

Watermark Homes

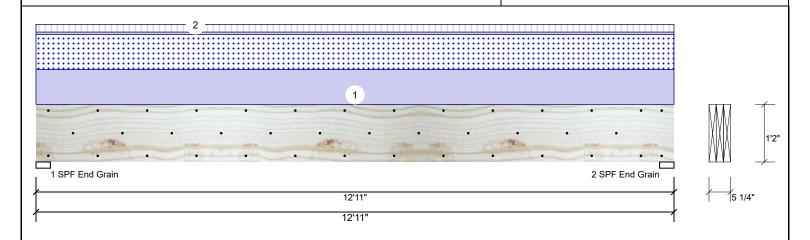
Project:

Address: Lot 23 Oak Haven Date: 3/4/2022

Input by: Hampton Horrocks Job Name: Peach Willow III Project #: J0322-1176

Kerto-S LVL 3-Ply - PASSED 1.750" X 14.000" BM₁

Level: Level



Member Inform	Member Information					Reactions UNPATTERNED Ib (Uplift)							
Type:	Girder	Application:	Floor	Brg	Direction	Live	Dead	Snow	Wind	Const			
Plies:	3	Design Method:	ASD	1	Vertical	762	3806	3449	0	0			
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015	2	Vertical	762	3806	3449	0	0			
Deflection LL:	480	Load Sharing:	Yes										
Deflection TL:	360	Deck:	Not Checked										
Importance:	Normal - II												

Bearings Bearing Length

End Grain

End Grain

1 - SPF 3.500"

2 - SPF 3.500"

Dir.

Vert

Vert

Cap. React D/L lb

3806 / 3449

3806 / 3449

Analysis Results

Temperature:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	21794 ft-lb	6'5 1/2"	48437 ft-lb	0.450 (45%)	D+S	L
Unbraced	21794 ft-lb	6'5 1/2"	21850 ft-lb	0.997 (100%)	D+S	L
Shear	5636 lb	1'5 1/2"	18032 lb	0.313 (31%)	D+S	L
LL Defl inch	0.137 (L/1093)	6'5 1/2"	0.311 (L/480)	0.439 (44%)	S	L
TL Defl inch	0.288 (L/520)	6'5 1/2"	0.415 (L/360)	0.693 (69%)	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 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.

Temp <= 100°F

- 6 Top must be laterally braced at a maximum of 7' 11/16" o.c

Self Weight

o lop max	or bo latorally braced at a file	axiiiiaiii oi i i ii io	0.0.								
7 Bottom	must be laterally braced at e	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	Uniform			Тор	534 PLF	0 PLF	534 PLF	0 PLF	0 PLF	A5 ROOF	
2	Uniform			Тор	39 PLF	118 PLF	0 PLF	0 PLF	0 PLF	A5 FLOOR	

16 PLF

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

 2 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

Total Ld. Case

7255 L

7255 L



Page 1 of 11

Ld. Comb.

D+S

D+S





BM₁

Kerto-S LVL

Client:

Watermark Homes

Project:

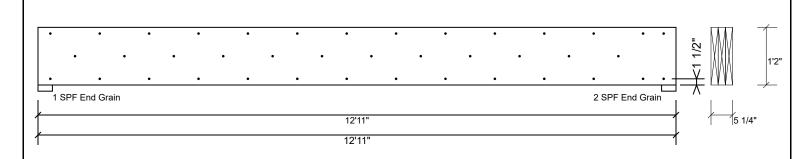
Address: Lot 23 Oak Haven 3/4/2022

Input by: Hampton Horrocks Job Name: Peach Willow III Project #: J0322-1176

Page 2 of 11

3-Ply - PASSED 1.750" X 14.000"

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c.. Nail from both sides. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	245.6 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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

 2 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

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:

Lot 23 Oak Haven

Watermark Homes

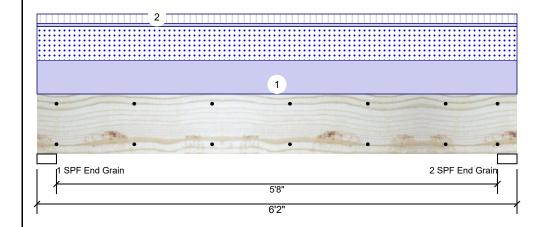
Date: 3/4/2022

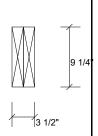
Input by: Hampton Horrocks Job Name: Peach Willow III

Project #: J0322-1176

2-Ply - PASSED **Kerto-S LVL** 1.750" X 9.250" BM₃

Level: Level





Page 3 of 11

Member Information

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

Application: Floor Design Method: ASD **Building Code: IBC/IRC 2015**

Load Sharing: No

Deck:

Not Checked

Reactions UNPATTERNED Ib (Uplift)

В	rg	Direction	Live	Dead	Snow	Wind	Const
	1	Vertical	561	2224	2013	0	0
	2	Vertical	561	2224	2013	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5762 ft-lb	3'1"	14423 ft-lb	0.399 (40%)	D+S	L
Unbraced	5762 ft-lb	3'1"	10779 ft-lb	0.535 (53%)	D+S	L
Shear	2840 lb	1' 1/4"	7943 lb	0.358 (36%)	D+S	L
LL Defl inch	0.046 (L/1526)	3'1"	0.145 (L/480)	0.315 (31%)	S	L
TL Defl inch	0.096 (L/725)	3'1"	0.193 (L/360)	0.497 (50%)	D+S	L

Bearings

Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	48%	2224 / 2013	4237	L	D+S
2 - SPF End Grain	3.000"	Vert	48%	2224 / 2013	4237	L	D+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 Fasten all plies using 2 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 end bearings.
- 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	Uniform			Тор	653 PLF	0 PLF	653 PLF	0 PLF	0 PLF	A3 ROOF
2	Uniform			Тор	61 PLF	182 PLF	0 PLF	0 PLF	0 PLF	A3 FLOOR
	Self Weight				7 PLF					

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

 2 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

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



Project: Address:

Watermark Homes

Date: 3/4/2022

Input by: Hampton Horrocks Job Name: Peach Willow III

Project #: J0322-1176

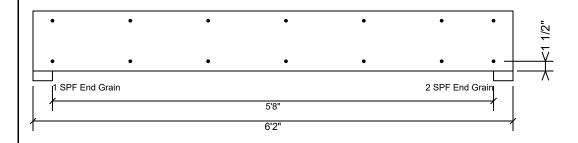
Kerto-S LVL BM₃

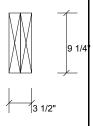
1.750" X 9.250"

Lot 23 Oak Haven

2-Ply - PASSED

Level: Level





Page 4 of 11

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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

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



Watermark Homes

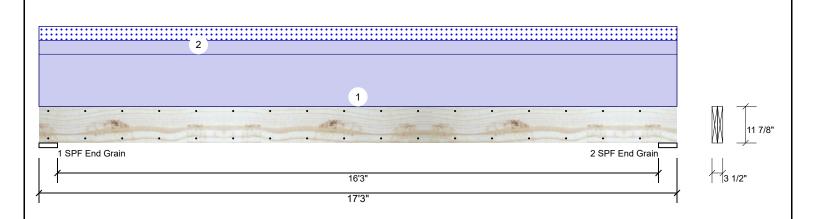
Project:

Address: Lot 23 Oak Haven Date: 3/4/2022

Input by: Hampton Horrocks Job Name: Peach Willow III Project #: J0322-1176

Kerto-S LVL 2-Ply - PASSED 1.750" X 11.875" GDH1

Level: Level



End Grain

End Grain

2-SPF 6.000"

