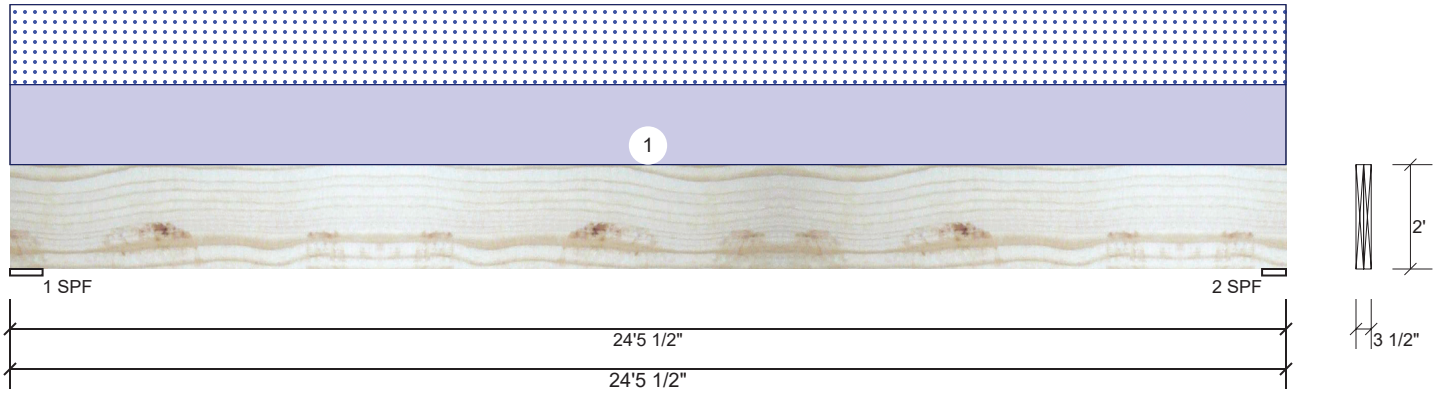
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

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

Client:	Signature Home Builders	Date:	3/30/2020
Project:		Input by:	Hampton Horrocks
Address:	34 Bumpas Creek Access, Dunn, NC	Job Name:	Denning Residence
		Project #:	J0320-1253

GDH Kerto-S LVL 1.750" X 24.000" 2-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	2	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	0	3739	3509	0	0
2	0	3688	3462	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	7.500"	65%	3739 / 3509	7248	L	D+S
2 - SPF	5.500"	87%	3688 / 3462	7150	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	40708 ft-lb	12'3 3/4"	84163 ft-lb	0.484 (48%)	D+S	L
Unbraced	40708 ft-lb	12'3 3/4"	40854 ft-lb	0.996 (100%)	D+S	L
Shear	5746 lb	22' 7/8"	20608 lb	0.279 (28%)	D+S	L
LL Defl inch	0.270 (L/1044)	12'3 13/16"	0.588 (L/480)	0.460 (46%)	S	L
TL Defl inch	0.559 (L/505)	12'3 13/16"	1.176 (L/240)	0.470 (47%)	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.
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4 Top must be laterally braced at a maximum of 4'3 3/8" o.c.
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	285 PLF	0 PLF	285 PLF	0 PLF	0 PLF	C1
	Self Weight				19 PLF					

NORTH CAROLINA PROFESSIONAL SEAL 20809 ENGINEER PHILIP EDWARD ROBBINS

03/31/2020

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