



RB01 (Roof Flush Beam)

Dry | 1 span | No cant.

September 9, 2024 15:58:46

BC CALC® Member Report

Build 8892

Job name: Mabus Hip

File name:

Address:

Description: Hip Beam

City, State, Zip:

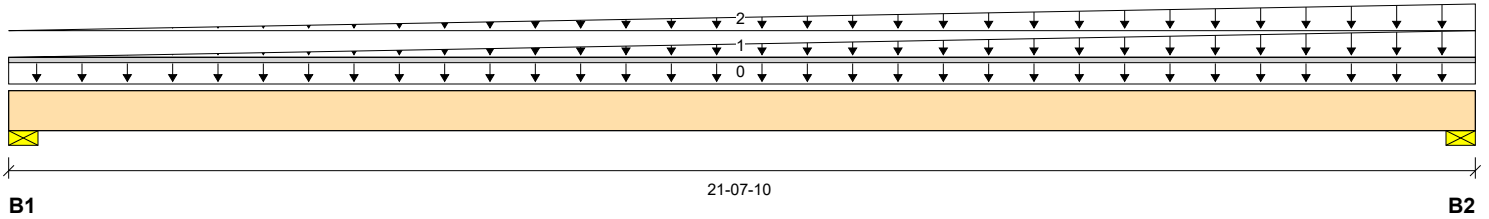
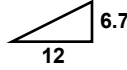
Specifier:

Customer:

Designer: Marvelia Antonio

Code reports: ESR-1040

Company: Builders First Source



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"		308 / 0	335 / 0		
B2, 3-1/2"		506 / 0	685 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Roof Live	Tributary
							100%	90%	115%	160%	125%	
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	21-07-10	Top	11					00-00-00
1	Back Load	Trapezoidal (lb/ft)	L	00-00-00	21-07-10	Back	0	0	0			n/a
2	Front Load	Trapezoidal (lb/ft)	L	00-00-00	21-07-10	Front	0	0	0			n/a
							26	52				

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	4837 ft-lbs	31.7%	115%	4	12-04-10
End Shear	1142 lbs	16.1%	115%	4	21-04-02
Total Load Deflection	L/276 (1.054")	65.2%	n/a	4	11-03-03
Live Load Deflection	L/497 (0.586")	48.3%	n/a	5	11-03-03
Max Defl.	1.054"	n/a	n/a	4	11-03-03
Span / Depth	27.5				

Bearing Supports

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	644 lbs	n/a	7.0%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	1191 lbs	n/a	13.0%	Unspecified

Slope and Cut Length

	Slope	Fascia Depth	Horiz. Length	Product Length
Plumb Cut with Bird's mouth seat cut	6.7/12	10-5/8"	21-07-10	25-02-08

Notes

Design meets Code minimum (L/180) Total load deflection criteria.  
 Design meets Code minimum (L/240) Live load deflection criteria.  
 Design based on Dry Service Condition.  
 BC CALC® analysis is based on IBC 2009.  
 Calculations assume member is fully braced.



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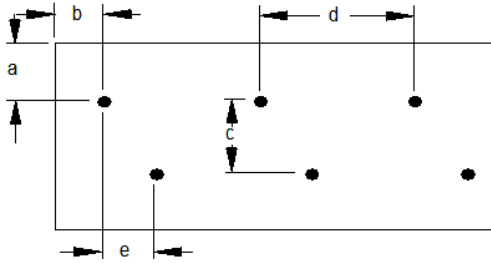
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**Connection Diagram: Full Length of Member**



a minimum = 1-1/2"

c = 6-1/4"

b minimum = 4"

d = 24"

e minimum = 1"

Calculated Side Load = 0.0 lb/ft

Connectors are: SDS 1/4 x 3-1/2

**Disclosure**

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