

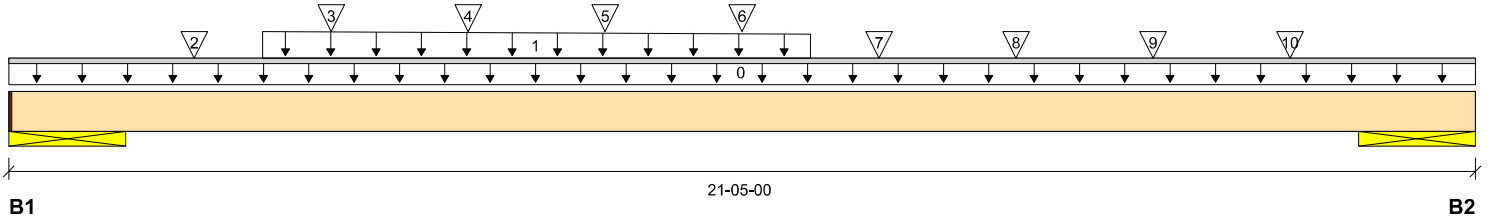
RoofDropped Beams\GDH-3(i21)

BC CALC® Member Report
 Build 7118
 Job name:
 Address:
 City, State, Zip:
 Customer:
 Code reports: ESR-1040

Dry | 1 span | No cant.

February 13, 2020 12:35:03

File name: 2000131A.mmdl
 Description: RoofDropped Beams\GDH-3(i21)
 Specifier:
 Designer:
 Company:



Total Horizontal Product Length = 21-05-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 20-1/2"		575 / 0		118 / 449	460 / 0
B2, 20-1/2"		575 / 0		118 / 449	459 / 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	21-05-00	Top		18				00-00-00
1	Smoothed Load	Trapezoidal (lb/ft)	L	03-08-08	11-08-08	Top					50	n/a
2	BE(c1)	Conc. Pt. (lbs)	L	02-08-08	02-08-08	Top		115			127	n/a
3	BE(c1)	Conc. Pt. (lbs)	L	04-08-08	04-08-08	Top		70				n/a
4	BE(c1)	Conc. Pt. (lbs)	L	06-08-08	06-08-08	Top		84				n/a
5	BE(c1)	Conc. Pt. (lbs)	L	08-08-08	08-08-08	Top		80				n/a
6	BE(c1)	Conc. Pt. (lbs)	L	10-08-08	10-08-08	Top		65				n/a
7	BE(c1)	Conc. Pt. (lbs)	L	12-08-08	12-08-08	Top		80			92	n/a
8	BE(c1)	Conc. Pt. (lbs)	L	14-08-08	14-08-08	Top		84			97	n/a
9	BE(c1)	Conc. Pt. (lbs)	L	16-08-08	16-08-08	Top		70			98	n/a
10	BE(c1)	Conc. Pt. (lbs)	L	18-08-08	18-08-08	Top		115			127	n/a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	4,351 ft-lbs	10.9%	125%	1	10-08-08
End Shear	986 lbs	6.7%	125%	1	02-08-06
Total Load Deflection	L/1,237 (0.176")	19.4%	n/a	1	10-08-08
Live Load Deflection	L/999 (0.08")	n/a	n/a	110	10-08-08
Max Defl.	0.176"	17.6%	n/a	1	10-08-08
Span / Depth	18.3				

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 20-1/2" x 5-1/4"	1,034 lbs	2.3%	1.3%	Spruce-Pine-Fir
B2	Wall/Plate 20-1/2" x 5-1/4"	1,034 lbs	2.3%	1.3%	Spruce-Pine-Fir

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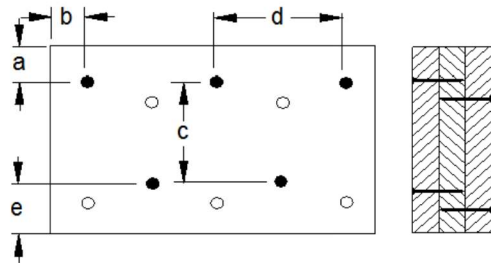
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Notes

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 2012.
 Wind loads determined from building geometry were used in selected product's verification.
 Design based on Dry Service Condition.
 Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.
 Nailing schedule applies to both sides of the member.
 Member has no side loads.

Connection Diagram: Full Length of Member



a minimum = 2" c = 6-7/8"
 b minimum = 3" d = 24"
 e minimum = 3"

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.
 Nailing schedule applies to both sides of the member.
 Member has no side loads.
 Connectors are: 16d Sinker 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®,