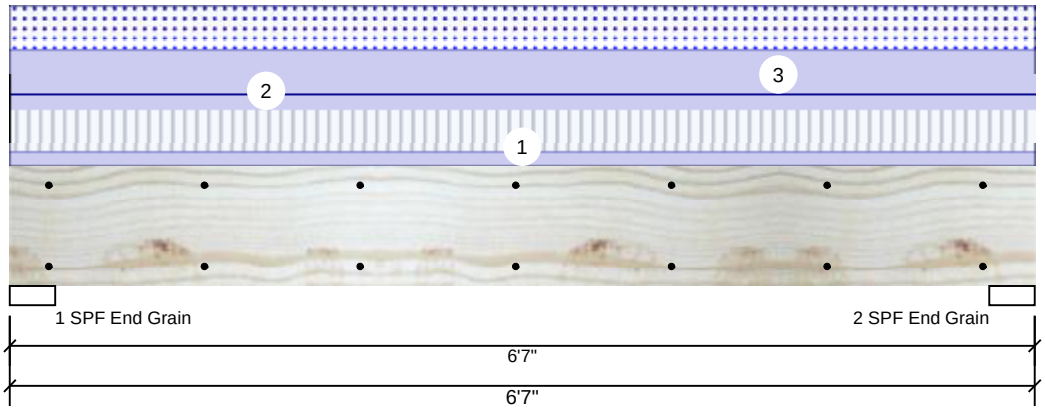
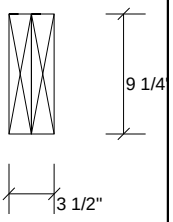
Client:	Weaver Development	Date:	12/4/2020
Project:		Input by:	Christine Shivy
Address:	Gaston II (181035B)	Job Name:	6/0 Sliding Door HDR
		Project #:	

6/0 Sliding Door HDR Kerto-S LVL 1.750" X 9.250" 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:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	1060	1903	1113	0	0
2	1060	1903	1113	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	33%	1903 / 1629	3533	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	33%	1903 / 1629	3533	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5033 ft-lb	3'3 1/2"	14423 ft-lb	0.349 (35%)	D+0.75(L+S)	L
Unbraced	5033 ft-lb	3'3 1/2"	10451 ft-lb	0.482 (48%)	D+0.75(L+S)	L
Shear	2459 lb	1'	7943 lb	0.310 (31%)	D+0.75(L+S)	L
LL Defl inch	0.042 (L/1741)	3'3 1/2"	0.153 (L/480)	0.280 (28%)	0.75(L+S)	L
TL Defl inch	0.092 (L/803)	3'3 1/2"	0.204 (L/360)	0.450 (45%)	D+0.75(L+S)	L

Design Notes

1 Fasten all plies using 2 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 braced at bearings.
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	Uniform			Top	108 PLF	322 PLF	0 PLF	0 PLF	0 PLF	F4
2	Uniform			Top	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall Load
3	Uniform			Top	338 PLF	0 PLF	338 PLF	0 PLF	0 PLF	A4
	Self Weight				7 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

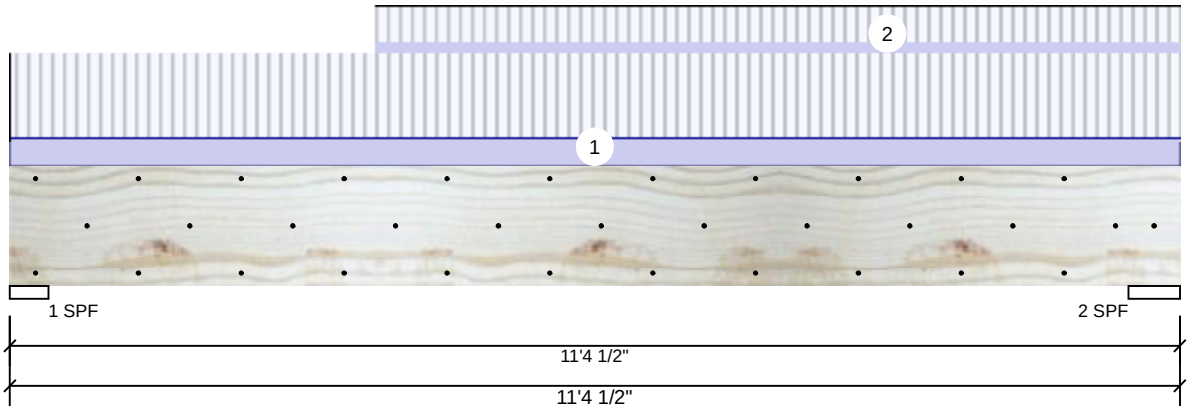
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

