

Address:

Barstow II "B" Barstow II "B" Date: 4/6/2022

Input by: Christine Shivy Job Name: Barstow II "B"

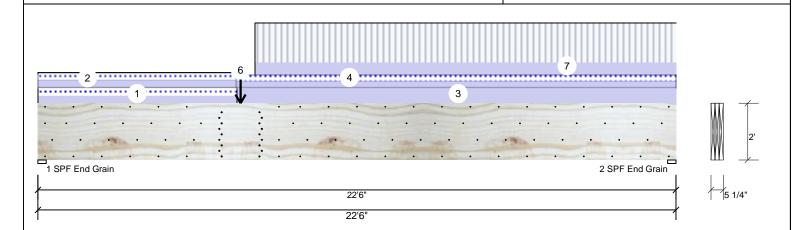
Project #:

Vertical

Kerto-S LVL 1.750" X 24.000" BM₁

3-Ply - PASSED

Level: Level



Member Inform	nation		
Type:	Girder	Application:	Floor
Plies:	3	Design Method:	ASD
Moisture Condition	: Dry	Building Code:	IBC/IRC 2015
Deflection LL:	480	Load Sharing:	Yes
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal - II		
Temperature:	Temp <= 100°F		

Read	ctions UNP	ATTERNED	lb (Uplift))		
Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	5907	4111	1162	0	0

685

0

0

3964

5045

Page 1 of 2

Bearings Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. 1 - SPF 3.500" Vert 4111 / 5907 10017 L End Grain 3964 / 5045 9009 L D+L 2 - SPF 3.500" Vert End Grain

Analysis Results

•						
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	65693 ft-lb	7'1 7/8"	114169 ft-lb	0.575 (58%)	D+L	L
Unbraced	65693 ft-lb	7'1 7/8"	65752 ft-lb	0.999 (100%)	D+L	L
Shear	10635 lb	2'3 1/2"	26880 lb	0.396 (40%)	D+L	L
LL Defl inch	0.304 (L/871)	10'5 15/16"	0.552 (L/480)	0.551 (55%)	L	L
TL Defl inch	0.507 (L/522)	10'7 11/16"	0.735 (L/360)	0.690 (69%)	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 Fasten all plies using 4 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 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Simpson fasteners applied from a single side of the member use tip values where published.
- 6 Girders are designed to be supported on the bottom edge only.
- 7 Top loads must be supported equally by all plies.
- 8 Top must be laterally braced at a maximum of 3'11 9/16" o.c.
- 9 Bottom must be laterally braced at end bearings.
- 10 Lateral slenderness ratio based on single ply width.

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 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

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



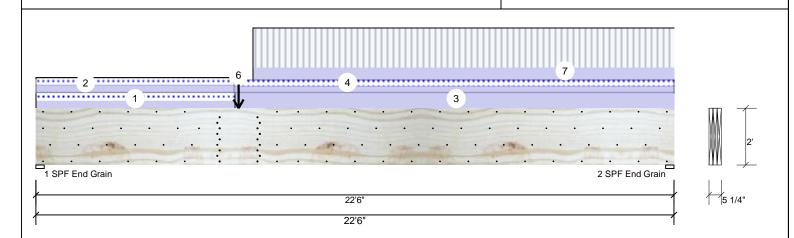


Barstow II "B" Address: Barstow II "B" Date: 4/6/2022 Input by: Christine Shivy Job Name: Barstow II "B"

Project #:

1.750" X 24.000" **Kerto-S LVL** 3-Ply - PASSED BM₁

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 7-0-0		Far Face	61 PLF	0 PLF	61 PLF	0 PLF	0 PLF	M4
2	Part. Uniform	0-0-0 to 7-0-0		Near Face	56 PLF	0 PLF	56 PLF	0 PLF	0 PLF	M8A
3	Part. Uniform	7-0-0 to 22-6-0		Тор	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall
4	Part. Uniform	7-0-0 to 22-6-0		Near Face	45 PLF	0 PLF	45 PLF	0 PLF	0 PLF	M8
5	Point	7-1-12		Far Face	2160 lb	6480 lb	0 lb	0 lb	0 lb	BM2
6	Point	7-1-12		Тор	331 lb	0 lb	331 lb	0 lb	0 lb	D1GE
	Bearing Length	0-3-8								
7	Part. Uniform	7-7-12 to 22-6-0		Far Face	101 PLF	301 PLF	0 PLF	0 PLF	0 PLF	F1
	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 out or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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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Manufacturer Info

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



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Barstow II "B" Address: Barstow II "B" Date: 4/6/2022

Input by: Christine Shivy Job Name: Barstow II "B"

