

Project: Address:

Weaver Homes

Gaston II (181035B)

Date: 9/18/2023

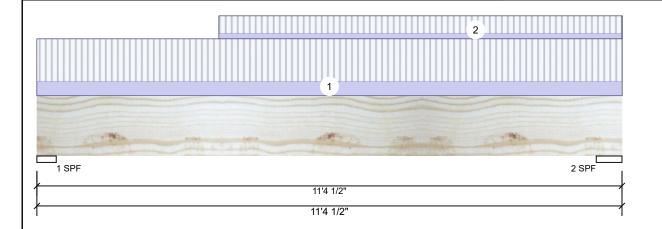
Input by: Marshall Naylor

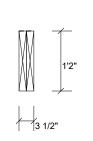
Job Name: Gaston II (181035B) 3 Car

Project #:

2-Ply - PASSED Kerto-S LVL 1.750" X 14.000" FB1

Level: Level





Page 1 of 1

Member Information

Type: Plies: Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360 Importance: Normal - II Temp <= 100°F Temperature:

Application: Floor Design Method: ASD **Building Code:** IBC 2012 Load Sharing: No Deck: Not Checked

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	2129	771	0	0	0
2	Vertical	2523	904	0	0	0

Bearings

Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.500"	Vert	43%	771 / 2129	2899	L	D+L
2 - SPF	6.000"	Vert	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"	10268 ft-lb	0.795 (80%)	D+L	L
Shear	2421 lb	9'8 1/2"	10453 lb	0.232 (23%)	D+L	L
LL Defl inch	0.090 (L/1419)	5'8 3/16"	0.266 (L/480)	0.338 (34%)	L	L
TL Defl inch	0.122 (L/1044)	5'8 3/16"	0.354 (L/360)	0.345 (34%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end 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			Тор	106 PLF	318 PLF	0 PLF	0 PLF	0 PLF	F5	
2	Part. Uniform	3-6-8 to 11-4-8		Тор	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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

Damaged Beams must not be used

Design assumes top edge is laterally restrained
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 11/3/2024

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

Manufacturer Info







Project: Address:

Weaver Homes

Gaston II (181035B)

Date: 9/18/2023

Input by: Marshall Naylor

Job Name: Gaston II (181035B) 3 Car

Page 1 of 2

Project #:

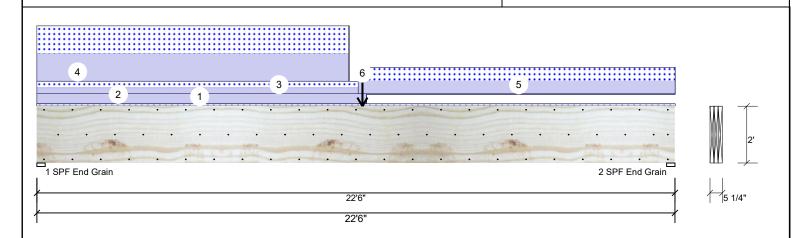
Kerto-S LVL FB2

1.750" X 24.000"

3-Ply - PASSED

Level: Level

Denetions HAIDATTEDAIED IL (Halift)



Type:	Girder
Plies:	3
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal - II
Temperature:	Temp <= 100°F

Member Information

Application: Floor Design Method: ASD **Building Code:** IBC 2012 Load Sharing: Yes Deck: Not Checked

Kea	ctions UNP	ALIEKNEL	ιιο (υριιττ)			
Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	225	6536	5095	0	0
2	Vertical	225	4429	3676	0	0

Analysis Results Location Allowed Analysis Actual Comb. Case Capacity 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" 65512 ft-lb 0.999 L (100%)10076 lb 2'3 1/2" 30912 lb 0.326 (33%) D+S Shear LL Defl inch 0.226 (L/1171) 11'1 11/16" 0.552 (L/480) 0.410 (41%) S ī TL Defl inch 0.501 (L/528) 11' 7/8" 0.735 (L/360) 0.682 (68%) D+S

Bearings

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

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 3 Refer to last page of calculations for fasteners required for specified loads.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 4' 3/8" o.c.
- 7 Bottom must be laterally braced at end bearings.
- 8 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		Тор	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		Тор	341 PLF	0 PLF	341 PLF	0 PLF	0 PLF	A2

Continued on page 2...