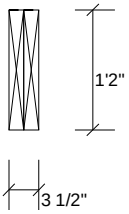
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Weaver Homes	Date:	12/4/2020
Project:		Input by:	Christine Shivy
Address:	Gaston II (181035B)	Job Name:	BM2
		Project #:	

FB1 Kerto-S LVL 1.750" X 14.000" 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	2129	771	0	0	0
2	2523	904	0	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.500"	43%	771 / 2129	2899	L	D+L
2 - SPF	6.000"	38%	904 / 2523	3426	L	D+L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8168 ft-lb	5'9 3/16"	26999 ft-lb	0.303 (30%)	D+L	L
Unbraced	8168 ft-lb	5'9 3/16"	10258 ft-lb	0.796 (80%)	D+L	L
Shear	2941 lb	9'9 1/4"	10453 lb	0.281 (28%)	D+L	L
LL Defl inch	0.090 (L/1419)	5'8 3/16"	0.266 (L/480)	0.340 (34%)	L	L
TL Defl inch	0.122 (L/1044)	5'8 3/16"	0.354 (L/360)	0.340 (34%)	D+L	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 braced at bearings.
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	Uniform			Far Face	106 PLF	318 PLF	0 PLF	0 PLF	0 PLF	F5
2	Part. Uniform	3-6-8 to 11-4-8		Top	44 PLF	132 PLF	0 PLF	0 PLF	0 PLF	F9
	Self Weight				11 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

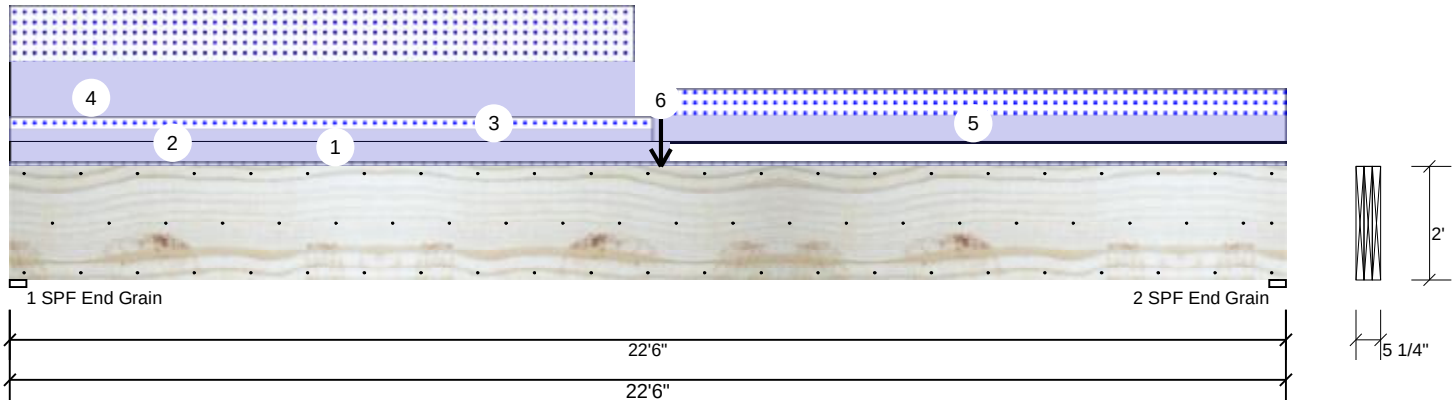
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

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

Client:	Weaver Homes	Date:	12/4/2020
Project:		Input by:	Marshall Naylor
Address:	Gaston II (181035B)	Job Name:	BM1
		Project #:	