Page 1 of 2

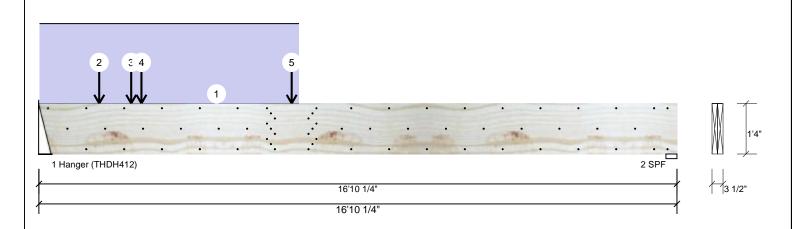
Project #:

1.750" X 16.000" **Kerto-S LVL** BM₂

2-Ply - PASSED

Level: Level

Reactions UNPATTERNED Ib (Uplift)



Type: Girder Application: Floor Brg Direction Live Dead Sno Plies: 2 Design Method: ASD 1 Vertical 975 4880 375 Moisture Condition: Dry Building Code: IBC/IRC 2015 2 Vertical 628 1043 56 Deflection LL: 480 Load Sharing: No Deck: Not Checked Importance: Normal - II Temperature: Temperature: Temperature: Temperature: Temperature:		Const 0
Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360 Importance: Normal - II Temperature: Temp <= 100°F Building Code: IBC/IRC 2015 Load Sharing: No Deck: Not Checked	9 0	0
Deflection LL:		U
Deflection TL: 360 Importance: Normal - II Temperature: Temp <= 100°F Deck: Not Checked Temperature: Normal - II	3 0	0
Importance: Normal - II Temperature: Temp <= 100°F		
Temperature: Temp <= 100°F		
D		
Bearings		
Bearing Length Dir. Cap. React D/L lb T	otal Ld. Case	Ld. Comb.
1 - 4.000" Vert 73% 4880 / 3759 8	639 L	D+S
Hanger		
Analysis Results 2 - SPF 3.500" Vert 37% 1043 / 894 1	937 L	D+0.75(L+S)

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	18652 ft-lb	6'3 11/16"	39750 ft-lb	0.469 (47%)	D+0.75(L+S)	L
Unbraced	18652 ft-lb	6'3 11/16"	18711 ft-lb	0.997 (100%)	D+0.75(L+S)	L
Shear	8384 lb	1'8"	13739 lb	0.610 (61%)	D+S	L
LL Defl inch	0.175 (L/1123)	7'3 11/16"	0.409 (L/480)	0.428 (43%)	0.75(L+S)	L
TI Deflinch	0.377 (L/522)	7'3 1/8"	0.546 (L/360)	0.690 (69%)	D+0.75(L+S)	L

Design Notes

Member Information

- 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 Concentrated load fastener specification is in addition to hanger fasteners if a hanger is present.
- 5 Fill all hanger nailing holes.
- 6 Girders are designed to be supported on the bottom edge only.
- 7 Top loads must be supported equally by all plies.
- 8 Top must be laterally braced at a maximum of 6'3 1/4" o.c.
- 9 Bottom must be laterally braced at end bearings.
- 10 Lateral slenderness ratio based on single ply width.

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 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

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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 |



Project: Barstow II "B" Address: Barstow II "B" Date: 4/6/2022

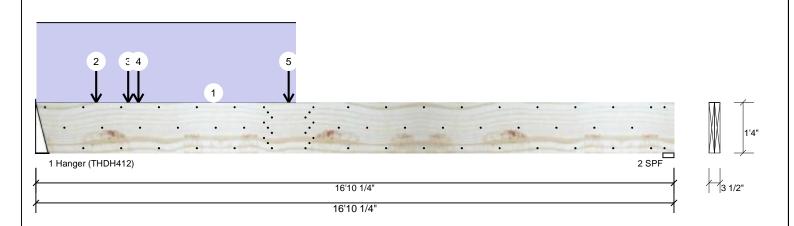
Input by: Christine Shivy Job Name: Barstow II "B"

Project #:

1.750" X 16.000" **Kerto-S LVL BM2**

2-Ply - PASSED

Level: Level



ID	Load Type	Location	Trib Width	Side	Dead 0.9	Live 1	Snow 1.15	Wind 1.6	Const. 1.25	Comments
1	Part. Uniform	0-0-0 to 6-10-4		Тор	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall
2	Point	1-7-2		Тор	388 lb	0 lb	388 lb	0 lb	0 lb	B1GE
	Bearing Length	0-3-8								
3	Point	2-5-4		Тор	3415 lb	0 lb	3415 lb	0 lb	0 lb	B1GR
	Bearing Length	0-3-8								
4	Point	2-8-8		Тор	519 lb	0 lb	519 lb	0 lb	0 lb	A4GE
	Bearing Length	0-3-8								
5	Point	6-8-2		Near Face	535 lb	1603 lb	0 lb	0 lb	0 lb	BM4
	Self Weight				12 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 out or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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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Manufacturer Info

