Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

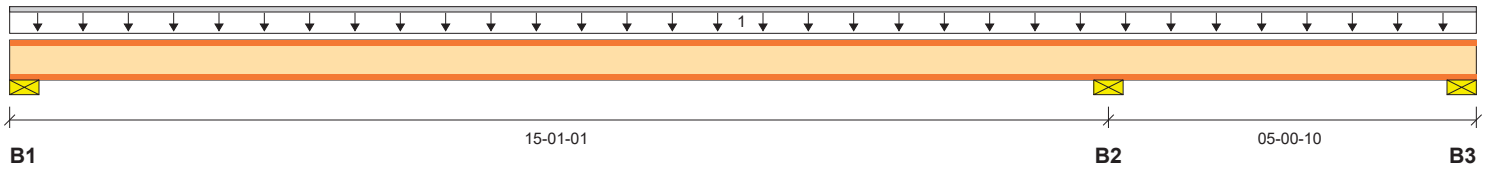
PASSED

2nd Floor\Floor Joists\FJ1(i1242) (Floor Joist)

BC CALC® Member Report | Dry | 2 spans | No cant. | 16 OCS | Repetitive | Glued & nailed | February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ1(i1242)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	515 / 4	118 / 0			
B2, 3-1/2"	1225 / 0	283 / 0			
B3, 2-3/8"	199 / 306	0 / 25			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	81	19				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1930 ft-lbs	55.4%	100%	2	06-04-08
Neg. Moment	-1917 ft-lbs	55.0%	100%	1	15-01-01
End Reaction	633 lbs	54.7%	100%	2	00-00-00
Int. Reaction	1508 lbs	67.0%	100%	1	15-01-01
End Shear	614 lbs	37.8%	100%	2	00-02-06
Cont. Shear	858 lbs	52.8%	100%	1	14-11-05
Total Load Deflection	L/798 (0.225")	45.1%	n\a	2	07-00-14
Live Load Deflection	L/978 (0.183")	49.1%	n\a	5	07-00-14
Total Neg. Defl.	L/999 (-0.012")	n\a	n\a	2	17-01-07
Max Defl.	0.225"	22.5%	n\a	2	07-00-14
Span / Depth	15.1				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	633 lbs	31.4%	54.7%	Unspecified
B2	Wall/Plate	3-1/2" x 2"	1508 lbs	50.7%	67.0%	Unspecified
B3	Wall/Plate	2-3/8" x 2"	174 lbs	8.6%	15.1%	Unspecified
B3	Uplift		331 lbs			

Cautions

Uplift of -331 lbs found at bearing B3.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

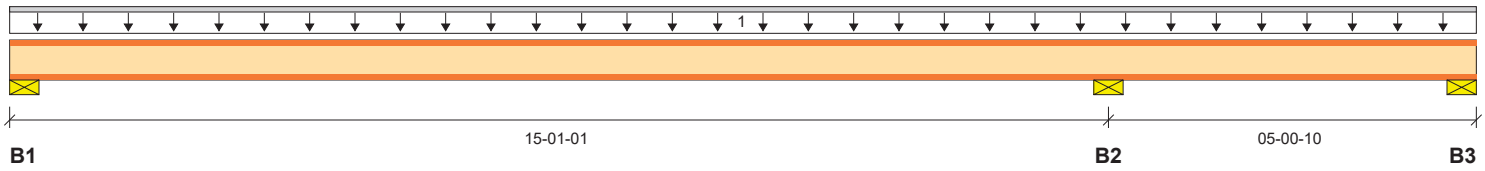
PASSED

2nd Floor\Floor Joists\FJ1(i1243) (Floor Joist)

BC CALC® Member Report | Dry | 2 spans | No cant. | 16 OCS | Repetitive | Glued & nailed | February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ1(i1243)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	552 / 4	127 / 0			
B2, 3-1/2"	1312 / 0	303 / 0			
B3, 2-3/8"	213 / 328	0 / 26			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	87	20				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	2067 ft-lbs	59.3%	100%	2	06-04-08
Neg. Moment	-2053 ft-lbs	58.9%	100%	1	15-01-01
End Reaction	679 lbs	58.6%	100%	2	00-00-00
Int. Reaction	1615 lbs	71.8%	100%	1	15-01-01
End Shear	657 lbs	40.5%	100%	2	00-02-06
Cont. Shear	919 lbs	56.6%	100%	1	14-11-05
Total Load Deflection	L/745 (0.241")	48.3%	n\a	2	07-00-14
Live Load Deflection	L/913 (0.196")	52.5%	n\a	5	07-00-14
Total Neg. Defl.	L/999 (-0.013")	n\a	n\a	2	17-01-07
Max Defl.	0.241"	24.1%	n\a	2	07-00-14
Span / Depth	15.1				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	679 lbs	33.6%	58.6%	Unspecified
B2	Wall/Plate	3-1/2" x 2"	1615 lbs	54.3%	71.8%	Unspecified
B3	Wall/Plate	2-3/8" x 2"	187 lbs	9.2%	16.1%	Unspecified
B3	Uplift		354 lbs			

Cautions

Uplift of -354 lbs found at bearing B3.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

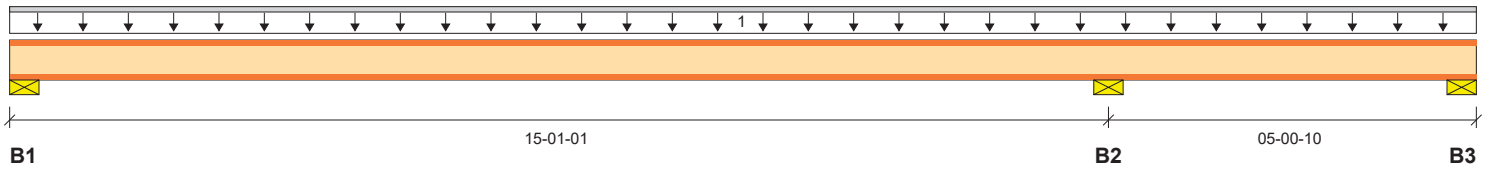
PASSED

2nd Floor\Floor Joists\FJ1(i1252) (Floor Joist)

BC CALC® Member Report | Dry | 2 spans | No cant. | 16 OCS | Repetitive | Glued & nailed | February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ1(i1252)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	378 / 3	87 / 0			
B2, 3-1/2"	897 / 0	207 / 0			
B3, 2-3/8"	146 / 224	0 / 18			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	59	14				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1414 ft-lbs	40.6%	100%	2	06-04-08
Neg. Moment	-1405 ft-lbs	40.3%	100%	1	15-01-01
End Reaction	464 lbs	40.1%	100%	2	00-00-00
Int. Reaction	1105 lbs	49.1%	100%	1	15-01-01
End Shear	450 lbs	27.7%	100%	2	00-02-06
Cont. Shear	629 lbs	38.7%	100%	1	14-11-05
Total Load Deflection	L/1089 (0.165")	33.1%	n\a	2	07-02-01
Live Load Deflection	L/1336 (0.134")	35.9%	n\a	5	07-02-01
Total Neg. Defl.	L/999 (-0.009")	n\a	n\a	2	17-01-07
Max Defl.	0.165"	16.5%	n\a	2	07-02-01
Span / Depth	15.1				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	464 lbs	23.0%	40.1%	Unspecified
B2	Wall/Plate	3-1/2" x 2"	1105 lbs	37.1%	49.1%	Unspecified
B3	Wall/Plate	2-3/8" x 2"	128 lbs	6.3%	11.0%	Unspecified
B3	Uplift		242 lbs			

Cautions

Uplift of -242 lbs found at bearing B3.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

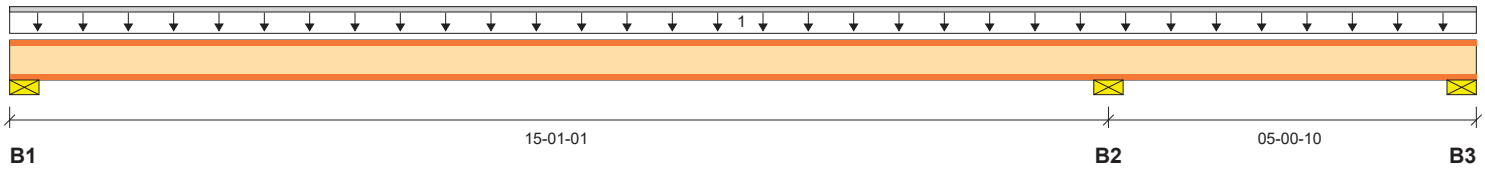
PASSED

2nd Floor\Floor Joists\FJ1(i1253) (Floor Joist)

BC CALC® Member Report | Dry | 2 spans | No cant. | 16 OCS | Repetitive | Glued & nailed | February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ1(i1253)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	450 / 3	103 / 0			
B2, 3-1/2"	1071 / 0	247 / 0			
B3, 2-3/8"	174 / 267	0 / 22			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	71	16				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1687 ft-lbs	48.4%	100%	2	06-04-08
Neg. Moment	-1676 ft-lbs	48.1%	100%	1	15-01-01
End Reaction	554 lbs	47.8%	100%	2	00-00-00
Int. Reaction	1318 lbs	58.6%	100%	1	15-01-01
End Shear	536 lbs	33.0%	100%	2	00-02-06
Cont. Shear	750 lbs	46.2%	100%	1	14-11-05
Total Load Deflection	L/913 (0.197")	39.4%	n\a	2	07-02-01
Live Load Deflection	L/1120 (0.16")	42.9%	n\a	5	07-02-01
Total Neg. Defl.	L/999 (-0.011")	n\a	n\a	2	17-01-07
Max Defl.	0.197"	19.7%	n\a	2	07-02-01
Span / Depth	15.1				

