

Project: Address:

Lot 4 Jones Creek

Signature Homes

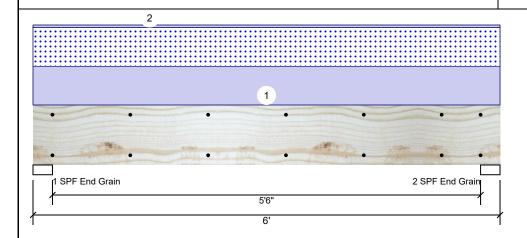
Date: 7/13/2023

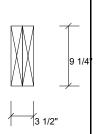
Input by: Anthony Williams

Job Name: Sinclair Project #: J0723-3614

Kerto-S LVL 1.750" X 9.250" HDR-1 & 2 2-Ply - PASSED

Level: Level





Page 1 of 6

Member Information

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

Normal - II Temp <= 100°F Temperature:

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	1447	1335	0	0
2	Vertical	0	1447	1335	0	0

Bearings

Grain

Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1-SPF 3.000" 1447 / 1335 D+S Vert 2782 L End Grain 1447 / 1335 2782 L D+S 2 - SPF 3.000" Vert 32% End

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3667 ft-lb	3'	14423 ft-lb	0.254 (25%)	D+S	L
Unbraced	3667 ft-lb	3'	10944 ft-lb	0.335 (34%)	D+S	L
Shear	1841 lb	1' 1/4"	7943 lb	0.232 (23%)	D+S	L
LL Defl inch	0.028 (L/2413)	3'	0.141 (L/480)	0.199 (20%)	S	L
TL Defl inch	0.058 (L/1158)	3'	0.188 (L/360)	0.311 (31%)	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 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	445 PLF	0 PLF	445 PLF	0 PLF	0 PLF	B2 TRUSS
2	Uniform			Тор	30 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
	Self Weight				7 PLF					

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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

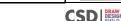
This design is valid until 11/3/2024

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Manufacturer Info

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





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Client:

Project: Address: Signature Homes

Lot 4 Jones Creek

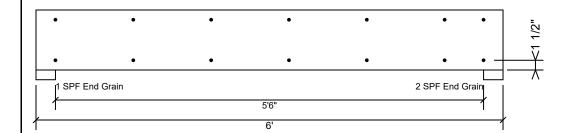
Date: 7/13/2023

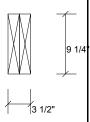
Input by: Anthony Williams

Job Name: Project #: J0723-3614

HDR-1 & 2 **Kerto-S LVL** 1.750" X 9.250" 2-Ply - PASSED

Level: Level





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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

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 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

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CSD DESIGN



Address:

Project:

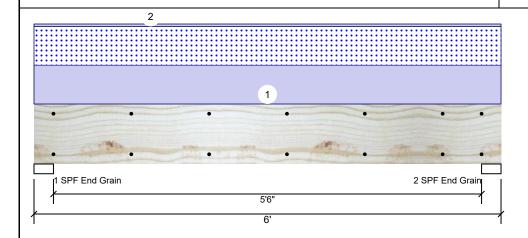
Signature Homes Lot 4 Jones Creek Date: 7/13/2023

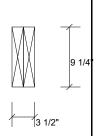
Input by: Anthony Williams

Job Name: Sinclair Project #: J0723-3614

2-Ply - PASSED HDR-3 Kerto-S LVL 1.750" X 9.250"

Level: Level





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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	0	1594	1482	0	0
2	Vertical	0	1594	1482	0	0

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4055 ft-lb	3'	14423 ft-lb	0.281 (28%)	D+S	L
Unbraced	4055 ft-lb	3'	10944 ft-lb	0.370 (37%)	D+S	L
Shear	2035 lb	4'11 3/4"	7943 lb	0.256 (26%)	D+S	L
LL Defl inch	0.031 (L/2174)	3'	0.141 (L/480)	0.221 (22%)	S	L
TL Defl inch	0.064 (L/1047)	3'	0.188 (L/360)	0.344 (34%)	D+S	L