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



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This design is valid until 11/3/2024



Address:

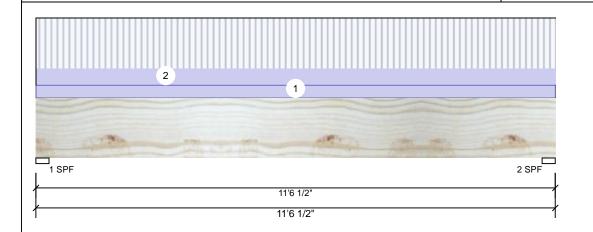
Barstow II "B" Barstow II "B" Date: 4/6/2022 Input by: Christine Shivy

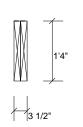
Job Name: Barstow II "B"

Project #:

1.750" X 16.000" 2-Ply - PASSED **Kerto-S LVL** BM₃

Level: Level





D+I

Page 1 of 1

Member Information Reactions UNPATTERNED Ib (Uplift) Туре: Girder Application: Floor Brg Direction Snow Wind Const Live Dead ASD Plies: 2 Design Method: Vertical 1824 1145 0 0 0 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 0 O 2 Vertical 1824 1145 0 Deflection LL: 480 Load Sharing: No Deflection TL: 240 Deck: Not Checked Importance: Normal - II Temperature: Temp <= 100°F **Bearings** Bearing Length Dir. Cap. React D/L lb Total Ld. Case Ld. Comb. D+L 1 - SPF 3.500" Vert 1145 / 1824 2969 L

2 - SPF 3.500"

Vert

57%

1145 / 1824

2969 L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7929 ft-lb	5'9 1/4"	34565 ft-lb	0.229 (23%)	D+L	L
Unbraced	7929 ft-lb	5'9 1/4"	11133 ft-lb	0.712 (71%)	D+L	L
Shear	2712 lb	9'11"	11947 lb	0.227 (23%)	D+L	L
LL Defl inch	0.055 (L/2411)	5'9 1/4"	0.278 (L/480)	0.199 (20%)	L	L
TL Defl inch	0.090 (L/1481)	5'9 1/4"	0.555 (L/240)	0.162 (16%)	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	80 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Interior Wall
2	Uniform			Far Face	106 PLF	316 PLF	0 PLF	0 PLF	0 PLF	F7
	Self Weight				12 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

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Manufacturer Info







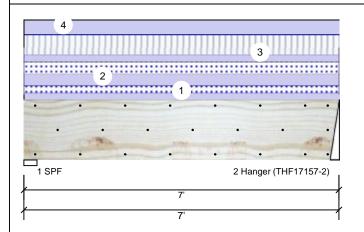
Project: Barstow II "B" Address: Barstow II "B" Date: 4/6/2022

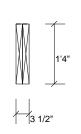
Input by: Christine Shivy Job Name: Barstow II "B"

Project #:

1.750" X 16.000" 2-Ply - PASSED **Kerto-S LVL** BM4

Level: Level





Wind

0

0

Const

Ld. Comb. D+0.75(L+S)

D+0.75(L+S)

0

0

Page 1 of 1

Member Information Reactions UNPATTERNED Ib (Uplift) Type: Girder Application: Floor Brg Direction Live Dead Snow Plies: 2 Design Method: ASD Vertical 627 1280 584 1 Moisture Condition: Dry **Building Code: IBC/IRC 2015** 1250 2 Vertical 612 571 Deflection LL: 480 Load Sharing: No Deflection TL: 360 Deck: Not Checked Importance: Normal - II Temp <= 100°F Temperature: Bearings Bearing Length Dir. Cap. React D/L lb Total Ld. Case 1 - SPF 3.500" Vert 42% 1280 / 908 2189 L 2 -2.500" Vert 29% 1250 / 887 2137 L