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	554 lbs	27.4%	47.8%	Unspecified
B2	Wall/Plate	3-1/2" x 2"	1318 lbs	44.3%	58.6%	Unspecified
B3	Wall/Plate	2-3/8" x 2"	152 lbs	7.5%	13.2%	Unspecified
B3	Uplift		289 lbs			

Cautions

Uplift of -289 lbs found at bearing B3.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

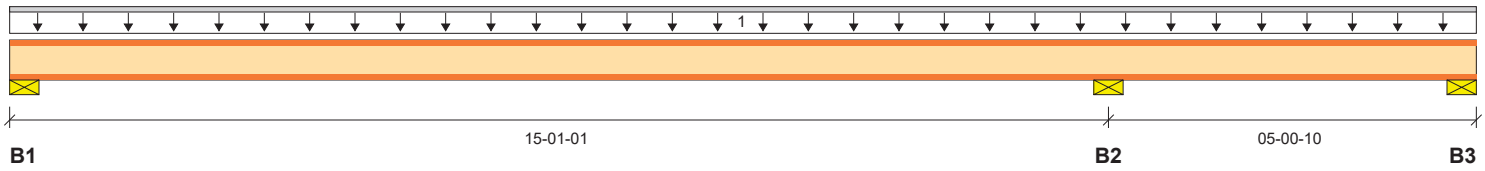
PASSED

2nd Floor\Floor Joists\FJ1(i1263) (Floor Joist)

BC CALC® Member Report | Dry | 2 spans | No cant. | 16 OCS | Repetitive | Glued & nailed | February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ1(i1263)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	429 / 3	98 / 0			
B2, 3-1/2"	1021 / 0	236 / 0			
B3, 2-3/8"	166 / 255	0 / 21			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	67	16				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1608 ft-lbs	46.1%	100%	2	06-04-08
Neg. Moment	-1597 ft-lbs	45.8%	100%	1	15-01-01
End Reaction	528 lbs	45.6%	100%	2	00-00-00
Int. Reaction	1256 lbs	55.8%	100%	1	15-01-01
End Shear	511 lbs	31.5%	100%	2	00-02-06
Cont. Shear	715 lbs	44.0%	100%	1	14-11-05
Total Load Deflection	L/957 (0.187")	37.6%	n\a	2	07-00-14
Live Load Deflection	L/1174 (0.153")	40.9%	n\a	5	07-00-14
Total Neg. Defl.	L/999 (-0.01")	n\a	n\a	2	17-01-07
Max Defl.	0.187"	18.7%	n\a	2	07-00-14
Span / Depth	15.1				

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	528 lbs	26.1%	45.6%	Unspecified
B2	Wall/Plate	3-1/2" x 2"	1256 lbs	42.2%	55.8%	Unspecified
B3	Wall/Plate	2-3/8" x 2"	145 lbs	7.2%	12.5%	Unspecified
B3	Uplift		275 lbs			

Cautions

Uplift of -275 lbs found at bearing B3.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

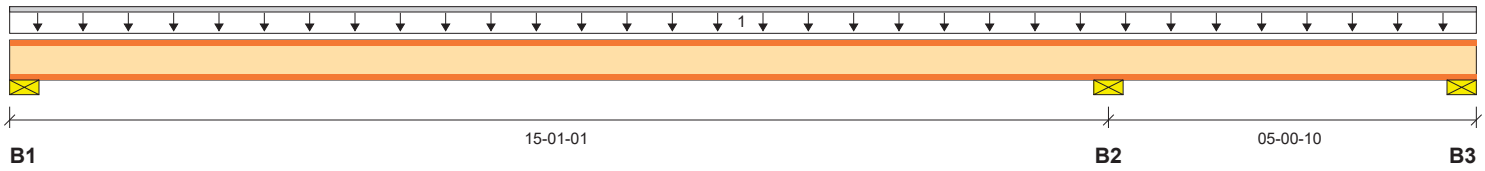
PASSED

2nd Floor\Floor Joists\FJ1(i1264) (Floor Joist)

BC CALC® Member Report — Dry | 2 spans | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ1(i1264)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	399 / 3	91 / 0			
B2, 3-1/2"	947 / 0	219 / 0			
B3, 2-3/8"	154 / 237	0 / 19			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	63	14				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1493 ft-lbs	42.8%	100%	2	06-04-08
Neg. Moment	-1483 ft-lbs	42.5%	100%	1	15-01-01
End Reaction	490 lbs	42.3%	100%	2	00-00-00
Int. Reaction	1166 lbs	51.8%	100%	1	15-01-01
End Shear	475 lbs	29.2%	100%	2	00-02-06
Cont. Shear	664 lbs	40.9%	100%	1	14-11-05
Total Load Deflection	L/1032 (0.174")	34.9%	n\a	2	07-02-01
Live Load Deflection	L/1265 (0.142")	37.9%	n\a	5	07-02-01
Total Neg. Defl.	L/999 (-0.009")	n\a	n\a	2	17-01-07
Max Defl.	0.174"	17.4%	n\a	2	07-02-01
Span / Depth	15.1				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	490 lbs	24.3%	42.3%	Unspecified
B2	Wall/Plate	3-1/2" x 2"	1166 lbs	39.2%	51.8%	Unspecified
B3	Wall/Plate	2-3/8" x 2"	135 lbs	6.7%	11.6%	Unspecified
B3	Uplift		256 lbs			

Cautions

Uplift of -256 lbs found at bearing B3.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

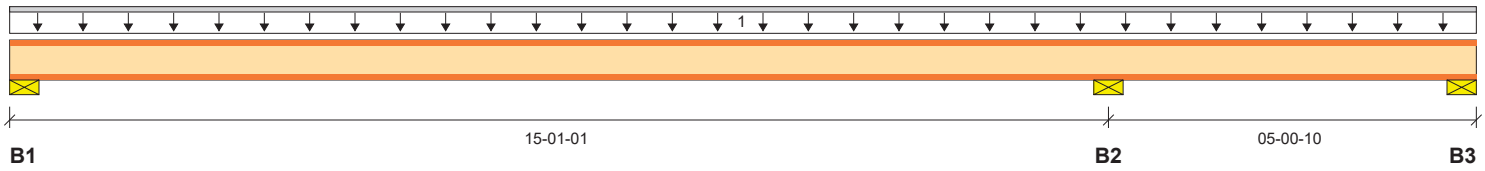
PASSED

2nd Floor\Floor Joists\FJ1(i1285) (Floor Joist)

BC CALC® Member Report | Dry | 2 spans | No cant. | 16 OCS | Repetitive | Glued & nailed | February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ1(i1285)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	587 / 4	134 / 0			
B2, 3-1/2"	1394 / 0	322 / 0			
B3, 2-3/8"	226 / 348	0 / 28			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	-	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	92	21				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	2196 ft-lbs	63.0%	100%	2	06-03-01
Neg. Moment	-2182 ft-lbs	62.6%	100%	1	15-01-01
End Reaction	721 lbs	62.3%	100%	2	00-00-00
Int. Reaction	1716 lbs	76.3%	100%	1	15-01-01
End Shear	699 lbs	43.0%	100%	2	00-02-06
Cont. Shear	977 lbs	60.1%	100%	1	14-11-05
Total Load Deflection	L/701 (0.256")	51.4%	n\a	2	07-01-04
Live Load Deflection	L/860 (0.209")	55.8%	n\a	5	07-01-04
Total Neg. Defl.	L/999 (-0.014")	n\a	n\a	2	17-01-07
Max Defl.	0.256"	25.6%	n\a	2	07-01-04
Span / Depth	15.1				

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	721 lbs	35.7%	62.3%	Unspecified
B2	Wall/Plate	3-1/2" x 2"	1716 lbs	57.7%	76.3%	Unspecified
B3	Wall/Plate	2-3/8" x 2"	198 lbs	9.8%	17.1%	Unspecified
B3	Uplift		376 lbs			

Cautions

Uplift of -376 lbs found at bearing B3.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

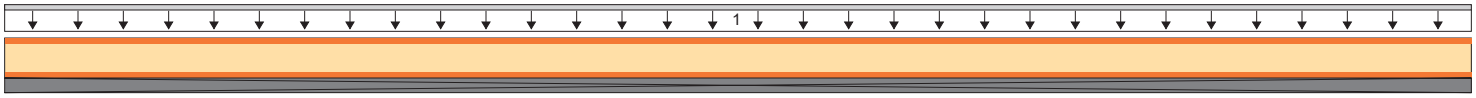
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ1(i1334) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 0

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ1(i1334)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	44	10				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Dist. Load	53.33 lb/ft	2.5%	100%		
Conc. Load	5 lbs	0.5%	100%		

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER® , AJS™, ALLJOIST® , BC RIM BOARD™, BCI® , BOISE GLULAM™, BC FloorValue® , VERSA-LAM®, VERSA-RIM PLUS® ,

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

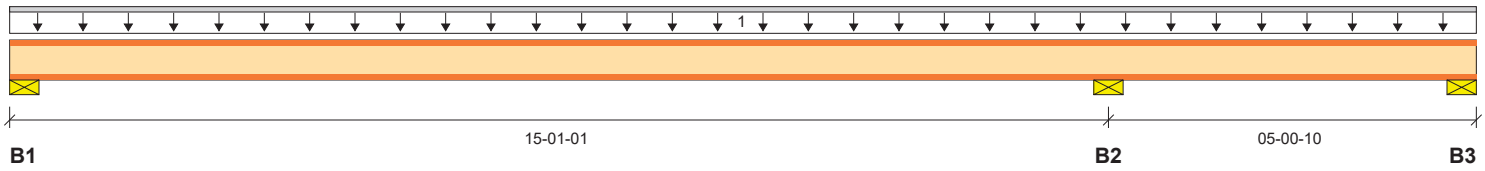
PASSED

2nd Floor\Floor Joists\FJ1(i1335) (Floor Joist)

