

RoofDropped Beams\FB1() (Dropped Beam)

Dry | 3 spans | No cant.

May 20, 2020 13:51:46

BC CALC® Member Report

Build 7493

Job name:

File name: 2000367A.mmdl

Address:

Description: RoofDropped Beams\FB1()

City, State, Zip:

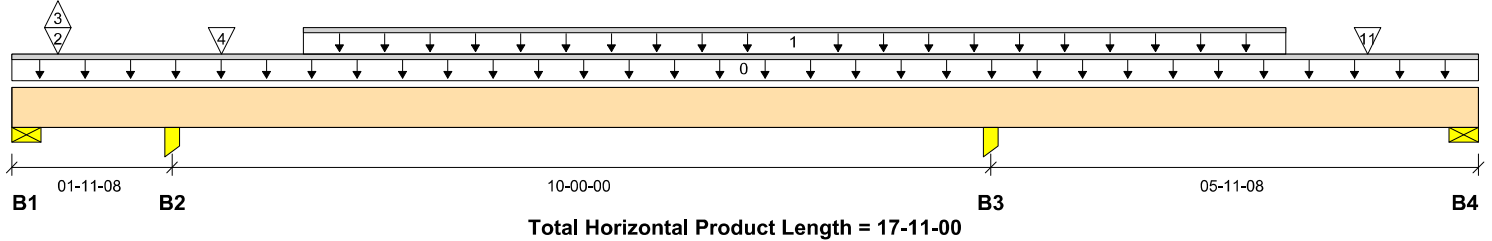
Specifier:

Customer:

Designer:

Code reports: ESR-1040

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"		0 / 242		290 / 77	71 / 380
B2, 5-1/2"		697 / 0		190 / 702	811 / 54
B3, 5-1/2"		602 / 0		161 / 594	653 / 0
B4, 3-1/2"		93 / 0		21 / 74	163 / 67

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	17-11-00	Top		9				00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	03-06-12	15-06-12	Top		57			72	n/a
2	M1(c1)	Conc. Pt. (lbs)	L	00-06-12	00-06-12	Top		64			50	n/a
3	M1(c1)	Conc. Pt. (lbs)	L	00-06-12	00-06-12	Top					-21	n/a
4	M1(c1)	Conc. Pt. (lbs)	L	02-06-12	02-06-12	Top		126			168	n/a
11	M1(c1)	Conc. Pt. (lbs)	L	16-06-12	16-06-12	Top		102			130	n/a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	779 ft-lbs	4.7%	125%	4	06-06-12
Neg. Moment	-1155 ft-lbs	7.1%	125%	5	01-11-08
End Shear	576 lbs	7.5%	125%	4	01-00-12
Cont. Shear	689 lbs	9.0%	125%	5	00-11-08
Total Load Deflection	L/999 (0.022")	n/a	n/a	4	07-00-12
Live Load Deflection	L/999 (0.012")	n/a	n/a	312	07-02-04
Total Neg. Defl.	L/999 (-0.003")	n/a	n/a	4	13-10-15
Max Defl.	0.022"	n/a	n/a	4	07-00-12
Span / Depth	13.0				

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	29 lbs	0.6%	0.3%	Spruce-Pine-Fir
B1	Uplift	622 lbs			
B2	Column 5-1/2" x 3-1/2"	1508 lbs	10.8%	10.4%	Unspecified
B3	Column 5-1/2" x 3-1/2"	1255 lbs	9.0%	8.7%	Unspecified
B4	Wall/Plate 3-1/2" x 3-1/2"	256 lbs	4.9%	2.8%	Spruce-Pine-Fir

Cautions

Uplift of -622 lbs found at bearing B1.

RoofDropped Beams\FB1() (Dropped Beam)

Dry | 3 spans | No cant.