Notes

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- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- LVI beams must not be cut or drilled
 Refer to manufacturer's product information
 regarding installation requirements, multi-ply
 fastening details, beam strength values, and code
 approvals Damaged Beams must not be used

Handling & Installation

Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

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

Manufacturer Info

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



This design is valid until 11/3/2024

Version 21.80.417 Powered by iStruct™ Dataset: 23062201.1



Weaver Homes

Project:

Address: Gaston II (181035B) Date: 9/18/2023

Input by: Marshall Naylor

Job Name: Gaston II (181035B) 3 Car

Page 2 of 2

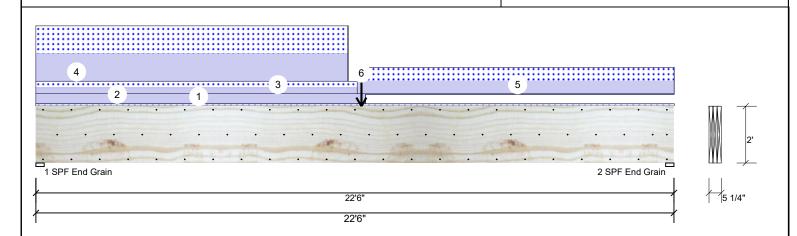
Project #:

Kerto-S LVL FB₂

1.750" X 24.000"

3-Ply - PASSED

Level: Level



Continued from	Continued from page 1										
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
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		Тор	2293 lb	0 lb	2293 lb	0 lb	0 lb	B2	
	Bearing Length	0-3-8									
	Self Weight				28 PLF						

Notes

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

Handling & Installation

Handling & Installation

1. IVI. 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

For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

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

Manufacturer Info







Project:

Address: Gaston II (181035B) Date: 9/18/2023

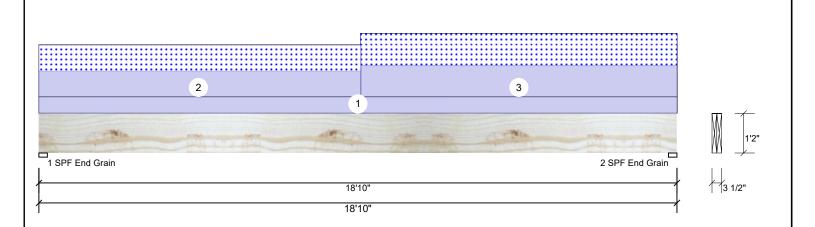
Input by: Marshall Naylor

Job Name: Gaston II (181035B) 3 Car

Page 1 of 1

Project #:

Kerto-S LVL 1.750" X 14.000" Front GDH 2-Ply - PASSED Level: Level



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

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12090 ft-lb	9'8 7/8"	31049 ft-lb	0.389 (39%)	D+S	L
Unbraced	12090 ft-lb	9'8 7/8"	12128 ft-lb	0.997 (100%)	D+S	L
Shear	2353 lb	17'5"	12021 lb	0.196 (20%)	D+S	L
LL Defl inch	0.184 (L/1202)	9'6 3/16"	0.461 (L/480)	0.399 (40%)	S	L
TL Defl inch	0.491 (L/451)	9'5 13/16"	0.615 (L/360)	0.798 (80%)	D+S	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 8'7 13/16" o.c.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

Reactions UNPATTERNED lb (U	Jplift)
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Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1619	952	0	0
2	Vertical	0	1720	1052	0	0

Bearings	5						
Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	29%	1619 / 952	2571	L	D+S
2 - SPF End Grain	3.000"	Vert	31%	1720 / 1052	2772	L	D+S

ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	wall
2	Part. Uniform	0-0-0 to 9-6-0		Тор	96 PLF	0 PLF	96 PLF	0 PLF	0 PLF	M2
3	Part. Uniform	9-6-0 to 18-10-0		Тор	117 PLF	0 PLF	117 PLF	0 PLF	0 PLF	M3
	Self Weight				11 PLF					

Notes

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- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- andling & Installation

 LVL beams must not be out or drilled

 Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals

 Damaged Beams must not be used

 Design assumes top edge is laterally restrained.

 Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

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

Manufacturer Info





Project: Address:

Gaston II (181035B)

Date: 9/18/2023

Input by: Marshall Naylor

Job Name: Gaston II (181035B) 3 Car

Project #:

1.750" X 11.875" GDH-2 **Kerto-S LVL** 2-Ply - PASSED

Application:

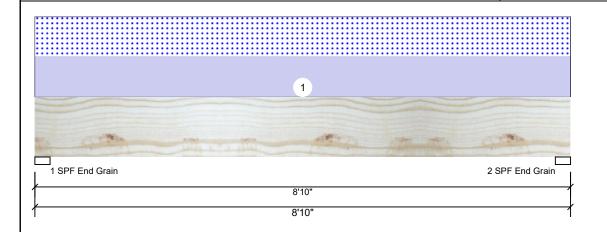
Design Method:

Building Code:

Load Sharing:

Deck:

Level: Level



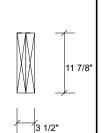
Floor

ASD

No

IBC 2012

Not Checked



Page 1 of 1

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Type: Girder Plies: 2 Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360 Importance:

Normal - II Temp <= 100°F

Temperature:

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1145	1104	0	0
2	Vertical	0	1145	1104	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4554 ft-lb	4'5"	22897 ft-lb	0.199 (20%)	D+S	L
Unbraced	4554 ft-lb	4'5"	10675 ft-lb	0.427 (43%)	D+S	L
Shear	1627 lb	1'2 7/8"	10197 lb	0.160 (16%)	D+S	L
LL Defl inch	0.036 (L/2845)	4'5 1/16"	0.211 (L/480)	0.169 (17%)	S	L
TL Defl inch	0.073 (L/1397)	4'5 1/16"	0.282 (L/360)	0.258 (26%)	D+S	L

Bearings

Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 3.000" D+S Vert 1145 / 1104 2249 L End Grain 1145 / 1104 2249 L D+S 2 - SPF 3.000" Vert 26% End Grain

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width.

ID Load Type Trib Width Side Dead 0.9 Comments Location Live 1 Snow 1.15 Wind 1.6 Const. 1.25 1 Uniform Top 250 PLF 0 PLF 250 PLF 0 PLF 0 PLF

> Self Weight 9 PLF

Notes

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- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

- Handling & Installation
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals Damaged Beams must not be used

- Design assumes top edge is laterally restrained Provide lateral support at bearing points to avoid lateral displacement and rotation This design is valid until 11/3/2024

For flat roofs provide proper drainage to prevent ponding

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

Manufacturer Info

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

CSD DESIGN





Address:

Project:

Gaston II (181035B)

Weaver Homes

Date: 9/18/2023

Input by: Marshall Naylor

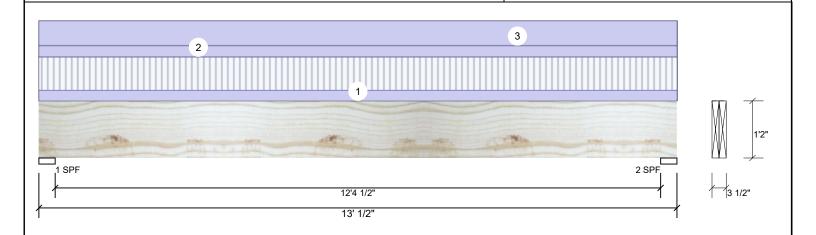
Job Name: Gaston II (181035B) 3 Car

Page 1 of 1

Project #:

1.750" X 14.000" 2-Ply - PASSED Kerto-S LVL **GCO**

Level: Level



Member Information Reactions UNPATTERNED Ib (Uplift) Type: Girder Application: Floor Brg Snow Wind Const Direction Live Dead Plies: 2 Design Method: ASD Vertical 2374 3468 0 0 0 1 Moisture Condition: Dry **Building Code:** IBC 2012 2374 3468 O O 0 2 Vertical Deflection LL: 480 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal - II Temp <= 100°F Temperature: **Bearings** Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 4.000" D+L Vert 3468 / 2374 5842 L 2 - SPF 4.000" Vert 98% 3468 / 2374 5842 L D+I