FB2 Kerto-S LVL 1.750" X 24.000" 3-Ply - PASSED

Level: Level



Member Information

Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition:	Dry	Building Code:	IBC 2012
Deflection LL:	480	Load Sharing:	Yes
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	225	6536	5095	0	0
2	225	4429	3676	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	73%	6536 / 5095	11631	L	D+S
2 - SPF End Grain	3.500"	51%	4429 / 3676	8104	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	65477 ft-lb	11'5 3/4"	131295 ft-lb	0.499 (50%)	D+S	L
Unbraced	65477 ft-lb	11'5 3/4"	65903 ft-lb	0.994 (99%)	D+S	L
Shear	10093 lb	2'2 5/8"	30912 lb	0.327 (33%)	D+S	L
LL Defl inch	0.226 (L/1171)	11'1 11/16"	0.552 (L/480)	0.410 (41%)	S	L
TL Defl inch	0.501 (L/528)	11' 7/8"	0.735 (L/360)	0.680 (68%)	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 3'11 5/8" 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	Tie-In	0-0-0 to 22-6-0	0-6-0	Far Face	15 PSF	40 PSF	0 PSF	0 PSF	0 PSF	1' Floor
2	Part. Uniform	0-0-0 to 11-7-8		Top	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
3	Part. Uniform	0-0-0 to 11-4-0		Near Face	79 PLF	0 PLF	79 PLF	0 PLF	0 PLF	M2
4	Part. Uniform	0-0-0 to 11-0-0		Top	341 PLF	0 PLF	341 PLF	0 PLF	0 PLF	A2
5	Part. Uniform	11-4-0 to 22-6-0		Near Face	164 PLF	0 PLF	164 PLF	0 PLF	0 PLF	M3
6	Point	11-5-12		Top	2293 lb	0 lb	2293 lb	0 lb	0 lb	B2
	Self Weight				28 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

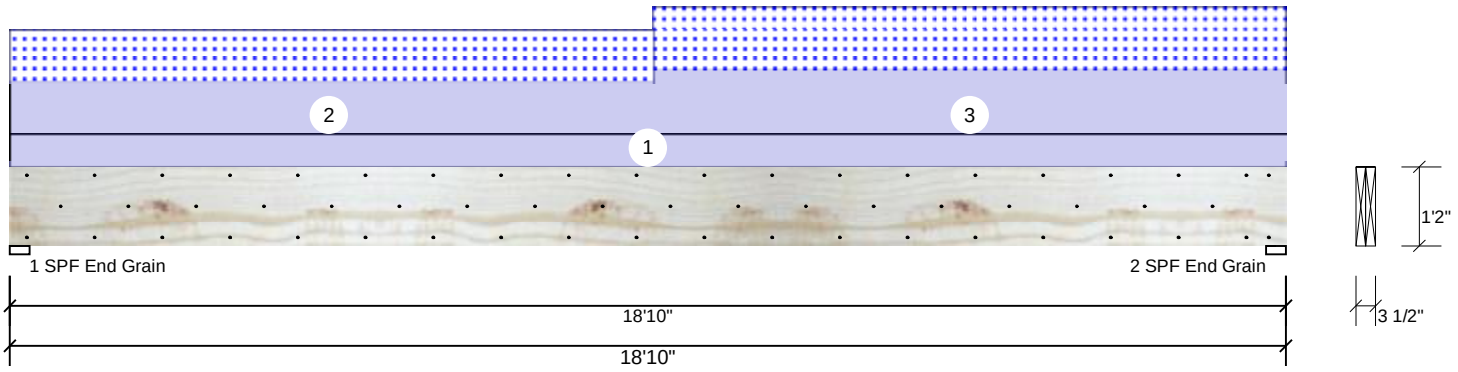
Metsä Wood
301 Merritt 7 Building, 2nd Floor
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

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

Client:	Weaver Homes	Date:	12/4/2020
Project:		Input by:	Christine Shivy
Address:	Gaston II (181035B)	Job Name:	Front GDH
		Project #:	