May 20, 2020 13:51:46

BC CALC® Member Report

Build 7493

Job name:

File name: 2000367A.mmdl

Address:

Description: RoofDropped Beams\FB1()

City, State, Zip:

Specifier:

Customer:

Designer:

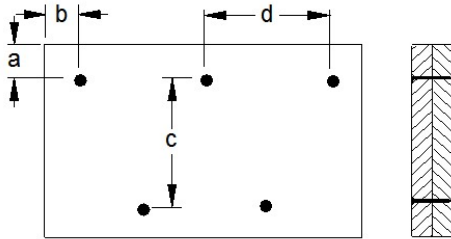
Code reports: ESR-1040

Company:

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 unbraced length of Top: 01-10-08, Bottom: 01-10-08.
- BC CALC® analysis is based on IBC 2012.
- Wind loads determined from building geometry were used in selected product's verification.
- Design based on Dry Service Condition.

Connection Diagram: Full Length of Member



a minimum = 2" c = 5-1/4"
 b minimum = 3" d = 24"

Connectors are: 3-1/4 in. Pneumatic Gun 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.

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

Roof\Dropped Beams\GDH(i19) (Dropped Beam)

BC CALC® Member Report

Dry | 1 span | No cant.

May 20, 2020 13:51:46

Build 7493

Job name:

File name: 2000367A.mmdl

Address:

Description: Roof\Dropped Beams\GDH(i19)

City, State, Zip:

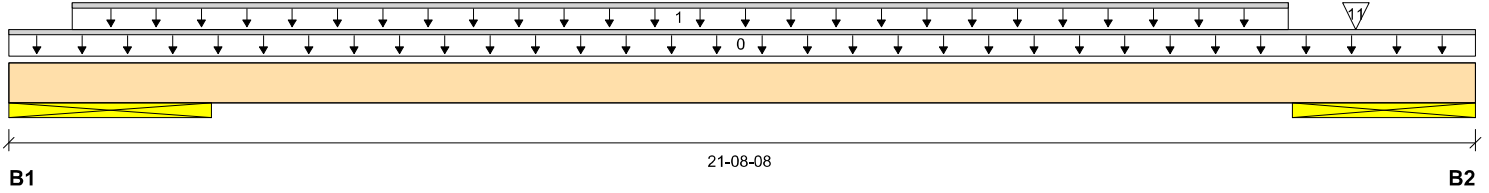
Specifier:

Customer:

Designer:

Code reports: ESR-1040

Company:



Total Horizontal Product Length = 21-08-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 36"		2891 / 0		1374 / 1950	2804 / 0
B2, 32-1/2"		2878 / 0		1383 / 1999	2811 / 0

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	100%	90%	115%	160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	21-08-08	Top		18				00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-11-04	18-11-04	Top		268			279	n\A
11	A(c1)	Conc. Pt. (lbs)	L	19-11-04	19-11-04	Top		557			600	n\A

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	17173 ft-lbs	44.1%	125%	1	11-11-04
End Shear	3425 lbs	23.1%	125%	1	03-11-14
Total Load Deflection	L/356 (0.544")	67.5%	n\A	1	10-11-04
Live Load Deflection	L/718 (0.27")	50.2%	n\A	116	10-11-04
Max Defl.	0.544"	54.4%	n\A	1	10-11-04
Span / Depth	16.3				
Conc. Load (B1)	1107 lbs	8.0%	100%		
Conc. Load (B2)	1157 lbs	8.4%	100%		

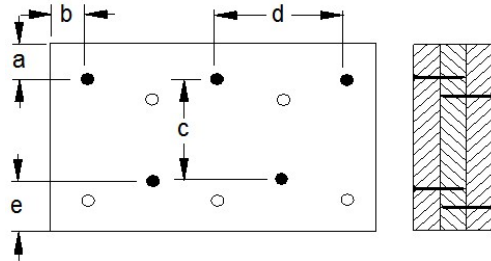
Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 36" x 5-1/4"	5695 lbs	4.2%	4.0%	Unspecified
B2	Wall/Plate 32-1/2" x 5-1/4"	5689 lbs	7.8%	4.4%	Spruce-Pine-Fir

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 unbraced length of Top: 01-10-08, Bottom: 01-10-08.
 BC CALC® analysis is based on IBC 2012.
 Wind loads determined from building geometry were used in selected product's verification.
 Design based on Dry Service Condition.

Connection Diagram: Full Length of Member



- a minimum = 2"
- b minimum = 3"
- c = 7-7/8"
- d = 24"
- e minimum = 3"

Nailing applies to both sides of the member
 Connectors are: 3-1/4 in. Pneumatic Gun 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.

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