Bearings

Bearing Lei	ngth Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 3.0 End Grain	00" Vert	35%	1594 / 1482	3076	L	D+S
2 - SPF 3.0 End Grain	00" Vert	35%	1594 / 1482	3076	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.
- $\ensuremath{^{\circ}}$ 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	494 PLF	0 PLF	494 PLF	0 PLF	0 PLF	A2 TRUSS
2	Uniform			Тор	30 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL
	Self Weight				7 PLF					

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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
 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

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Project: Address: Signature Homes

Lot 4 Jones Creek

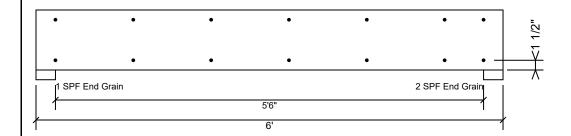
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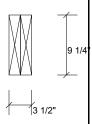
Input by: Anthony Williams

Job Name: Project #: J0723-3614

1.750" X 9.250" **Kerto-S LVL** 2-Ply - PASSED HDR-3

Level: Level





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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

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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. 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

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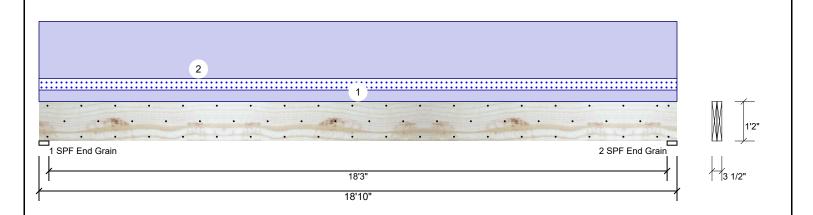
Address: Lot 4 Jones Creek 7/13/2023

Anthony Williams Input by:

Job Name: Project #: J0723-3614

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

Level: Level



Bearings

End Grain

End

Grain

Bearing Length

1-SPF 3.500"

2 - SPF 3.500"

Dir.

Vert

Vert

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

Application: Design Method: ASD **Building Code: IBC/IRC 2015** Load Sharing: No Not Checked Deck:

Rea	ctions UNP	ATTERNED	lb (Uplift)		
Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	0	2363	377	0	0
2	Vertical	0	2363	377	0	0

Cap. React D/L lb

27%

2363 / 377

2363 / 377

Total Ld. Case

2739 L

2739 L

Ld. Comb.

D+S

D+S

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Analysis Results Comb. Analysis Actual Location Allowed Case Capacity Moment 10589 ft-lb 9'5" 24299 ft-lb 0.436 (44%) D Uniform Unbraced 12277 ft-lb 9'5" 12288 ft-lb 0.999 L (100%)Shear 2009 lb 17'4 1/2" 9408 lb 0.214 (21%) D Uniform LL Defl inch 0.068 (L/3239) 9'5 1/16" 0.459 (L/480) 0.148 (15%) S 1 TL Defl inch 0.495 (L/445) 9'5 1/16" 0.612 (L/360) 0.808 (81%) 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 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 8'6 1/16" o.c.
- 7 Bottom must be laterally braced at end bearings.
- 8 Lateral slenderness ratio based on single ply width

o Latoral olona	2 Lateral deliations rate based on single ply water.											
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	40 PLF	0 PLF	40 PLF	0 PLF	0 PLF	R + F		
2	Uniform			Тор	200 PLF	0 PLF	0 PLF	0 PLF	0 PLF	WALL		
	Self Weight				11 PLF							

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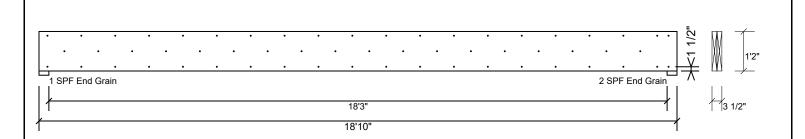
Date:

7/13/2023 Anthony Williams Page 6 of 6

Input by: Job Name: Sinclair Project #: J0723-3614

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

Level: Level



Multi-Ply Analysis

Fasten all plies using 3 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	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

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