

**FB01 (Floor Beam)**

Dry | 1 span | No cant.

April 9, 2020 13:48:10

BC CALC® Member Report

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB01

City, State, Zip:

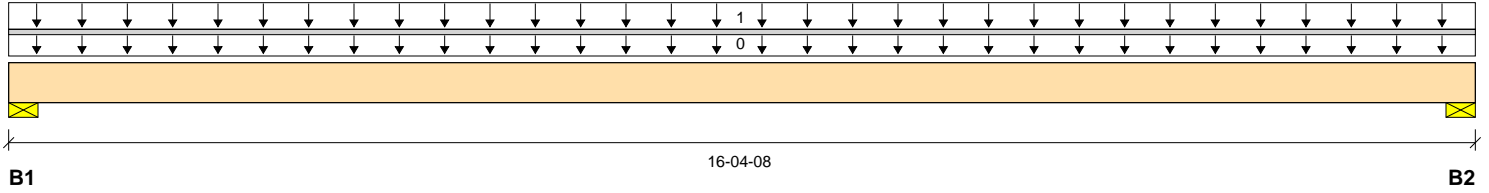
Specifier:

Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf



Total Horizontal Product Length = 16-04-08

**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	4258 / 0	1729 / 0			
B2, 3-1/2"	4257 / 0	1729 / 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	16-04-08	Top		16				00-00-00
1	Standard Load	Unf. Area (lb/ft²)	L	00-00-00	16-04-08	Top	40	15				13-00-00

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	23156 ft-lbs	62.0%	100%	1	08-02-04
End Shear	4799 lbs	45.1%	100%	1	01-07-08
Total Load Deflection	L/432 (0.442")	83.3%	n/a	1	08-02-04
Live Load Deflection	L/608 (0.314")	79.0%	n/a	2	08-02-04
Max Defl.	0.442"	44.2%	n/a	1	08-02-04
Span / Depth	11.9				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	5987 lbs	n/a	65.2%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	5987 lbs	n/a	65.2%	Unspecified

**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.  
 Calculations assume member is fully braced.  
 BC CALC® analysis is based on IBC 2018.  
 Design based on Dry Service Condition.

**User Notes**

This design is provided as a courtesy to the builder and does NOT guarantee a complete structural review of this project. Neither lateral nor seismic analysis has been considered. All bearing conditions, connections, spans, o.c. spacing, loading and product usages shall be verified by the builder and engineer of record. This design shall be reviewed, verified and approved by the builder, project engineer and local building department prior to ordering materials.

BC CALC® Member Report

Dry | 1 span | No cant.

April 9, 2020 13:48:10

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB01

City, State, Zip:

Specifier:

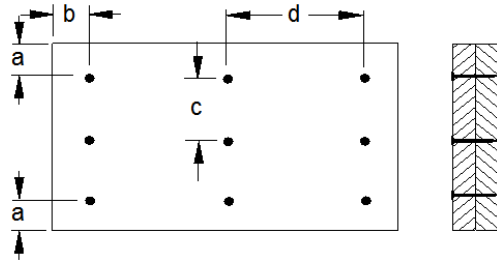
Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf

**Connection Diagram: Full Length of Member**



a minimum = 2"      c = 6"  
 b minimum = 3"      d = 24"

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

**Disclosure**

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**FB02 (Floor Beam)**

BC CALC® Member Report

Dry | 1 span | No cant.

April 9, 2020 13:48:10

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB02

City, State, Zip:

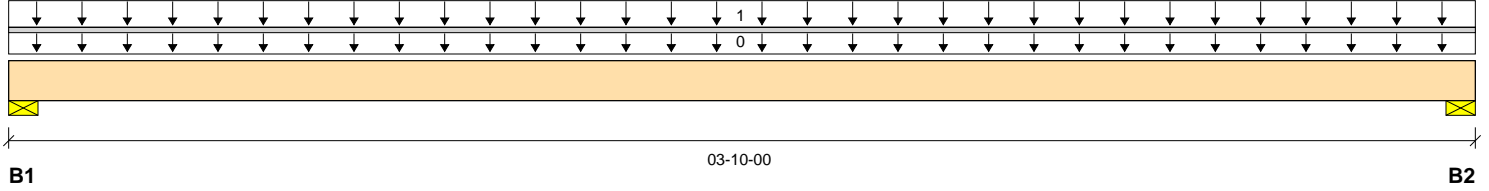
Specifier:

Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf



Total Horizontal Product Length = 03-10-00

**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	920 / 0	372 / 0			
B2, 3-1/2"	920 / 0	372 / 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	03-10-00	Top		14				00-00-00
1	Standard Load	Unf. Area (lb/ft²)	L	00-00-00	03-10-00	Top	40	15				12-00-00

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	960 ft-lbs	3.3%	100%	1	01-11-00
End Shear	309 lbs	3.3%	100%	1	01-05-08
Total Load Deflection	L/999 (0.001")	n/a	n/a	1	01-11-00
Live Load Deflection	L/999 (0.001")	n/a	n/a	2	01-11-00
Max Defl.	0.001"	n/a	n/a	1	01-11-00
Span / Depth	2.9				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	1292 lbs	n/a	14.1%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	1292 lbs	n/a	14.1%	Unspecified

**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.  
 Calculations assume member is fully braced.  
 BC CALC® analysis is based on IBC 2018.  
 Design based on Dry Service Condition.

**User Notes**

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**FB02 (Floor Beam)**

Dry | 1 span | No cant.

April 9, 2020 13:48:10

BC CALC® Member Report

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB02

City, State, Zip:

Specifier:

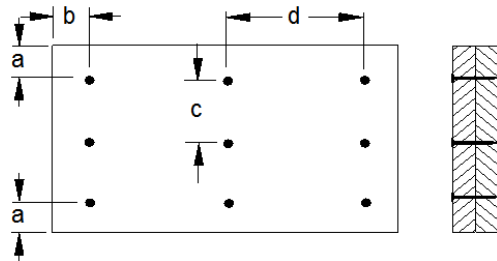
Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf

**Connection Diagram: Full Length of Member**



a minimum = 2"      c = 5"  
 b minimum = 3"      d = 24"

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

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**FB03 (Floor Beam)**

BC CALC® Member Report

Dry | 1 span | No cant.

April 9, 2020 13:48:10

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB03

City, State, Zip:

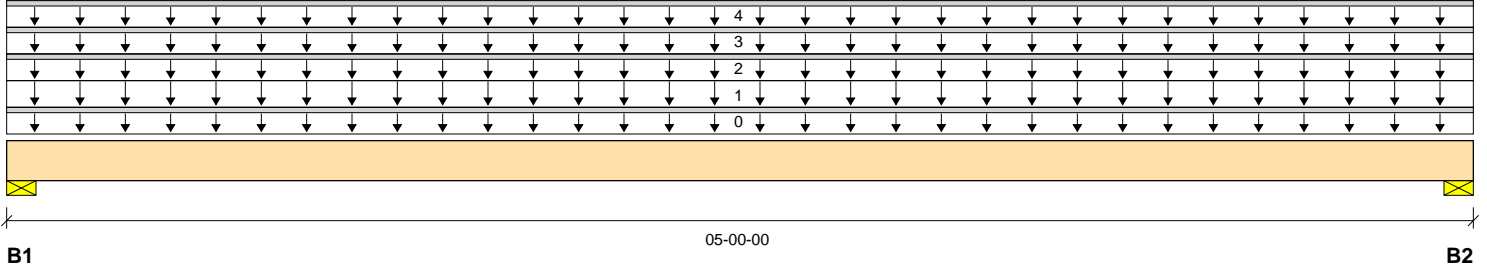
Specifier:

Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf



**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	750 / 0	1367 / 0	800 / 0		
B2, 3-1/2"	750 / 0	1367 / 0	800 / 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	05-00-00	Top		14				00-00-00
1	Standard Load	Unf. Area (lb/ft²)	L	00-00-00	05-00-00	Top	40	15				07-06-00
2		Unf. Lin. (lb/ft)	L	00-00-00	05-00-00	Back		40	40			n\A
3		Unf. Lin. (lb/ft)	L	00-00-00	05-00-00	Top		100				n\A
4		Unf. Lin. (lb/ft)	L	00-00-00	05-00-00	Top		280	280			n\A

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	2608 ft-lbs	7.8%	115%	3	02-06-00
End Shear	1054 lbs	9.8%	115%	3	01-05-08
Total Load Deflection	L/999 (0.006")	n\A	n\A	3	02-06-00
Live Load Deflection	L/999 (0.003")	n\A	n\A	6	02-06-00
Max Defl.	0.006"	n\A	n\A	3	02-06-00
Span / Depth	3.9				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	2529 lbs	n\A	27.5%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	2529 lbs	n\A	27.5%	Unspecified

**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.  
 Calculations assume member is fully braced.  
 BC CALC® analysis is based on IBC 2018.  
 Design based on Dry Service Condition.

**User Notes**

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**FB03 (Floor Beam)**

Dry | 1 span | No cant.

April 9, 2020 13:48:10

BC CALC® Member Report

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB03

City, State, Zip:

Specifier:

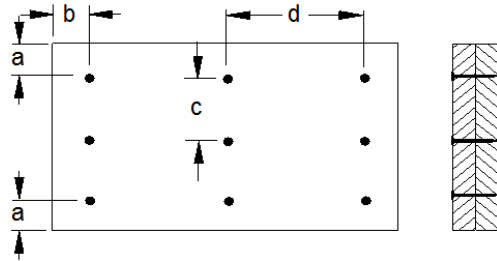
Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf

**Connection Diagram: Full Length of Member**



a minimum = 2"      c = 5"  
 b minimum = 3"      d = 24"

Calculated Side Load = 80.0 lb/ft  
 Connectors are: 3-1/4 in. Pneumatic Gun Nails

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**FB04 (Floor Beam)**

BC CALC® Member Report

Dry | 1 span | No cant.

April 9, 2020 13:48:10

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB04

City, State, Zip:

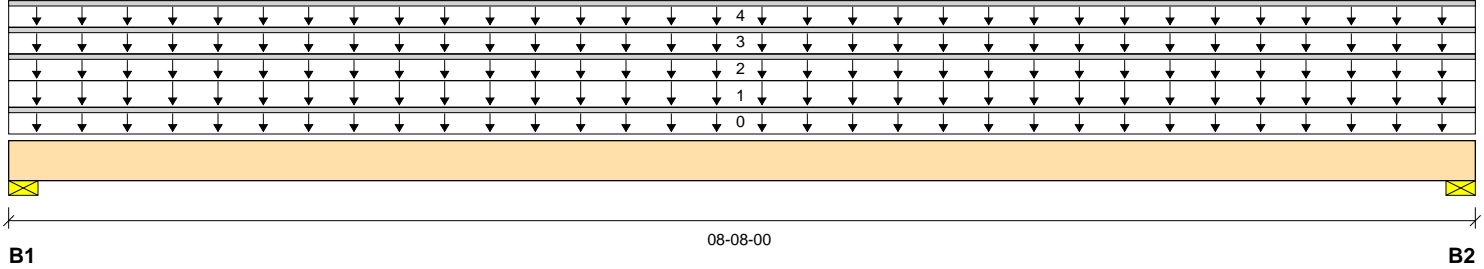
Specifier:

Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf



**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	1300 / 0	2369 / 0	1387 / 0		
B2, 3-1/2"	1300 / 0	2369 / 0	1387 / 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	08-08-00	Top		14				00-00-00
1	Standard Load	Unf. Area (lb/ft²)	L	00-00-00	08-08-00	Top	40	15				07-06-00
2		Unf. Lin. (lb/ft)	L	00-00-00	08-08-00	Top		100				n\A
3		Unf. Lin. (lb/ft)	L	00-00-00	08-08-00	Top		40	40			n\A
4		Unf. Lin. (lb/ft)	L	00-00-00	08-08-00	Top		280	280			n\A