Analysis Results

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Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	17498 ft-lb	6'6 1/4"	26999 ft-lb	0.648 (65%)	D+L	L
Unbraced	17498 ft-lb	6'6 1/4"	17512 ft-lb	0.999 (100%)	D+L	L
Shear	4511 lb	1'6"	10453 lb	0.432 (43%)	D+L	L
LL Defl inch	0.142 (L/1059)	6'6 1/4"	0.312 (L/480)	0.453 (45%)	L	L
TL Defl inch	0.349 (L/430)	6'6 1/4"	0.625 (L/240)	0.558 (56%)	D+L	L

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 5'7 3/8" o.c.
- 6 Bottom must be laterally braced at end bearings.
- 7 Lateral slenderness ratio based on single ply width

. Lateral eleme	ionnece ratio bacca en emigio	P. 9								
ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Uniform			Тор	122 PLF	364 PLF	0 PLF	0 PLF	0 PLF	F01
2	Uniform			Тор	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Wall
3	Uniform			Тор	274 PLF	0 PLF	0 PLF	0 PLF	0 PLF	A1
	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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals Damaged Beams must not be used

- Design assumes top edge is laterally restrained
 Provide lateral support at bearing points to avoid
 lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

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

Manufacturer Info

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



This design is valid until 11/3/2024 CSD DESIGN



Project:

Address:

Date: 9/18/2023

Input by: Marshall Naylor

Level: Level

Job Name: Gaston II (181035B) 3 Car

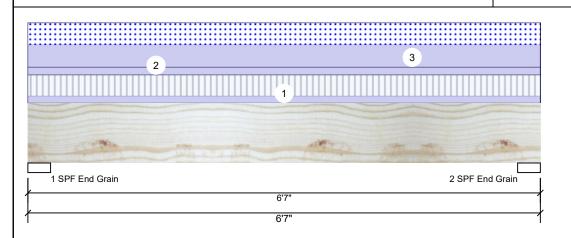
Project #:

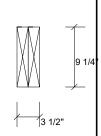
Kerto-S LVL 6/0 SLIDER

1.750" X 9.250"

Gaston II (181035B)

2-Ply - PASSED





Page 1 of 1

Member Information

Plies: 2 Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360 Importance: Normal - II Temperature: Temp <= 100°F	Type:	Girder
Deflection LL: 480 Deflection TL: 360 Importance: Normal - II	Plies:	2
Deflection TL: 360 Importance: Normal - II	Moisture Condition:	Dry
Importance: Normal - II	Deflection LL:	480
mportanos. Itorina n	Deflection TL:	360
Temperature: Temp <= 100°F	Importance:	Normal - II
	Temperature:	Temp <= 100°F

Application: Floor Design Method: ASD **Building Code:** IBC 2012

Load Sharing: No Not Checked

Deck:

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1060	1887	1113	0	0
2	Vertical	1060	1887	1113	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5009 ft-lb	3'3 1/2"	14423 ft-lb	0.347 (35%)	D+0.75(L+S)	L
Unbraced	5009 ft-lb	3'3 1/2"	10451 ft-lb	0.479 (48%)	D+0.75(L+S)	L
Shear	2387 lb	1' 3/4"	7943 lb	0.300 (30%)	D+0.75(L+S)	L
LL Defl inch	0.042 (L/1741)	3'3 1/2"	0.153 (L/480)	0.276 (28%)	0.75(L+S)	L
TL Defl inch	0.091 (L/807)	3'3 1/2"	0.204 (L/360)	0.446 (45%)	D+0.75(L+S)	L

Bearings

End Grain

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	Vert	34%	1887 / 1629	3516	L	D+0.75(L+S)
2 SDE	3 500"	\/ort	3/1%	1887 / 1620	3516	1	D+0.75(L+S)

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end bearings.