	Anal	ysis	Resu	lts
--	------	------	------	-----

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2973 ft-lb	3'6 1/2"	34565 ft-lb	0.086 (9%)	D+L	L
Unbraced	3412 ft-lb	3'6 1/2"	17713 ft-lb	0.193 (19%)	D+0.75(L+S)	L
Shear	1445 lb	5'5 1/2"	11947 lb	0.121 (12%)	D+L	L
LL Defl inch	0.008 (L/10459)	3'6 1/2"	0.166 (L/480)	0.046 (5%)	0.75(L+S)	L
TL Defl inch	0.018 (L/4341)	3'6 1/2"	0.222 (L/360)	0.083 (8%)	D+0.75(L+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 Fill all hanger nailing holes.
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top loads must be supported equally by all plies.
- 7 Top must be laterally braced at end bearings.
- 8 Bottom must be laterally braced at end bearings.
- 9 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			Near Face	61 PLF	0 PLF	61 PLF	0 PLF	0 PLF	M4
2	Uniform			Тор	104 PLF	0 PLF	104 PLF	0 PLF	0 PLF	C1
3	Uniform			Far Face	59 PLF	177 PLF	0 PLF	0 PLF	0 PLF	F3
4	Uniform			Тор	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall
	Self Weight				12 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
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 lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 11/3/2024

Hanger

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Manufacturer Info





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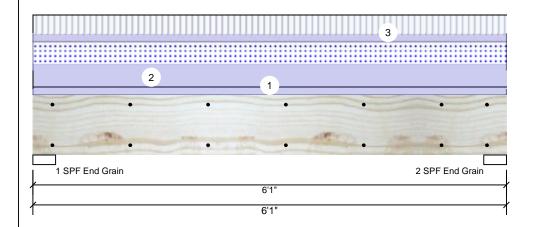
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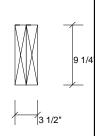
Kerto-S LVL BM5

1.750" X 9.250"

2-Ply - PASSED

Level: Level





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

Member Information

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

Read	ctions UNP	ALLERNEL				
Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	961	1783	1059	0	0
2	Vertical	961	1783	1059	0	0

Analysis Results

Temperature:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4288 ft-lb	3' 1/2"	14423 ft-lb	0.297 (30%)	D+0.75(L+S)	L
Unbraced	4288 ft-lb	3' 1/2"	10944 ft-lb	0.392 (39%)	D+0.75(L+S)	L
Shear	2151 lb	1' 3/4"	7943 lb	0.271 (27%)	D+0.75(L+S)	L
LL Defl inch	0.031 (L/2156)	3' 1/2"	0.141 (L/480)	0.223 (22%)	0.75(L+S)	L
TL Defl inch	0.068 (L/990)	3' 1/2"	0.188 (L/360)	0.363 (36%)	D+0.75(L+S)	L

Temp <= 100°F

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.

Bearings	8						
Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End	3.500"	Vert	32%	1783 / 1515	3298	L	D+0.75(L+S)
Grain							
2-SPF	3.500"	Vert	32%	1783 / 1515	3298	L	D+0.75(L+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	125 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Wall	
2	Uniform			Тор	348 PLF	0 PLF	348 PLF	0 PLF	0 PLF	A1	
3	Uniform			Тор	106 PLF	316 PLF	0 PLF	0 PLF	0 PLF	F7	
	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 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

End Grain

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

Manufacturer Info







Client: Southern Touch Homes Project: Barstow II "B"

Address: Barstow II "B" Date: 4/6/2022 Input by: Christine Shivy

Project #:

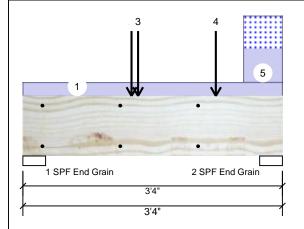
Kerto-S LVL BM6

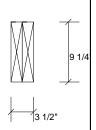
1.750" X 9.250"

2-Ply - PASSED

Level: Level

Job Name: Barstow II "B"





D+L

Page 1 of 2

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

Member Information

Importance: Normal - II Temperature: Temp <= 100°F

Actual

2228 ft-lb

2228 ft-lb

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

Capacity

0.178 (18%) D+L

0.186 (19%) D+L

Comb.

Reactions UNPATTERNED Ib (Uplift)

Vert

Brg	Direction	Live	Dead	Snow	Wind	Const
1	Vertical	1004	914	401	0	0
2	Vertical	1667	1127	392	0	0

Bearings

2793 L

27% 1127 / 1667

2 - SPF 3.500" End Grain

Case

L

L

Shear	2038 lb	2'3 1/4"	6907 lb	0.295 (30%) D+L	L
LL Defl inch	0.008 (L/4191)	1'5 3/4"	0.072 (L/480)	0.115 (11%) 0.75(L+S)	L
TL Defl inch	0.014 (L/2383)	1'5 3/4"	0.096 (L/360)	0.151 (15%) D+0.75(L+S)	L

Location Allowed

1'5 3/4" 12542 ft-lb

1'5 3/4" 11972 ft-lb

Design Notes

Analysis Results

Analysis

Moment

Unbraced

- 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	100 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Interior Wall
2	Point	1-4-12		Тор	669 lb	0 lb	669 lb	0 lb	0 lb	C2
	Bearing Length	0-3-8								
3	Point	1-5-12		Тор	406 lb	1218 lb	0 lb	0 lb	0 lb	F3
	Bearing Length	0-3-8								

Continued on page 2...