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	8521 ft-lbs	25.5%	115%	3	04-04-00
End Shear	2909 lbs	27.2%	115%	3	01-05-08
Total Load Deflection	L/999 (0.065")	n\A	n\A	3	04-04-00
Live Load Deflection	L/999 (0.03")	n\A	n\A	6	04-04-00
Max Defl.	0.065"	n\A	n\A	3	04-04-00
Span / Depth	7.0				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	4384 lbs	n\A	47.7%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	4384 lbs	n\A	47.7%	Unspecified

**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.  
 Calculations assume member is fully braced.  
 BC CALC® analysis is based on IBC 2018.  
 Design based on Dry Service Condition.

**User Notes**

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**FB04 (Floor Beam)**

Dry | 1 span | No cant.

April 9, 2020 13:48:10

BC CALC® Member Report

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB04

City, State, Zip:

Specifier:

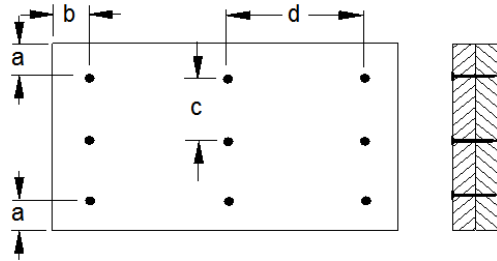
Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf

**Connection Diagram: Full Length of Member**



a minimum = 2"      c = 5"  
 b minimum = 3"      d = 24"

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

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**FB05 (Floor Beam)**

Dry | 1 span | No cant.

April 9, 2020 13:48:10

BC CALC® Member Report

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB05

City, State, Zip:

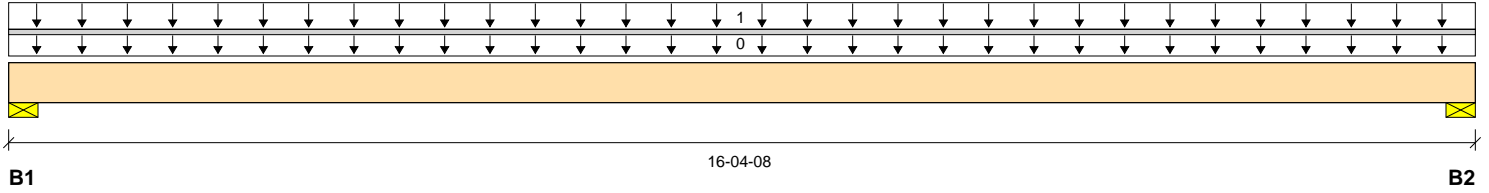
Specifier:

Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf



Total Horizontal Product Length = 16-04-08

**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	4258 / 0	1771 / 0			
B2, 3-1/2"	4257 / 0	1771 / 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	16-04-08	Top		21				00-00-00
1	Standard Load	Unf. Area (lb/ft²)	L	00-00-00	16-04-08	Top	40	15				13-00-00

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	23316 ft-lbs	53.5%	100%	1	08-02-04
End Shear	4955 lbs	35.5%	100%	1	01-05-08
Total Load Deflection	L/431 (0.443")	83.5%	n/a	1	08-02-04
Live Load Deflection	L/611 (0.313")	78.6%	n/a	2	08-02-04
Max Defl.	0.443"	44.3%	n/a	1	08-02-04
Span / Depth	13.6				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 5-1/4"	6028 lbs	n/a	43.7%	Unspecified
B2	Wall/Plate 3-1/2" x 5-1/4"	6028 lbs	n/a	43.7%	Unspecified

**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.  
 Calculations assume member is fully braced.  
 BC CALC® analysis is based on IBC 2018.  
 Design based on Dry Service Condition.

**User Notes**

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**FB05 (Floor Beam)**

Dry | 1 span | No cant.