BC CALC® Member Report | Dry | 2 spans | No cant. | 16 OCS | Repetitive | Glued & nailed | February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ1(i1335)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	276 / 2	63 / 0			
B2, 3-1/2"	656 / 0	151 / 0			
B3, 2-3/8"	107 / 164	0 / 13			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	43	10				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1034 ft-lbs	29.7%	100%	2	06-04-08
Neg. Moment	-1027 ft-lbs	29.5%	100%	1	15-01-01
End Reaction	339 lbs	29.3%	100%	2	00-00-00
Int. Reaction	807 lbs	35.9%	100%	1	15-01-01
End Shear	329 lbs	20.2%	100%	2	00-02-06
Cont. Shear	460 lbs	28.3%	100%	1	14-11-05
Total Load Deflection	L/999 (0.12")	n\a	n\a	2	07-00-14
Live Load Deflection	L/999 (0.098")	n\a	n\a	5	07-00-14
Total Neg. Defl.	L/999 (-0.006")	n\a	n\a	2	17-01-07
Max Defl.	0.12"	n\a	n\a	2	07-00-14
Span / Depth	15.1				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	339 lbs	16.8%	29.3%	Unspecified
B2	Wall/Plate	3-1/2" x 2"	807 lbs	27.1%	35.9%	Unspecified
B3	Wall/Plate	2-3/8" x 2"	93 lbs	4.6%	8.1%	Unspecified
B3	Uplift		177 lbs			

Cautions

Uplift of -177 lbs found at bearing B3.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

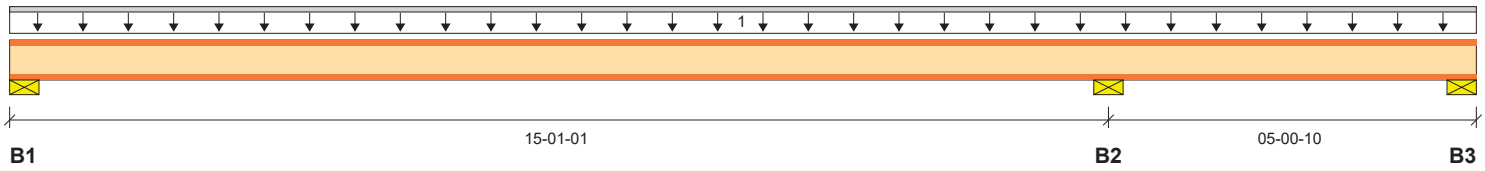
PASSED

2nd Floor\Floor Joists\FJ1(i1336) (Floor Joist)

BC CALC® Member Report | Dry | 2 spans | No cant. | 16 OCS | Repetitive | Glued & nailed | February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ1(i1336)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	276 / 2	63 / 0			
B2, 3-1/2"	656 / 0	151 / 0			
B3, 2-3/8"	107 / 164	0 / 13			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	43	10				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1034 ft-lbs	29.7%	100%	2	06-04-08
Neg. Moment	-1027 ft-lbs	29.5%	100%	1	15-01-01
End Reaction	339 lbs	29.3%	100%	2	00-00-00
Int. Reaction	807 lbs	35.9%	100%	1	15-01-01
End Shear	329 lbs	20.2%	100%	2	00-02-06
Cont. Shear	460 lbs	28.3%	100%	1	14-11-05
Total Load Deflection	L/999 (0.12")	n\a	n\a	2	07-02-01
Live Load Deflection	L/999 (0.098")	n\a	n\a	5	07-02-01
Total Neg. Defl.	L/999 (-0.006")	n\a	n\a	2	17-01-07
Max Defl.	0.12"	n\a	n\a	2	07-02-01
Span / Depth	15.1				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	339 lbs	16.8%	29.3%	Unspecified
B2	Wall/Plate	3-1/2" x 2"	807 lbs	27.1%	35.9%	Unspecified
B3	Wall/Plate	2-3/8" x 2"	93 lbs	4.6%	8.1%	Unspecified
B3	Uplift		177 lbs			

Cautions

Uplift of -177 lbs found at bearing B3.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

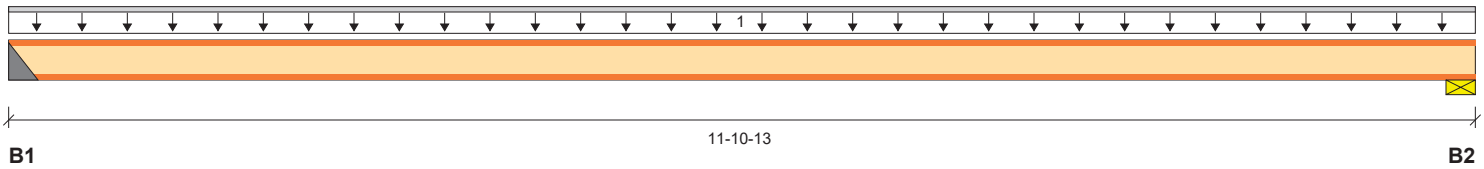
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ2(i1293) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ2(i1293)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 11-10-13

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	298 / 0	69 / 0			
B2, 2-3/8"	300 / 0	69 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-10-13	Top	50	12				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1050 ft-lbs	30.1%	100%	1	05-11-04
End Reaction	367 lbs	34.3%	100%	1	00-00-00
End Shear	356 lbs	21.9%	100%	1	00-02-00
Total Load Deflection	L/999 (0.085")	n\a	n\a	1	05-11-04
Live Load Deflection	L/999 (0.069")	n\a	n\a	2	05-11-04
Max Defl.	0.085"	n\a	n\a	1	05-11-04
Span / Depth	11.8				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	367 lbs	30.8%	34.3%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	369 lbs	18.3%	31.8%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

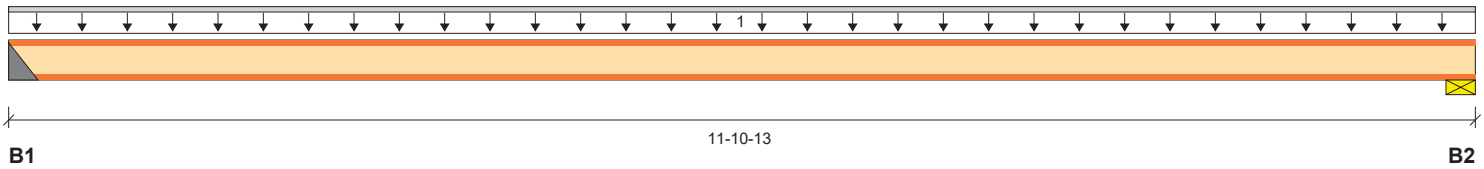
PASSED

2nd Floor\Floor Joists\FJ2(i1295) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ2(i1295)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 11-10-13

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	450 / 0	104 / 0			
B2, 2-3/8"	452 / 0	104 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-10-13	Top	76	18				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1587 ft-lbs	45.5%	100%	1	05-11-04
End Reaction	554 lbs	51.8%	100%	1	00-00-00
End Shear	538 lbs	33.1%	100%	1	00-02-00
Total Load Deflection	L/1084 (0.129")	33.2%	n\a	1	05-11-04
Live Load Deflection	L/999 (0.105")	n\a	n\a	2	05-11-04
Max Defl.	0.129"	12.9%	n\a	1	05-11-04
Span / Depth	11.8				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	554 lbs	46.6%	51.8%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	557 lbs	27.6%	48.1%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

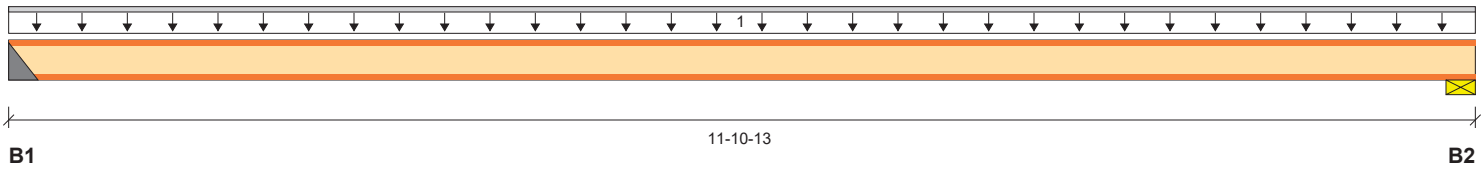
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ2(i1297) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ2(i1297)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 11-10-13

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	514 / 0	119 / 0			
B2, 2-3/8"	517 / 0	119 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-10-13	Top	87	20				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1813 ft-lbs	52.0%	100%	1	05-11-04
End Reaction	633 lbs	59.2%	100%	1	00-00-00
End Shear	615 lbs	37.9%	100%	1	00-02-00
Total Load Deflection	L/949 (0.148")	38.0%	n\a	1	05-11-04
Live Load Deflection	L/999 (0.12")	n\a	n\a	2	05-11-04
Max Defl.	0.148"	14.8%	n\a	1	05-11-04
Span / Depth	11.8				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	633 lbs	53.2%	59.2%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	636 lbs	31.5%	55.0%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