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: Barstow II "B" Address: Barstow II "B" Date: 4/6/2022 Input by: Christine Shivy

Project #:

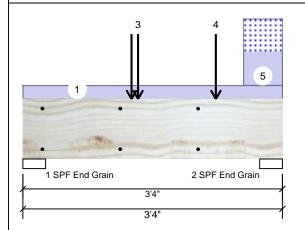
Kerto-S LVL BM6

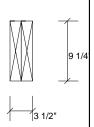
1.750" X 9.250"

2-Ply - PASSED

Level: Level

Job Name: Barstow II "B"





Page 2 of 2

Continued	from	page	1
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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
4	Point	2-5-12		Тор	485 lb	1453 lb	0 lb	0 lb	0 lb	BM2
	Bearing Length	0-3-8								
5	Part. Uniform	2-10-0 to 3-4-0		Тор	247 PLF	0 PLF	247 PLF	0 PLF	0 PLF	A4GE
	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

Handling & Installation

1. IVI beams must not be out or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering 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

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 BOOK



This design is valid until 11/3/2024



Address:

Barstow II "B" Barstow II "B" Date: 4/6/2022

Input by: Christine Shivy Job Name: Barstow II "B"

Reactions UNPATTERNED Ib (Uplift)

Dir.

Vert

Vert

Cap. React D/L lb

18%

18%

1270 / 603

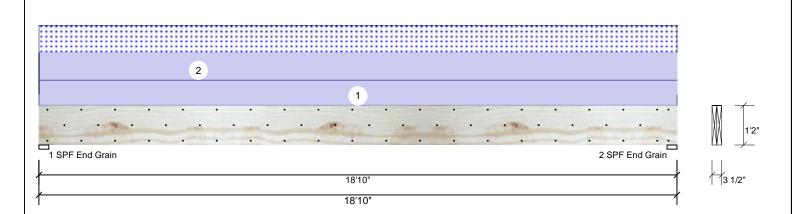
1270 / 603

Page 1 of 1

Project #:

Kerto-S LVL 1.750" X 14.000" **GDH**

Level: Level 2-Ply - PASSED



Plies: 2 Design Method: ASD 1 Vertical 0 1270 603 0 0													
Moisture Condition: Dry Deflection LL: 480 Deflection TL: 360 Importance: Normal - II	Type:	Girder	Application:	Floor	Brg	Direction	Live	Dead	Snow	Wind	Const		
Deflection LL: 480 Load Sharing: No Deflection TL: 360 Deck: Not Checked Importance: Normal - II	Plies:	2	Design Method:	ASD	1	Vertical	0	1270	603	0	0		
Deflection TL: 360 Deck: Not Checked Importance: Normal - II	Moisture Condition	: Dry	Building Code:	IBC/IRC 2015	2	Vertical	0	1270	603	0	0		
Importance: Normal - II	Deflection LL:	480	Load Sharing:	No									
	Deflection TL:	360	Deck:	Not Checked									
Temperature: Temp <= 100°F	Importance:	Normal - II											
	Temperature:	Temp <= 100°F											

Bearings Bearing Length

End Grain

End Grain

1 - SPF 3.500"

2 - SPF 3.500"

Analysis Results

Member Information

•						
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8394 ft-lb	9'5"	31049 ft-lb	0.270 (27%)	D+S	L
Unbraced	8394 ft-lb	9'5"	8403 ft-lb	0.999 (100%)	D+S	L
Shear	1596 lb	1'5 1/2"	12021 lb	0.133 (13%)	D+S	L
LL Defl inch	0.109 (L/2025)	9'5 1/16"	0.459 (L/480)	0.237 (24%)	S	L
TL Defl inch	0.338 (L/652)	9'5 1/16"	0.612 (L/360)	0.553 (55%)	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.
- 6 Top must be laterally braced at a maximum of 13'7 5/8" 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	Uniform			Тор	60 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Load	
2	Uniform			Тор	64 PLF	0 PLF	64 PLF	0 PLF	0 PLF	M8	
	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
- L. UVL 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

Total Ld. Case

1873 L

1873 L

Ld. Comb.

D+S

D+S