April 9, 2020 13:48:10

BC CALC® Member Report

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB05

City, State, Zip:

Specifier:

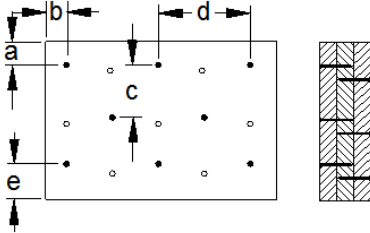
Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf

**Connection Diagram: Full Length of Member**



a minimum = 2"

c = 5"

b minimum = 3"

d = 24"

e minimum = 3"

Nailing applies to both sides of the member

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

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**FB06 (Floor Beam)**

BC CALC® Member Report

Dry | 1 span | No cant.

April 9, 2020 13:48:10

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB06

City, State, Zip:

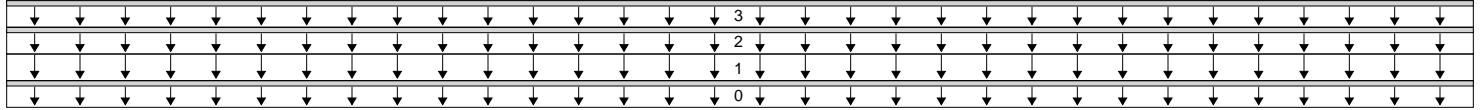
Specifier:

Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf



16-08-00

B1

B2

Total Horizontal Product Length = 16-08-00

**Reaction Summary (Down / Uplift) (lbs)**

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	667 / 0	2285 / 0	667 / 0		
B2, 3-1/2"	667 / 0	2285 / 0	667 / 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	16-08-00	Top		14				00-00-00
1	Standard Load	Unf. Area (lb/ft <sup>2</sup> )	L	00-00-00	16-08-00	Top	40	15				02-00-00
2		Unf. Lin. (lb/ft)	L	00-00-00	16-08-00	Top		150				n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	16-08-00	Top		80	80			n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	11631 ft-lbs	40.1%	100%	1	08-04-00
End Shear	2435 lbs	26.2%	100%	1	01-05-08
Total Load Deflection	L/509 (0.382")	70.8%	n/a	3	08-04-00
Live Load Deflection	L/999 (0.116")	n/a	n/a	6	08-04-00
Max Defl.	0.382"	38.2%	n/a	3	08-04-00
Span / Depth	13.9				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	3285 lbs	n/a	35.8%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	3285 lbs	n/a	35.8%	Unspecified

**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.  
 Calculations assume member is fully braced.  
 BC CALC® analysis is based on IBC 2018.  
 Design based on Dry Service Condition.

**User Notes**

This design is provided as a courtesy to the builder and does NOT guarantee a complete structural review of this project. Neither lateral nor seismic analysis has been considered. All bearing conditions, connections, spans, o.c. spacing, loading and product usages shall be verified by the builder and engineer of record. This design shall be reviewed, verified and approved by the builder, project engineer and local building department prior to ordering materials.

**FB06 (Floor Beam)**

Dry | 1 span | No cant.

April 9, 2020 13:48:10

BC CALC® Member Report

Build 7555

Job name: JOB#09-2020-020

File name: P20-04004

Address:

Description: BEAM FB06

City, State, Zip:

Specifier:

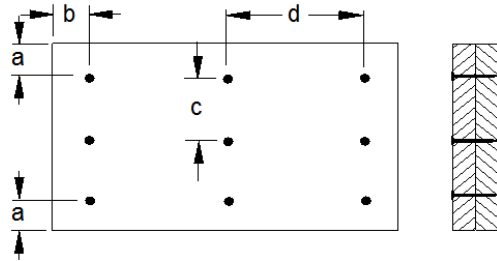
Builder: VALUE BUILD CONS.

Designer: Mark Lovelace

Code reports: ESR-1040

Company: LongLeaf

**Connection Diagram: Full Length of Member**



a minimum = 2"      c = 5"  
 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.

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