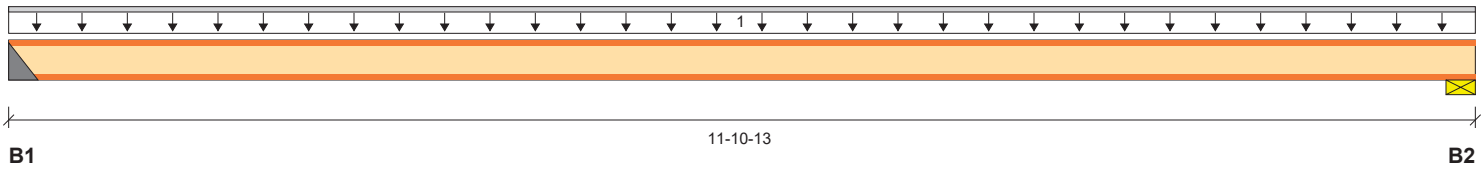
PASSED

2nd Floor\Floor Joists\FJ2(i1315) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ2(i1315)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 11-10-13

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	466 / 0	108 / 0			
B2, 2-3/8"	469 / 0	108 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-10-13	Top	79	18				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1644 ft-lbs	47.2%	100%	1	05-11-04
End Reaction	574 lbs	53.7%	100%	1	00-00-00
End Shear	558 lbs	34.3%	100%	1	11-08-07
Total Load Deflection	L/1046 (0.134")	34.4%	n\a	1	05-11-04
Live Load Deflection	L/999 (0.109")	n\a	n\a	2	05-11-04
Max Defl.	0.134"	13.4%	n\a	1	05-11-04
Span / Depth	11.8				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	574 lbs	48.2%	53.7%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	577 lbs	28.6%	49.9%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

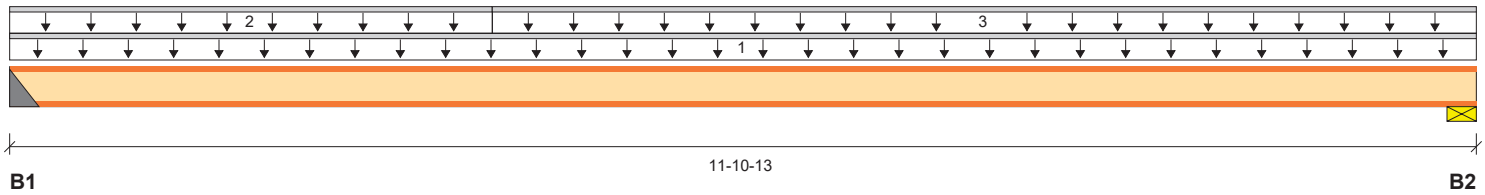
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ2(i1333) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ2(i1333)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 11-10-13

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	308 / 0	71 / 0			
B2, 2-3/8"	321 / 0	74 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-10-13	Top	35	8				n\a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-11-00	Top	15	3				n\a
3	FC1 Floor Material	Unf. Lin. (lb/ft)	L	03-11-00	11-10-13	Top	19	4				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1116 ft-lbs	32.0%	100%	1	05-11-03
End Reaction	380 lbs	35.5%	100%	1	00-00-00
End Shear	382 lbs	23.5%	100%	1	11-08-07
Total Load Deflection	L/999 (0.091")	n\a	n\a	1	05-11-03
Live Load Deflection	L/999 (0.074")	n\a	n\a	2	05-11-03
Max Defl.	0.091"	n\a	n\a	1	05-11-03
Span / Depth	11.8				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	380 lbs	31.9%	35.5%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	395 lbs	19.6%	34.1%	Unspecified

Cautions

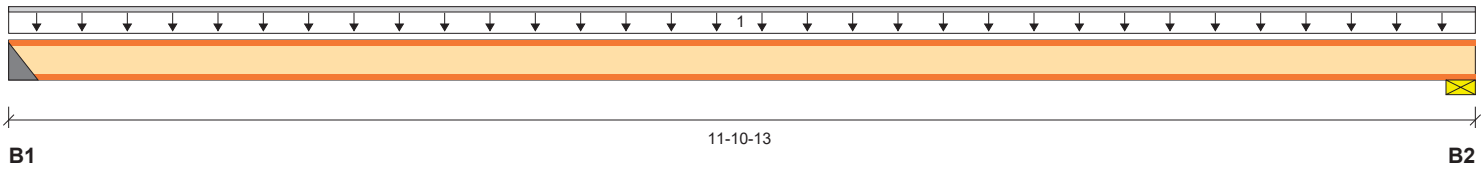
Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ2(i1338)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 11-10-13

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	514 / 0	119 / 0			
B2, 2-3/8"	517 / 0	119 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-10-13	Top	87	20				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1813 ft-lbs	52.0%	100%	1	06-00-02
End Reaction	633 lbs	59.2%	100%	1	00-00-00
End Shear	615 lbs	37.9%	100%	1	00-02-00
Total Load Deflection	L/949 (0.148")	37.9%	n\a	1	06-00-02
Live Load Deflection	L/999 (0.12")	n\a	n\a	2	06-00-02
Max Defl.	0.148"	14.8%	n\a	1	06-00-02
Span / Depth	11.8				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	633 lbs	53.2%	59.2%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	636 lbs	31.5%	55.0%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

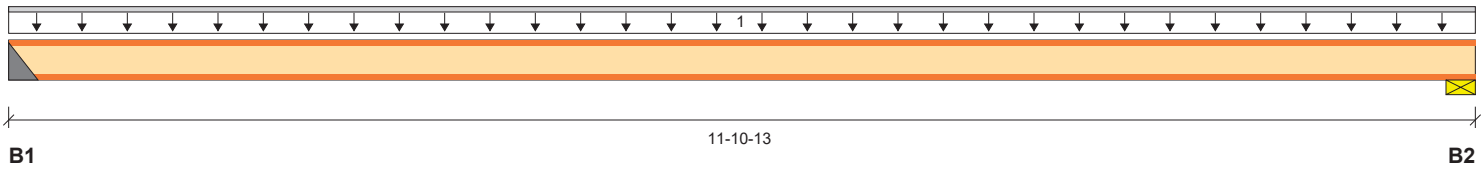
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ2(i1340) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ2(i1340)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 11-10-13

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	321 / 0	74 / 0			
B2, 2-3/8"	323 / 0	75 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-10-13	Top	54	12				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1133 ft-lbs	32.5%	100%	1	05-11-04
End Reaction	396 lbs	37.0%	100%	1	00-00-00
End Shear	385 lbs	23.7%	100%	1	00-02-00
Total Load Deflection	L/999 (0.092")	n\a	n\a	1	05-11-04
Live Load Deflection	L/999 (0.075")	n\a	n\a	2	05-11-04
Max Defl.	0.092"	n\a	n\a	1	05-11-04
Span / Depth	11.8				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	396 lbs	33.3%	37.0%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	398 lbs	19.7%	34.4%	Unspecified

Cautions

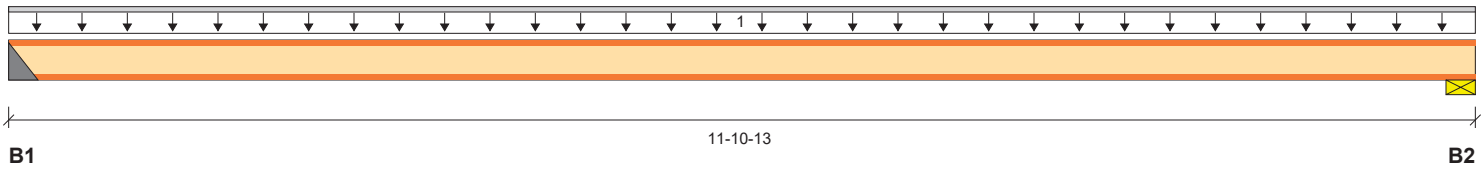
Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ2(i1342)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 11-10-13

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	474 / 0	109 / 0			
B2, 2-3/8"	476 / 0	110 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-10-13	Top	80	18				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1670 ft-lbs	47.9%	100%	1	05-11-04
End Reaction	583 lbs	54.5%	100%	1	00-00-00
End Shear	567 lbs	34.9%	100%	1	00-02-00
Total Load Deflection	L/1030 (0.136")	34.9%	n\a	1	05-11-04
Live Load Deflection	L/999 (0.11")	n\a	n\a	2	05-11-04
Max Defl.	0.136"	13.6%	n\a	1	05-11-04
Span / Depth	11.8				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	583 lbs	49.0%	54.5%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	586 lbs	29.0%	50.6%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

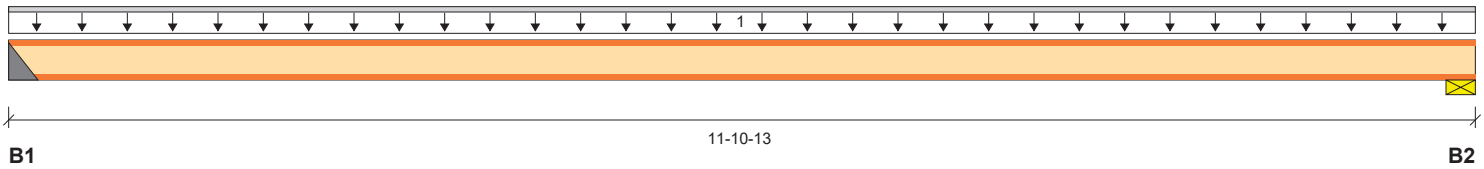
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ2(i1344) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ2(i1344)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 11-10-13

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	482 / 0	111 / 0			
B2, 2-3/8"	485 / 0	112 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	11-10-13	Top	81	19				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1700 ft-lbs	48.8%	100%	1	05-11-04
End Reaction	594 lbs	55.5%	100%	1	00-00-00
End Shear	577 lbs	35.5%	100%	1	00-02-00
Total Load Deflection	L/1012 (0.138")	35.6%	n\a	1	05-11-04
Live Load Deflection	L/999 (0.112")	n\a	n\a	2	05-11-04
Max Defl.	0.138"	13.8%	n\a	1	05-11-04
Span / Depth	11.8				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	594 lbs	49.9%	55.5%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	597 lbs	29.6%	51.5%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