Member Inform	nation			Rea	ctions UNP	ATTER	NED I	b (Uplift)		
Туре:	Girder	Application:	Floor	Brg	Direction	Liv	е	Dead	Snow	Wind
Plies:	2	Design Method:	ASD	1	Vertical		0	1718	345	0
Moisture Condition:	Dry	Building Code:	IBC/IRC 2015	2	Vertical		0	1718	345	0
Deflection LL:	480	Load Sharing:	No							
Deflection TL:	360	Deck:	Not Checked							
Importance:	Normal - II									
Temperature:	Temp <= 100°F									
				Bea	rings					
				Bea	aring Length	Dir.	Сар.	React D/L lb	Total	Ld. Case
				1 -	SPF 6.000"	Vert	12%	1718 / 345	2063	L

Analysis R	esults
------------	--------

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6678 ft-lb	8'7 1/2"	17919 ft-lb	0.373 (37%)	D	Uniform
Unbraced	8019 ft-lb	8'7 1/2"	8035 ft-lb	0.998 (100%)	D+S	L
Shear	1431 lb	15'9 1/8"	7980 lb	0.179 (18%)	D	Uniform
LL Defl inch	0.070 (L/2809)	8'7 9/16"	0.409 (L/480)	0.171 (17%)	S	L
TL Defl inch	0.418 (L/470)	8'7 9/16"	0.546 (L/360)	0.767 (77%)	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 Fasten all plies using 2 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 12' 11/16" o.c.
- 7 Bottom must be laterally braced at end bearings.

6 Lateral sienderness 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	150 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL	
2	Uniform			Тор	40 PLF	0 PLF	40 PLF	0 PLF	0 PLF	ROOF	
	Self Weight				9 PLF						

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

 2 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

12%

Vert

1718 / 345

2063 L

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



Page 5 of 11

Const

Ld. Comb.

D+S

D+S

0

0





GDH₁

Client:

Watermark Homes

Project:

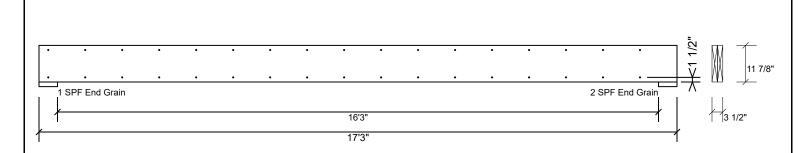
Address: Lot 23 Oak Haven Date: 3/4/2022

Input by: Hampton Horrocks Page 6 of 11

Job Name: Peach Willow III Project #: J0322-1176

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

Level: Level



Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

		,	,
Capacity	0.0 %		
Load	0.0 PLF		
Yield Limit per Foot	163.7 PLF		
Yield Limit per Fastener	81.9 lb.		
Yield Mode	IV		
Edge Distance	1 1/2"		
Min. End Distance	3"		
Load Combination			
Duration Factor	1.00		

Notes

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

- 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



GDH2

Client:

Project:

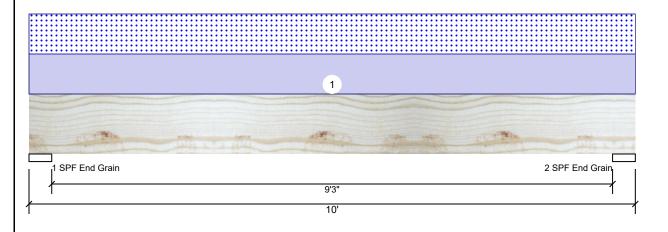
Watermark Homes Address: Lot 23 Oak Haven Date: 3/4/2022

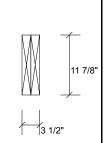
Project #:

Input by: Hampton Horrocks Job Name: Peach Willow III J0322-1176

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

Level: Level





Page 7 of 11

Member Information

Plies: 2	
Moisture Condition: Dry	
Deflection LL: 480	
Deflection TL: 240	
Importance: Normal -	·
Temperature: Temp <=	100°F

Application: Floor Design Method: ASD **Building Code: IBC/IRC 2015** Load Sharing: No

Deck:

Not Checked

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	1286	1240	0	0
2	Vertical	0	1286	1240	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5551 ft-lb	5'	22897 ft-lb	0.242 (24%)	D+S	L
Unbraced	5551 ft-lb	5'	9857 ft-lb	0.563 (56%)	D+S	L
Shear	1846 lb	8'7 5/8"	10197 lb	0.181 (18%)	D+S	L
LL Defl inch	0.052 (L/2177)	5'	0.234 (L/480)	0.220 (22%)	S	L
TL Defl inch	0.105 (L/1069)	5'	0.469 (L/240)	0.225 (22%)	D+S	L

Bearings

Bearing	Length	Dir.	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	4.500"	Vert	19%	1286 / 1240	2526	L	D+S
2 - SPF End Grain	4.500"	Vert	19%	1286 / 1240	2526	L	D+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.

Uniform

- 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 Location Live 1 Snow 1.15 Wind 1.6 Const. 1.25 Comments

248 PLF

0 PLF

248 PLF

Top

Self Weight 9 PLF

1

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

2 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

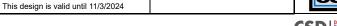
Metsä Wood 301 Merritt 7 Building, 2nd Floor Norwalk, CT 06851 (800) 622-5850 www.metsawood.com/us

Manufacturer Info

0 PLF

0 PLF







Project: Address:

Lot 23 Oak Haven

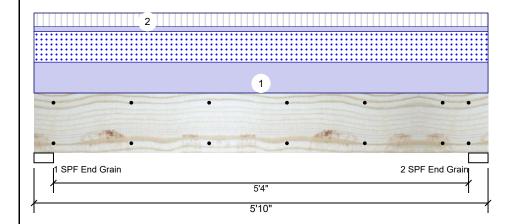
Watermark Homes

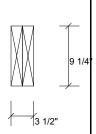
3/4/2022 Date:

Input by: Hampton Horrocks Peach Willow III Job Name: Project #: J0322-1176

2-Ply - PASSED Kerto-S LVL 1.750" X 9.250" **FDH**

Level: Level





Page 8 of 11

Member Information

Type: Plies: 2 Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360 Importance: Normal - II Application: Floor Design Method: ASD

Load Sharing: No

Building Code:

Deck:

IBC/IRC 2015 Not Checked

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	493	1290	1105	0	0
2	Vertical	493	1290	1105	0	0

Analysis Results

Temperature:

Comb. Analysis Actual Location Allowed Case Capacity Moment 3177 ft-lb 2'11" 14423 ft-lb 0.220 (22%) D+0.75(L+S) L Unbraced 3177 ft-lb 2'11" 11110 ft-lb 0.286 (29%) D+0.75(L+S) L Shear 1623 lb 1' 1/4" 7943 lb 0.204 (20%) D+0.75(L+S) L LL Defl inch 0.023 (L/2820) 2'11" 0.136 (L/480) 0.170 (17%) 0.75(L+S) L TL Defl inch 0.048 (L/1358) 2'11" 0.182 (L/360) 0.265 (26%) D+0.75(L+S) L

Bearings

Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. D+0.75(L+S) 1-SPF 3.000" Vert 1290 / 1199 2488 L End Grain

D+0.75(L+S) 2 - SPF 3.000" Vert 28% 1290 / 1199 2488 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 2 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.

Temp <= 100°F

- 6 Top must be laterally braced at end bearings.
- 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	Uniform			Тор	379 PLF	0 PLF	379 PLF	0 PLF	0 PLF	A3 ROOF
2	Uniform			Тор	56 PLF	169 PLF	0 PLF	0 PLF	0 PLF	A3 FLOOR
	Self Weight				7 PLF					

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
- 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







Watermark Homes

Project:

Address: Lot 23 Oak Haven Date: 3/4/2022

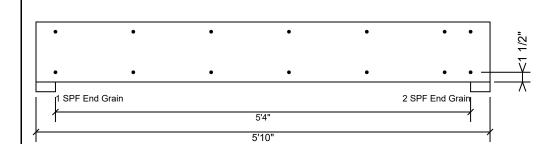
Input by: Hampton Horrocks Job Name: Peach Willow III