/ Lateral	i siendemess rado pased on s	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			Тор	108 PLF	322 PLF	0 PLF	0 PLF	0 PLF	F4	

Uniform 120 PLF 0 PLF 0 PLF 0 PLF 0 PLF WALL 2 Top 3 Uniform Top 338 PLF 0 PLF 338 PLF 0 PLF 0 PLF

> Self Weight 7 PLF

Notes

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- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

LVL beams must not be cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals Damaged Beams must not be used

- Design assumes top edge is laterally restrained
 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 11/3/2024

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

Manufacturer Info

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

CSD DESIGN





Application:

Design Method:

Building Code:

Load Sharing:

Deck:

Floor

ASD

No

IBC 2012

Not Checked

Project:

Address: Gaston II (181035B) Date: 9/18/2023

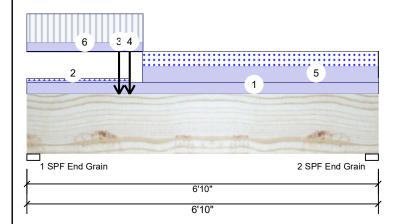
Input by: Marshall Naylor

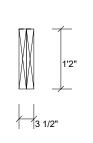
Job Name: Gaston II (181035B) 3 Car

Project #:

Window Hdr. Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED

Level: Level





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Member Information

Туре:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	480
Deflection TL:	360
Importance:	Normal -
Temperature:	Tomn <-

Ш Temp <= 100°F

Reactions UNPATTERNED Ib (Uplift)

E	Brg	Direction	Live	Dead	Snow	Wind	Const
	1	Vertical	2861	3387	1990	0	0
	2	Vertical	873	1906	1168	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11172 ft-lb	2'	31049 ft-lb	0.360 (36%)	D+0.75(L+S)	L
Unbraced	11172 ft-lb	2'	15767 ft-lb	0.709 (71%)	D+0.75(L+S)	L
Shear	6407 lb	1'5"	12021 lb	0.533 (53%)	D+0.75(L+S)	L
LL Defl inch	0.033 (L/2343)	2'7 5/8"	0.161 (L/480)	0.205 (20%)	0.75(L+S)	L
TL Defl inch	0.067 (L/1165)	2'8 7/8"	0.215 (L/360)	0.309 (31%)	D+0.75(L+S)	L

Bearings

Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	80%	3387 / 3638	7025	L	D+0.75(L+S)
2 - SPF End Grain	3.000"	Vert	39%	1906 / 1531	3437	L	D+0.75(L+S)

Design Notes

- 1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at end bearings.
- 6 Bottom must be laterally braced at end 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			Тор	120 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL	
2	Tie-In	0-0-0 to 2-0-0	1-0-0	Тор	20 PSF	0 PSF	20 PSF	0 PSF	0 PSF	2' ROOF	
3	Point	1-9-8		Тор	1040 lb	3115 lb	0 lb	0 lb	0 lb	F08	
	Bearing Length	0-3-8									
4	Point	2-0-0		Тор	2385 lb	0 lb	2385 lb	0 lb	0 lb	C3	
	Bearing Length	0-3-8									

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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.

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation
- Handling & Installation

 1. UVI 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 11/3/2024

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

Manufacturer Info





Weaver Homes

Project:

Address: Gaston II (181035B) Date: 9/18/2023

Input by: Marshall Naylor

Job Name: Gaston II (181035B) 3 Car

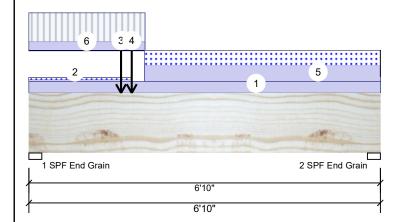
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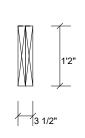
Window Hdr. **Kerto-S LVL**

1.750" X 14.000"

2-Ply - PASSED

Level: Level





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ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments	
5	Part. Uniform	2-3-0 to 6-10-0		Тор	160 PLF	0 PLF	160 PLF	0 PLF	0 PLF	C2	
6	Part. Uniform	2-3-0 to 0-0-0		Тор	97 PLF	300 PLF	0 PLF	0 PLF	0 PLF	F07	
	Self Weight				11 PLF						

Notes

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Handling & Installation

- Handling & Installation

 1. IVI. beams must not be cut or drilled

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