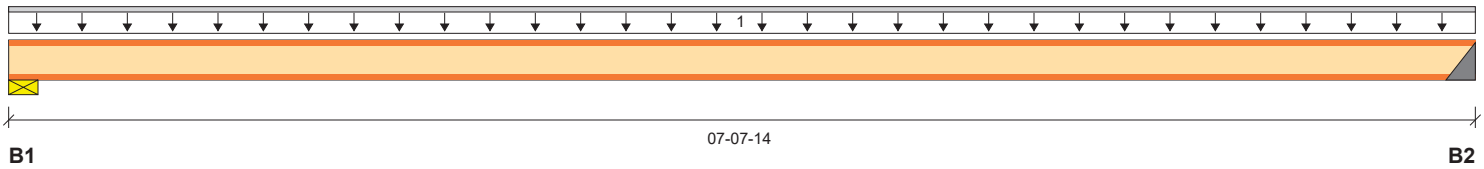
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ3(i1286) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1286)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	333 / 0	77 / 0			
B2, 2"	330 / 0	76 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-07-14	Top	87	20				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	734 ft-lbs	21.1%	100%	1	03-10-02
End Reaction	407 lbs	38.1%	100%	1	07-07-14
End Shear	389 lbs	23.9%	100%	1	00-02-06
Total Load Deflection	L/999 (0.031")	n\a	n\a	1	03-10-02
Live Load Deflection	L/999 (0.025")	n\a	n\a	2	03-10-02
Max Defl.	0.031"	n\a	n\a	1	03-10-02
Span / Depth	7.5				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	410 lbs	20.3%	35.4%	Unspecified
B2	Hanger	2" x 2"	407 lbs	34.2%	38.1%	IUS2.06/11.88

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

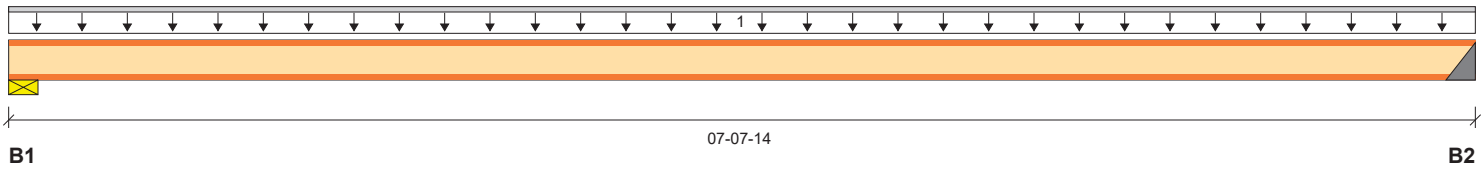
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ3(i1288) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1288)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	333 / 0	77 / 0			
B2, 2"	330 / 0	76 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-07-14	Top	87	20				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	734 ft-lbs	21.1%	100%	1	03-10-02
End Reaction	407 lbs	38.1%	100%	1	07-07-14
End Shear	389 lbs	23.9%	100%	1	00-02-06
Total Load Deflection	L/999 (0.031")	n\a	n\a	1	03-10-02
Live Load Deflection	L/999 (0.025")	n\a	n\a	2	03-10-02
Max Defl.	0.031"	n\a	n\a	1	03-10-02
Span / Depth	7.5				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	410 lbs	20.3%	35.4%	Unspecified
B2	Hanger	2" x 2"	407 lbs	34.2%	38.1%	IUS2.06/11.88

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

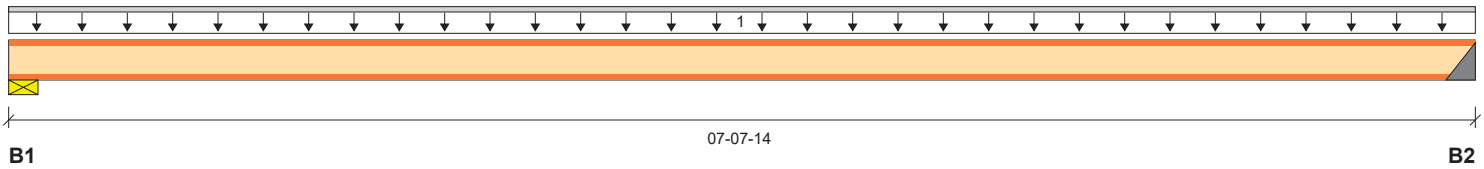
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ3(i1291) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1291)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	307 / 0	71 / 0			
B2, 2"	304 / 0	70 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-07-14	Top	80	18				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	675 ft-lbs	19.4%	100%	1	03-10-02
End Reaction	374 lbs	35.0%	100%	1	07-07-14
End Shear	358 lbs	22.0%	100%	1	00-02-06
Total Load Deflection	L/999 (0.028")	n\a	n\a	1	03-10-02
Live Load Deflection	L/999 (0.023")	n\a	n\a	2	03-10-02
Max Defl.	0.028"	n\a	n\a	1	03-10-02
Span / Depth	7.5				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	378 lbs	18.7%	32.6%	Unspecified
B2	Hanger	2" x 2"	374 lbs	31.5%	35.0%	IUS2.06/11.88

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

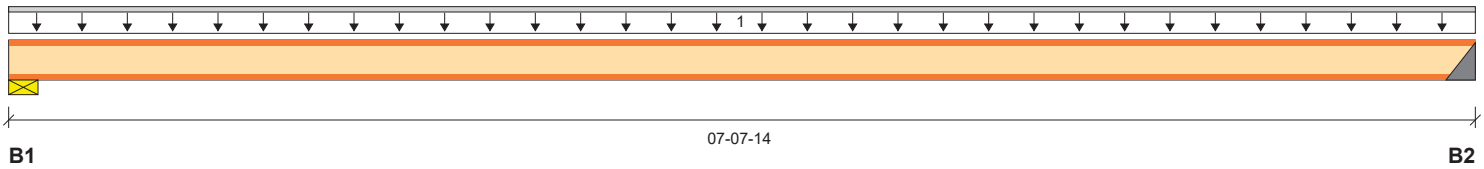
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ3(i1292) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1292)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	193 / 0	45 / 0			
B2, 2"	191 / 0	44 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-07-14	Top	50	12				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	425 ft-lbs	12.2%	100%	1	03-10-02
End Reaction	236 lbs	22.0%	100%	1	07-07-14
End Shear	225 lbs	13.9%	100%	1	00-02-06
Total Load Deflection	L/999 (0.018")	n\a	n\a	1	03-10-02
Live Load Deflection	L/999 (0.014")	n\a	n\a	2	03-10-02
Max Defl.	0.018"	n\a	n\a	1	03-10-02
Span / Depth	7.5				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	238 lbs	11.8%	20.5%	Unspecified
B2	Hanger	2" x 2"	236 lbs	19.8%	22.0%	IUS2.06/11.88

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

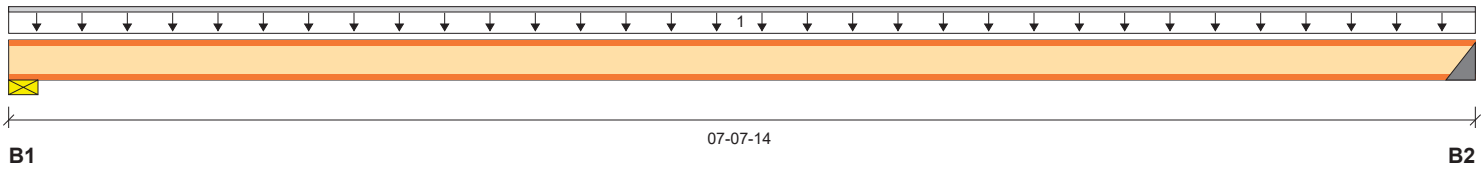
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ3(i1294) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1294)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	292 / 0	67 / 0			
B2, 2"	289 / 0	67 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-07-14	Top	76	17				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	642 ft-lbs	18.4%	100%	1	03-10-02
End Reaction	356 lbs	33.3%	100%	1	07-07-14
End Shear	340 lbs	20.9%	100%	1	00-02-06
Total Load Deflection	L/999 (0.027")	n\a	n\a	1	03-10-02
Live Load Deflection	L/999 (0.022")	n\a	n\a	2	03-10-02
Max Defl.	0.027"	n\a	n\a	1	03-10-02
Span / Depth	7.5				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	359 lbs	17.8%	31.0%	Unspecified
B2	Hanger	2" x 2"	356 lbs	29.9%	33.3%	IUS2.06/11.88

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

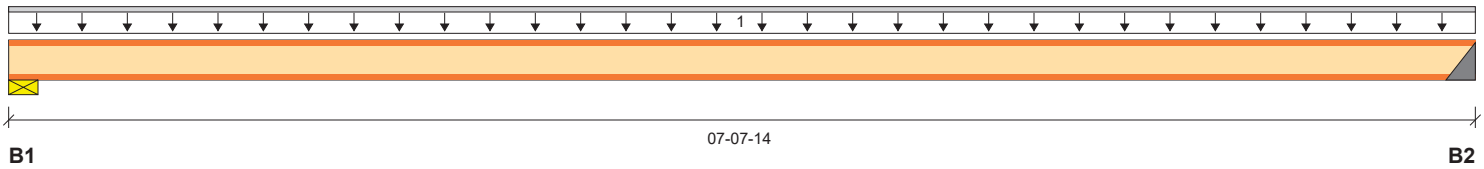
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ3(i1314) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1314)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	302 / 0	70 / 0			
B2, 2"	299 / 0	69 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-07-14	Top	79	18				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	665 ft-lbs	19.1%	100%	1	03-10-02
End Reaction	369 lbs	34.5%	100%	1	07-07-14
End Shear	352 lbs	21.7%	100%	1	00-02-06
Total Load Deflection	L/999 (0.028")	n\a	n\a	1	03-10-02
Live Load Deflection	L/999 (0.023")	n\a	n\a	2	03-10-02
Max Defl.	0.028"	n\a	n\a	1	03-10-02
Span / Depth	7.5				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	372 lbs	18.4%	32.1%	Unspecified
B2	Hanger	2" x 2"	369 lbs	31.0%	34.5%	IUS2.06/11.88