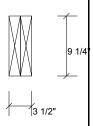
Project #: J0322-1176 Level: Level

Kerto-S LVL FDH

1.750" X 9.250"

2-Ply - PASSED





Page 9 of 11

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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
- - 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



Project:

Watermark Homes Address: Lot 23 Oak Haven Date: 3/4/2022

Input by: Hampton Horrocks Job Name: Peach Willow III

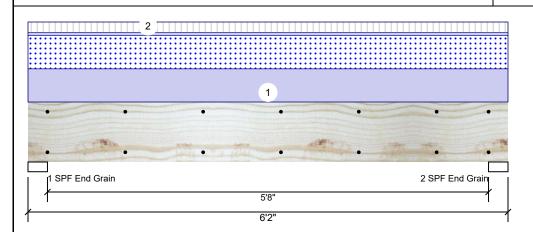
Project #: J0322-1176

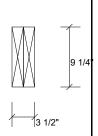
_evel: Level

Kerto-S LVL

1.750" X 9.250"

2-Ply - PASSED





Page 10 of 11

Member Information

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

Temperature: Temp <= 100°F

Application: Floor Design Method: ASD **Building Code: IBC/IRC 2015**

Load Sharing: No Deck:

Not Checked

Reactions UNPATTERNED Ib (Uplift)

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	743	2665	2396	0	0
2	Vertical	743	2665	2396	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6881 ft-lb	3'1"	14423 ft-lb	0.477 (48%)	D+S	L
Unbraced	6881 ft-lb	3'1"	10779 ft-lb	0.638 (64%)	D+S	L
Shear	3391 lb	1' 1/4"	7943 lb	0.427 (43%)	D+S	L
LL Defl inch	0.054 (L/1282)	3'1"	0.145 (L/480)	0.374 (37%)	S	L
TL Defl inch	0.114 (L/607)	3'1"	0.193 (L/360)	0.593 (59%)	D+S	L

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6881 ft-lb	3'1"	14423 ft-lb	0.477 (48%)	D+S	L
Unbraced	6881 ft-lb	3'1"	10779 ft-lb	0.638 (64%)	D+S	L
Shear	3391 lb	1' 1/4"	7943 lb	0.427 (43%)	D+S	L
LL Defl inch	0.054 (L/1282)	3'1"	0.145 (L/480)	0.374 (37%)	S	L
TL Defl inch	0.114 (L/607)	3'1"	0.193 (L/360)	0.593 (59%)	D+S	L

Bearings

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	Vert	57%	2665 / 2396	5060	L	D+S
2 - SPF End Grain	3.000"	Vert	57%	2665 / 2396	5060	L	D+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 Fasten all plies using 2 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 end bearings.
- 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	Uniform			Тор	777 PLF	0 PLF	777 PLF	0 PLF	0 PLF	A2 ROOF
2	Uniform			Тор	80 PLF	241 PLF	0 PLF	0 PLF	0 PLF	A2 FLOOR
	Self Weight				7 PLF					

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

 2 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



isDesign

Client:

Project: Address: Watermark Homes

Lot 23 Oak Haven

Date: Input by: 3/4/2022

Hampton Horrocks

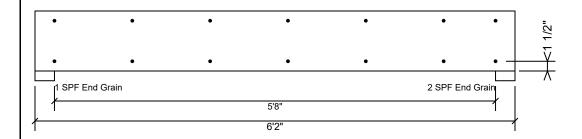
Job Name: Peach Willow III Project #: J0322-1176

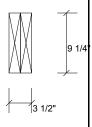
Kerto-S LVL

1.750" X 9.250"

2-Ply - PASSED

Level: Level





Page 11 of 11

Multi-Ply Analysis

Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c.. Maximum end distance not to exceed 6".

1 3	` ,
Capacity	0.0 %
Load	0.0 PLF
Yield Limit per Foot	163.7 PLF
Yield Limit per Fastener	81.9 lb.
Yield Mode	IV
Edge Distance	1 1/2"
Min. End Distance	3"
Load Combination	
Duration Factor	1.00

Notes

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
- 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