Front GDH Kerto-S LVL 1.750" X 14.000" 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	1619	951	0	0
2	0	1720	1053	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	24%	1619 / 951	2570	L	D+S
2 - SPF End Grain	3.500"	26%	1720 / 1053	2773	L	D+S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11981 ft-lb	9'8 7/8"	31049 ft-lb	0.386 (39%)	D+S	L
Unbraced	11981 ft-lb	9'8 7/8"	12012 ft-lb	0.997 (100%)	D+S	L
Shear	2347 lb	17'5 1/4"	12021 lb	0.195 (20%)	D+S	L
LL Defl inch	0.181 (L/1218)	9'6 3/16"	0.459 (L/480)	0.390 (39%)	S	L
TL Defl inch	0.483 (L/457)	9'5 13/16"	0.612 (L/360)	0.790 (79%)	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 8'9" 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	Uniform			Top	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
2	Part. Uniform	0-0-0 to 9-6-0		Top	96 PLF	0 PLF	96 PLF	0 PLF	0 PLF	M2
3	Part. Uniform	9-6-0 to 18-10-0		Top	117 PLF	0 PLF	117 PLF	0 PLF	0 PLF	M3
	Self Weight				11 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

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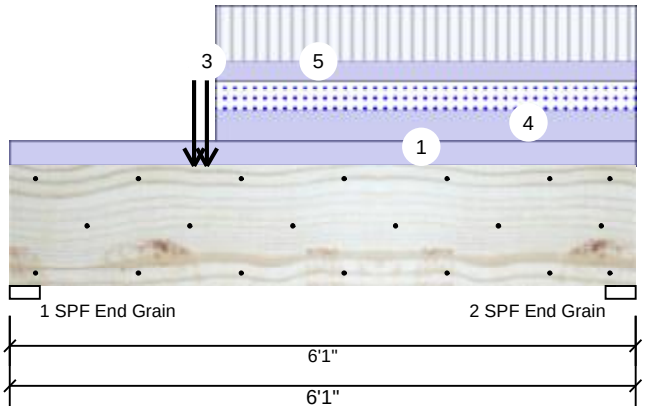
Norwalk, CT 06851
(800) 622-5850
www.metsawood.com/us
ICC-ES: ESR-3633

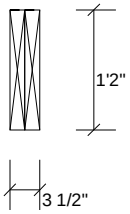
Comtech, Inc.
1001 S. Reilly Road, Suite #639
Fayetteville, NC
USA
28314
910-864-TRUS

Client:	Weaver Development	Date:	12/4/2020
Project:		Input by:	Christine Shivy
Address:	Gaston II (181035B)	Job Name:	Window Hdr.
		Project #:	

Window Hdr. Kerto-S LVL 1.750" X 14.000" 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:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind	Const
1	2560	3110	1843	0	0
2	1638	2098	1137	0	0

Bearings

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	60%	3110 / 3302	6412	L	D+0.75(L+S)
2 - SPF End Grain	3.500"	39%	2098 / 2082	4179	L	D+0.75(L+S)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	10167 ft-lb	1'11"	31049 ft-lb	0.327 (33%)	D+0.75(L+S)	L
Unbraced	10167 ft-lb	1'11"	17799 ft-lb	0.571 (57%)	D+0.75(L+S)	L
Shear	5480 lb	1'4 3/4"	10453 lb	0.524 (52%)	D+L	L
LL Defl inch	0.027 (L/2482)	2'5 1/4"	0.141 (L/480)	0.190 (19%)	0.75(L+S)	L
TL Defl inch	0.053 (L/1280)	2'5 11/16"	0.188 (L/360)	0.280 (28%)	D+0.75(L+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 braced at bearings.
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	Uniform			Top	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
2	Point	1-9-8		Top	1005 lb	3014 lb	0 lb	0 lb	0 lb	F8
3	Point	1-11-0		Top	2335 lb	0 lb	2335 lb	0 lb	0 lb	C3
4	Part. Uniform	2-0-0 to 6-1-0		Top	158 PLF	0 PLF	158 PLF	0 PLF	0 PLF	C2
5	Part. Uniform	2-0-0 to 6-1-0		Top	97 PLF	290 PLF	0 PLF	0 PLF	0 PLF	F7
	Self Weight				11 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

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