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

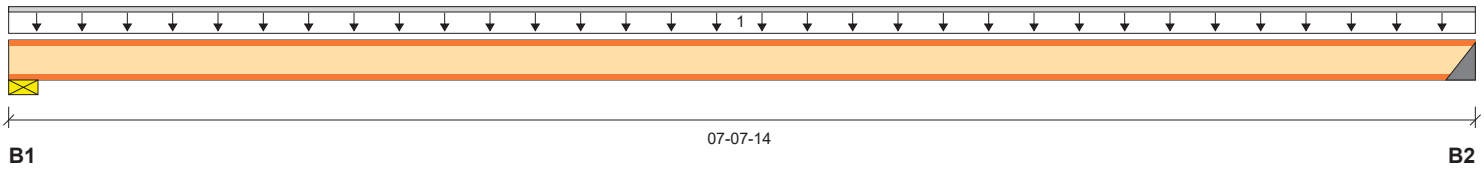
PASSED

2nd Floor\Floor Joists\FJ3(i1316) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1316)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	193 / 0	45 / 0			
B2, 2"	191 / 0	44 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-07-14	Top	50	12				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	425 ft-lbs	12.2%	100%	1	03-10-02
End Reaction	236 lbs	22.0%	100%	1	07-07-14
End Shear	225 lbs	13.9%	100%	1	00-02-06
Total Load Deflection	L/999 (0.018")	n\a	n\a	1	03-10-02
Live Load Deflection	L/999 (0.014")	n\a	n\a	2	03-10-02
Max Defl.	0.018"	n\a	n\a	1	03-10-02
Span / Depth	7.5				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	238 lbs	11.8%	20.5%	Unspecified
B2	Hanger	2" x 2"	236 lbs	19.8%	22.0%	IUS2.06/11.88

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

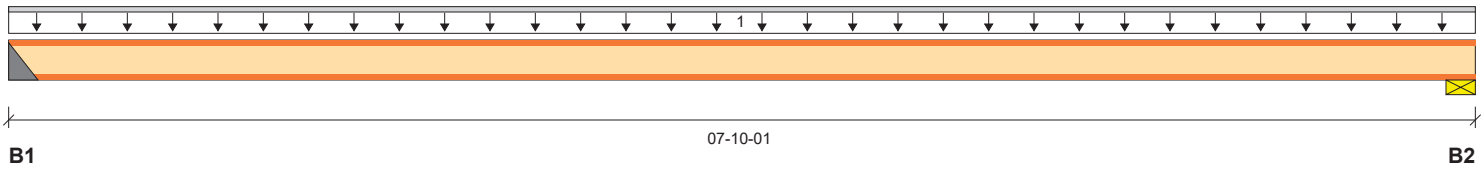
PASSED

2nd Floor\Floor Joists\FJ3(i1317) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1317)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-10-01

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	201 / 0	46 / 0			
B2, 2-3/8"	202 / 0	47 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-10-01	Top	51	12				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	457 ft-lbs	13.1%	100%	1	03-10-14
End Reaction	247 lbs	23.1%	100%	1	00-00-00
End Shear	236 lbs	14.6%	100%	1	00-02-00
Total Load Deflection	L/999 (0.02")	n\a	n\a	1	03-10-14
Live Load Deflection	L/999 (0.016")	n\a	n\a	2	03-10-14
Max Defl.	0.02"	n\a	n\a	1	03-10-14
Span / Depth	7.7				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	247 lbs	20.8%	23.1%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	249 lbs	12.3%	21.5%	Unspecified

Cautions

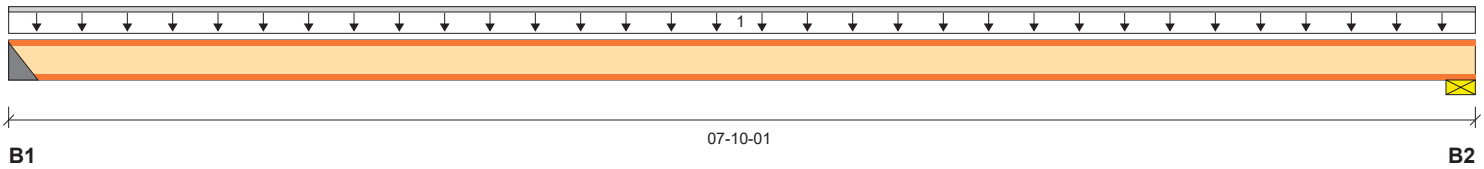
Header for the hanger IUS2.06/11.88 is a Double 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1324)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-10-01

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	317 / 0	73 / 0			
B2, 2-3/8"	320 / 0	74 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-10-01	Top	81	19				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	722 ft-lbs	20.7%	100%	1	03-10-14
End Reaction	390 lbs	36.5%	100%	1	00-00-00
End Shear	374 lbs	23.0%	100%	1	00-02-00
Total Load Deflection	L/999 (0.031")	n\a	n\a	1	03-10-14
Live Load Deflection	L/999 (0.025")	n\a	n\a	2	03-10-14
Max Defl.	0.031"	n\a	n\a	1	03-10-14
Span / Depth	7.7				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	390 lbs	32.8%	36.5%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	394 lbs	19.5%	34.0%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Double 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

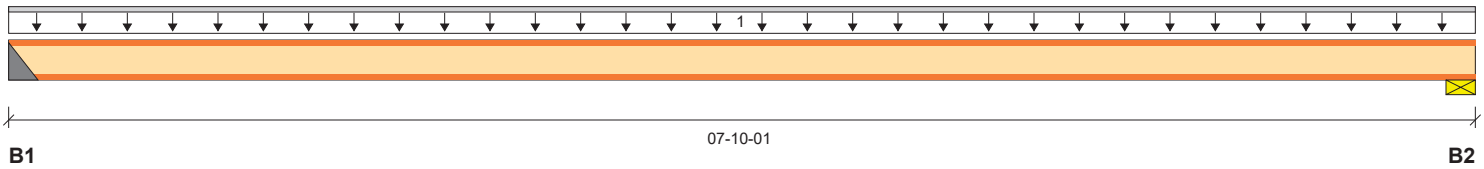
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ3(i1325) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1325)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-10-01

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	212 / 0	49 / 0			
B2, 2-3/8"	214 / 0	49 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-10-01	Top	54	13				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	482 ft-lbs	13.8%	100%	1	03-10-14
End Reaction	261 lbs	24.4%	100%	1	00-00-00
End Shear	250 lbs	15.4%	100%	1	00-02-00
Total Load Deflection	L/999 (0.021")	n\a	n\a	1	03-10-14
Live Load Deflection	L/999 (0.017")	n\a	n\a	2	03-10-14
Max Defl.	0.021"	n\a	n\a	1	03-10-14
Span / Depth	7.7				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	261 lbs	21.9%	24.4%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	263 lbs	13.0%	22.7%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Double 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

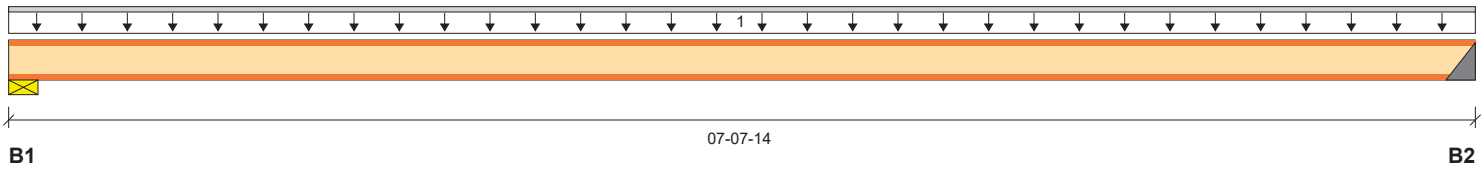
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ3(i1332) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1332)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	208 / 0	48 / 0			
B2, 2"	207 / 0	48 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-07-14	Top	54	12				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	459 ft-lbs	13.2%	100%	1	03-10-02
End Reaction	254 lbs	23.8%	100%	1	07-07-14
End Shear	243 lbs	15.0%	100%	1	00-02-06
Total Load Deflection	L/999 (0.019")	n\a	n\a	1	03-10-02
Live Load Deflection	L/999 (0.016")	n\a	n\a	2	03-10-02
Max Defl.	0.019"	n\a	n\a	1	03-10-02
Span / Depth	7.5				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	256 lbs	12.7%	22.1%	Unspecified
B2	Hanger	2" x 2"	254 lbs	21.4%	23.8%	IUS2.06/11.88

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

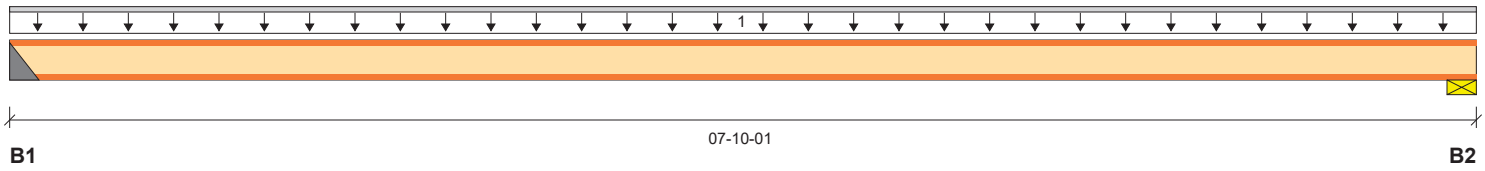
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ3(i1346) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1346)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-10-01

