



RB04 (Roof Flush Beam)

Dry | 1 span | No cant.

April 26, 2023 15:55:51

BC CALC® Member Report

Build 16959

Job name: Hobbs

File name:

Address: Lee County

Description:

City, State, Zip:

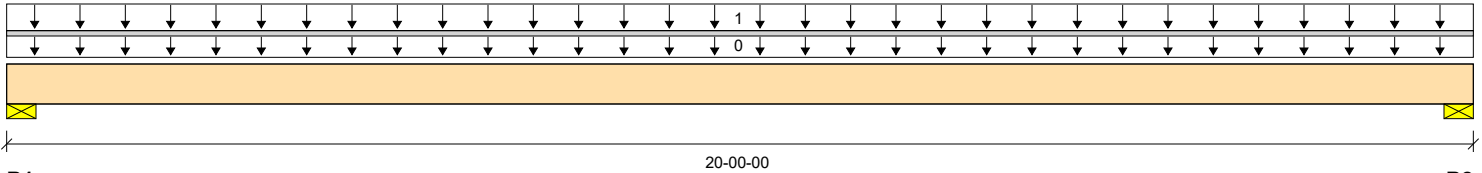
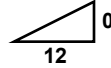
Specifier:

Customer: Better Home Improvements

Designer: BRENT DAVIS

Code reports: ESR-1040

Company: TBS



Total Horizontal Product Length = 20-00-00

Reaction Summary (Down / Uplift) (lbs)

| Bearing | Live | Dead | Snow | Wind | Roof Live |
|------------|------|----------|----------|------|-----------|
| B1, 3-1/2" | | 2582 / 0 | 2400 / 0 | | |
| B2, 3-1/2" | | 2582 / 0 | 2400 / 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 | 20-00-00 | Top | 18 | | | | | 00-00-00 |
| 1 | | Unf. Area (lb/ft²) | L | 00-00-00 | 20-00-00 | Front | 20 | 20 | | | | 12-00-00 |

Controls Summary

| | Value | % Allowable | Duration | Case | Location |
|-----------------------|----------------|-------------|----------|------|----------|
| Pos. Moment | 23783 ft-lbs | 44.3% | 115% | 4 | 10-00-00 |
| End Shear | 4090 lbs | 29.7% | 115% | 4 | 01-09-08 |
| Total Load Deflection | L/470 (0.499") | 38.3% | n/a | 4 | 10-00-00 |
| Live Load Deflection | L/975 (0.24") | 24.6% | n/a | 5 | 10-00-00 |
| Max Defl. | 0.499" | 49.9% | n/a | 4 | 10-00-00 |
| Span / Depth | 13.0 | | | | |

Bearing Supports

| | Dim. (LxW) | Value | % Allow Support | % Allow Member | Material |
|----|----------------------------|----------|-----------------|----------------|-------------|
| B1 | Wall/Plate 3-1/2" x 3-1/2" | 4982 lbs | n/a | 54.2% | Unspecified |
| B2 | Wall/Plate 3-1/2" x 3-1/2" | 4982 lbs | n/a | 54.2% | Unspecified |

Cautions

For roof members with slope (1/4)/12 or less final design must ensure that ponding instability will not occur.

For roof members with slope (1/2)/12 or less final design must account for Rain-on-Snow surcharge load.

Notes

- Design meets Code minimum (L/180) Total load deflection criteria.
- Design meets Code minimum (L/240) Live load deflection criteria.
- Design meets arbitrary (1") Maximum Total 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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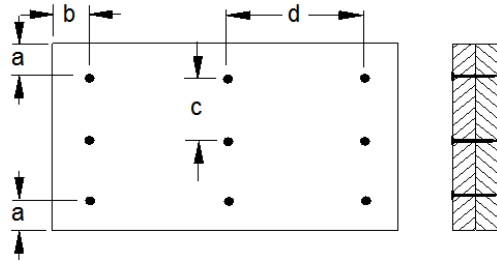
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Connection Diagram: Full Length of Member



a minimum = 2" c = 7"
b minimum = 3" d = 24"

Calculated Side Load = 480.0 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.

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