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	296 / 0	68 / 0			
B2, 2-3/8"	298 / 0	69 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-10-01	Top	76	17				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	674 ft-lbs	19.3%	100%	1	03-10-14
End Reaction	364 lbs	34.1%	100%	1	00-00-00
End Shear	349 lbs	21.5%	100%	1	00-02-00
Total Load Deflection	L/999 (0.029")	n\a	n\a	1	03-10-14
Live Load Deflection	L/999 (0.024")	n\a	n\a	2	03-10-14
Max Defl.	0.029"	n\a	n\a	1	03-10-14
Span / Depth	7.7				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	364 lbs	30.6%	34.1%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	367 lbs	18.2%	31.7%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Double 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

Single 11-7/8" BCI® 5000s-1.8

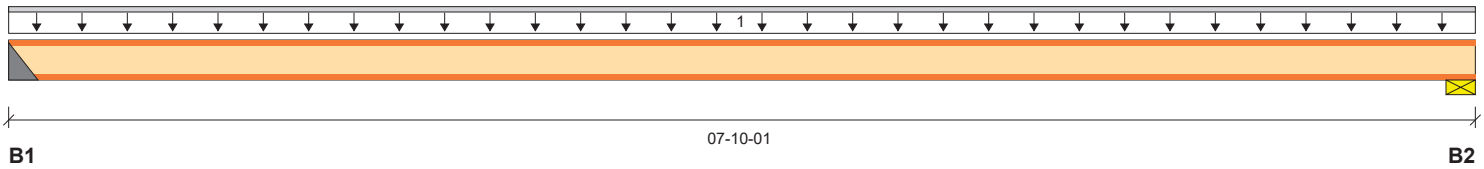
PASSED

2nd Floor\Floor Joists\FJ3(i1350) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00

Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1350)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-10-01

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2"	338 / 0	78 / 0			
B2, 2-3/8"	341 / 0	79 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-10-01	Top	87	20				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	770 ft-lbs	22.1%	100%	1	03-10-14
End Reaction	416 lbs	39.0%	100%	1	00-00-00
End Shear	399 lbs	24.5%	100%	1	00-02-00
Total Load Deflection	L/999 (0.033")	n\a	n\a	1	03-10-14
Live Load Deflection	L/999 (0.027")	n\a	n\a	2	03-10-14
Max Defl.	0.033"	n\a	n\a	1	03-10-14
Span / Depth	7.7				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Hanger	2" x 2"	416 lbs	35.0%	39.0%	IUS2.06/11.88
B2	Wall/Plate	2-3/8" x 2"	420 lbs	20.8%	36.3%	Unspecified

Cautions

Header for the hanger IUS2.06/11.88 is a Double 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

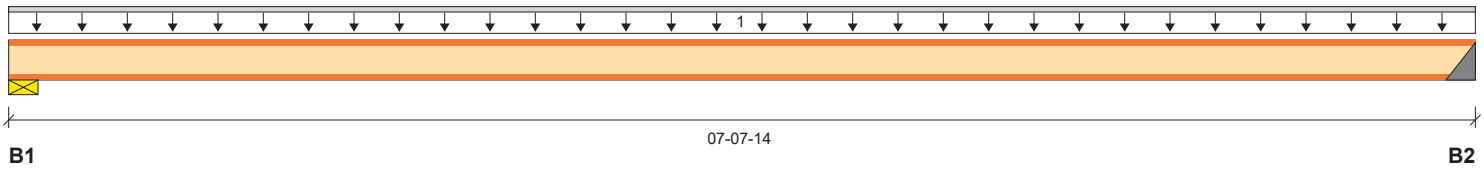
Single 11-7/8" BCI® 5000s-1.8

PASSED

2nd Floor\Floor Joists\FJ3(i1351) (Floor Joist)

BC CALC® Member Report — Dry | 1 span | No cant. | 16 OCS | Repetitive | Glued & nailed — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Floor Joists\FJ3(i1351)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1336	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-3/8"	312 / 0	72 / 0			
B2, 2"	310 / 0	71 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	OCS
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-07-14	Top	81	19				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	688 ft-lbs	19.7%	100%	1	03-10-02
End Reaction	381 lbs	35.7%	100%	1	07-07-14
End Shear	365 lbs	22.4%	100%	1	00-02-06
Total Load Deflection	L/999 (0.029")	n\a	n\a	1	03-10-02
Live Load Deflection	L/999 (0.023")	n\a	n\a	2	03-10-02
Max Defl.	0.029"	n\a	n\a	1	03-10-02
Span / Depth	7.5				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	2-3/8" x 2"	384 lbs	19.0%	33.2%	Unspecified
B2	Hanger	2" x 2"	381 lbs	32.0%	35.7%	IUS2.06/11.88

Cautions

Header for the hanger IUS2.06/11.88 is a Quadruple 1-3/4" x 11-7/8" LVL Beam.
Hanger IUS2.06/11.88 requires (10) 10d face nails, (2) Strong-Grip joist nails.

Notes

Design meets User specified (L/360) Total load deflection criteria.
Design meets User specified (L/480) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
Hanger Manufacturer: Simpson Strong-Tie, Inc.
BC CALC® analysis is based on IBC 2009.
Composite EI value based on 3/4" thick OSB sheathing glued and nailed to member.
Design based on Dry Service Condition.

Disclosure

Boise Cascade

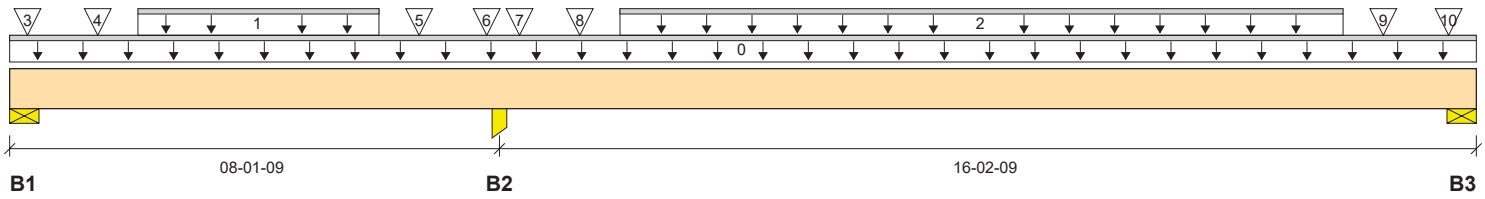
Quadruple 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

PASSED

2nd Floor\Flush Beams\BM1-4(i1151) (Flush Beam)

BC CALC® Member Report — Dry | 2 spans | No cant. — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Flush Beams\BM1-4(i1151)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1040	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 24-04-01

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	2870 / 1779	279 / 0			
B2, 11"	10940 / 0	2922 / 0			
B3, 3-1/2"	4442 / 103	1164 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	24-04-01	Top		24				00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	02-01-09	06-01-09	Top	666	154				n\a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	10-01-09	22-01-09	Top	666	154				n\a
3	-	Conc. Pt. (lbs)	L	00-03-09	00-03-09	Top	888	205				n\a
4	-	Conc. Pt. (lbs)	L	01-05-09	01-05-09	Top	833	192				n\a
5	-	Conc. Pt. (lbs)	L	06-09-09	06-09-09	Top	818	189				n\a
6	-	Conc. Pt. (lbs)	L	07-11-00	07-11-00	Top	555	128				n\a
7	-	Conc. Pt. (lbs)	L	08-05-09	08-05-09	Top	514	119				n\a
8	-	Conc. Pt. (lbs)	L	09-05-09	09-05-09	Top	777	179				n\a
9	-	Conc. Pt. (lbs)	L	22-09-09	22-09-09	Top	805	186				n\a
10	-	Conc. Pt. (lbs)	L	23-10-09	23-10-09	Top	525	121				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	18527 ft-lbs	43.5%	100%	3	17-05-09
Neg. Moment	-19893 ft-lbs	46.8%	100%	1	08-01-09
End Shear	5038 lbs	31.9%	100%	3	23-00-11
Cont. Shear	7172 lbs	45.4%	100%	1	09-06-15
Total Load Deflection	L/512 (0.374")	46.9%	n\a	3	16-09-09
Live Load Deflection	L/639 (0.3")	56.4%	n\a	6	16-09-09
Total Neg. Defl.	L/999 (-0.057")	n\a	n\a	3	04-10-09
Max Defl.	0.374"	37.4%	n\a	3	16-09-09
Span / Depth	16.2				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	3-1/2" x 7"	3149 lbs	30.2%	17.1%	Unspecified
B1	Uplift		1500 lbs			
B2	Column	11" x 7"	13862 lbs	22.5%	24.0%	Unspecified
B3	Wall/Plate	3-1/2" x 7"	5606 lbs	53.8%	30.5%	Unspecified

Cautions

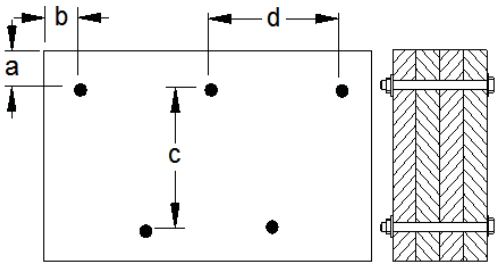
Uplift of -1500 lbs found at bearing B1.

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Flush Beams\BM1-4(i1151)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1040	Company:	McCray Lumber - Liberty

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Design based on Dry Service Condition.

Connection Diagram: Full Length of Member



a minimum = 2-1/2" c = 6-7/8"
b minimum = 3-1/8" d = 12"

Calculated Side Load = 701.0 lb/ft
Bolts are assumed to be Grade A307 or Grade 2 or higher.
Connectors are: 5/8 in. Staggered Through Bolt

Disclosure

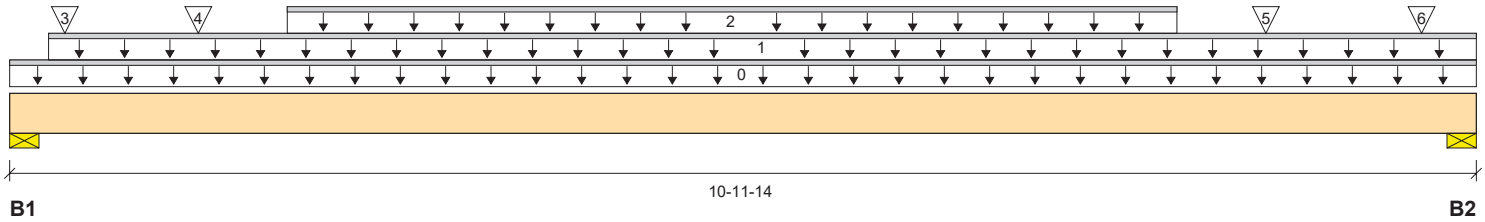
Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

PASSED

2nd Floor\Flush Beams\BM2-2(i1223) (Flush Beam)

BC CALC® Member Report — Dry | 1 span | No cant. — February 4, 2021 12:18:00
Build 7493

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Flush Beams\BM2-2(i1223)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1040	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 10-11-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	1463 / 0	404 / 0			
B2, 2-3/8"	1430 / 0	395 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	10-11-14	Top		12				00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-03-08	10-11-14	Top	9	2				n\a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	02-00-15	08-08-15	Top	260	60				n\a
3	FJ3(i1317)	Conc. Pt. (lbs)	L	00-04-15	00-04-15	Top	206	48				n\a
4	FJ3(i1346)	Conc. Pt. (lbs)	L	01-04-15	01-04-15	Top	304	70				n\a
5	FJ3(i1324)	Conc. Pt. (lbs)	L	09-04-15	09-04-15	Top	326	75				n\a
6	FJ3(i1325)	Conc. Pt. (lbs)	L	10-06-15	10-06-15	Top	218	50				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	4863 ft-lbs	22.9%	100%	1	05-04-15
End Shear	1615 lbs	20.5%	100%	1	01-03-06
Total Load Deflection	L/999 (0.1")	n\a	n\a	1	05-07-00
Live Load Deflection	L/999 (0.079")	n\a	n\a	2	05-07-00
Max Defl.	0.1"	n\a	n\a	1	05-07-00
Span / Depth	10.7				

Bearing Supports

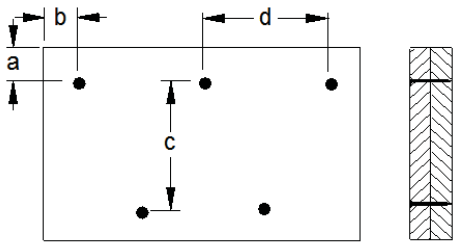
		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate	3-1/2" x 3-1/2"	1867 lbs	35.9%	20.3%	Unspecified
B2	Wall/Plate	2-3/8" x 3-1/2"	1824 lbs	51.6%	29.3%	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Design meets arbitrary (0.75") Maximum live load deflection criteria.
Calculations assume member is fully braced.
BC CALC® analysis is based on IBC 2009.
Design based on Dry Service Condition.

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Flush Beams\BM2-2(i1223)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	ESR-1040	Company:	McCray Lumber - Liberty

Connection Diagram: Full Length of Member



a minimum = 2" c = 7-7/8"
b minimum = 3" d = 12"

Calculated Side Load = 427.0 lb/ft
Connectors are: 16d Common Nails

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

Single 1-1/8" x 11-7/8" BC RIM BOARD OSB

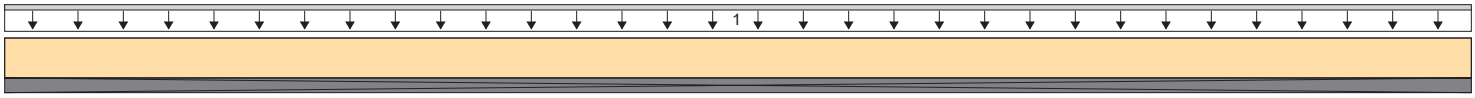
PASSED

2nd Floor\Flush Beams\Ca1(i1326) (Flush Beam)

BC CALC® Member Report — Dry | 1 span | No cant. — February 4, 2021 12:18:00

Build 0

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Flush Beams\Ca1(i1326)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	APA-W345G	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 20-01-11

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	20-01-11	Top	6	1				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Dist. Load	7.08 lb/ft	0.2%	100%		
Conc. Load	1 lbs	n\a	100%		

Disclosure

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BC CALC®, BC FRAMER® , AJS™, ALLJOIST® , BC RIM BOARD™, BCI® , BOISE GLULAM™, BC FloorValue® , VERSA-LAM®, VERSA-RIM PLUS® ,

Single 1-1/8" x 11-7/8" BC RIM BOARD OSB

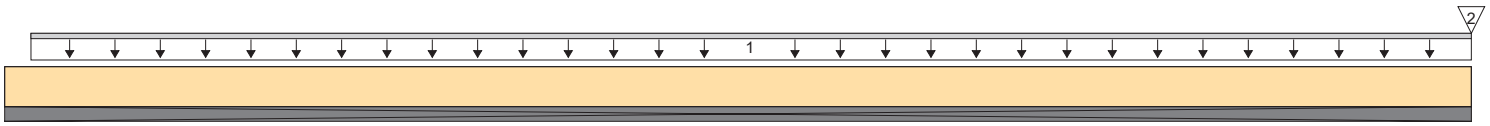
PASSED

2nd Floor\Flush Beams\Ca1(i1327) (Flush Beam)

BC CALC® Member Report — Dry | 1 span | No cant. — February 4, 2021 12:18:00

Build 0

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Flush Beams\Ca1(i1327)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	APA-W345G	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 08-01-09

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-01-12	08-01-09	Top	16	4				n\a
2	FC1 Floor Material	Conc. Pt. (lbs)	L	08-01-09	08-01-09	Top	2					n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Dist. Load	20.16 lb/ft	0.5%	100%		
Conc. Load	2 lbs	n\a	100%		

Disclosure

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Single 1-1/8" x 11-7/8" BC RIM BOARD OSB

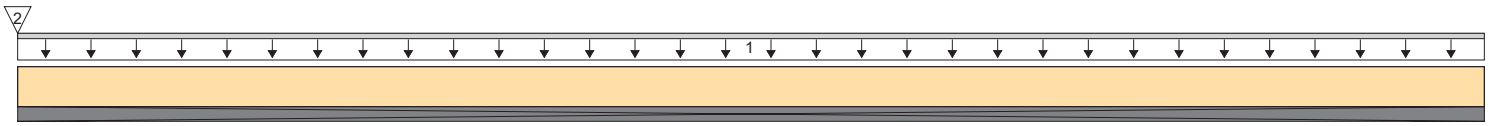
PASSED

2nd Floor\Flush Beams\Ca1(i1328) (Flush Beam)

BC CALC® Member Report — Dry | 1 span | No cant. — February 4, 2021 12:18:00

Build 0

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Flush Beams\Ca1(i1328)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	APA-W345G	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 03-09-04

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-09-04	Top	15	3				n\a
2	FC1 Floor Material	Conc. Pt. (lbs)	L	00-00-00	00-00-00	Top	4	1				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Dist. Load	18.45 lb/ft	0.4%	100%		
Conc. Load	5 lbs	0.2%	100%		

Disclosure

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BC CALC®, BC FRAMER® , AJS™, ALLJOIST® , BC RIM BOARD™, BCI® , BOISE GLULAM™, BC FloorValue® , VERSA-LAM®, VERSA-RIM PLUS® ,

Boise Cascade

Single 1-1/8" x 11-7/8" BC RIM BOARD OSB

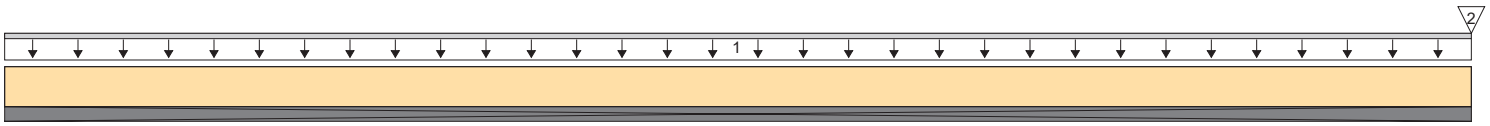
PASSED

2nd Floor\Flush Beams\Ca1(i1349) (Flush Beam)

BC CALC® Member Report | Dry | 1 span | No cant. | February 4, 2021 12:18:00

Build 0

Job name:	Hanger V	File name:	Hanger V.mmdl
Address:	2751 NE Douglas	Description:	2nd Floor\Flush Beams\Ca1(i1349)
City, State, Zip:	Lees Summit, MO	Specifier:	
Customer:	Signature Builders	Designer:	Keith Tally
Code reports:	APA-W345G	Company:	McCray Lumber - Liberty



Total Horizontal Product Length = 07-07-14

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-07-14	Top	15	3				n\a
2	FC1 Floor Material	Conc. Pt. (lbs)	L	07-07-14	07-07-14	Top	4	1				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Dist. Load	18.45 lb/ft	0.4%	100%		
Conc. Load	5 lbs	0.2%	100%		

Disclosure