

SFD1807.0038

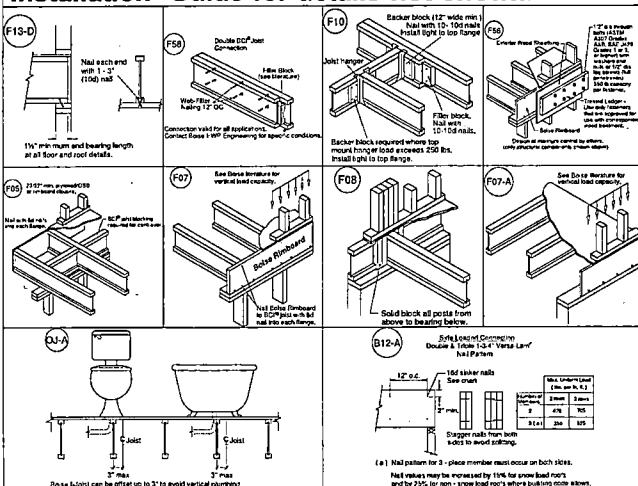
### General Notes:

- 1.) "READ" Boise Installation Guide before installation of products.
- 2.) All I-Joist, LVL beams, and Rim Board must be field cut to length.
- 3.) Contractor must verify and approve the material list.
- 4.) I-Joist may be moved 3" out of its own o.c. spacing, up to 19.2" o.c., to allow for plumbing drops.
- 5.) This layout, is a placement plan and, was designed in accordance with the original design of the structure (unless otherwise noted). See original plans for additional structural notes.
- 6.) Ceramic tile floors should be supported per APA standards. Additional joists may be required.
- 7.) HVAC & PLUMBER, "Review" Boise Installation Guide (Joist Hole Location & Sizing) Chart "BEFORE" cutting the I-joist product.
- 8.) "Blocking", are Random Length I-joist, Labeled as such.

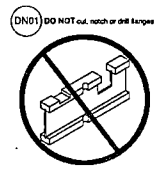
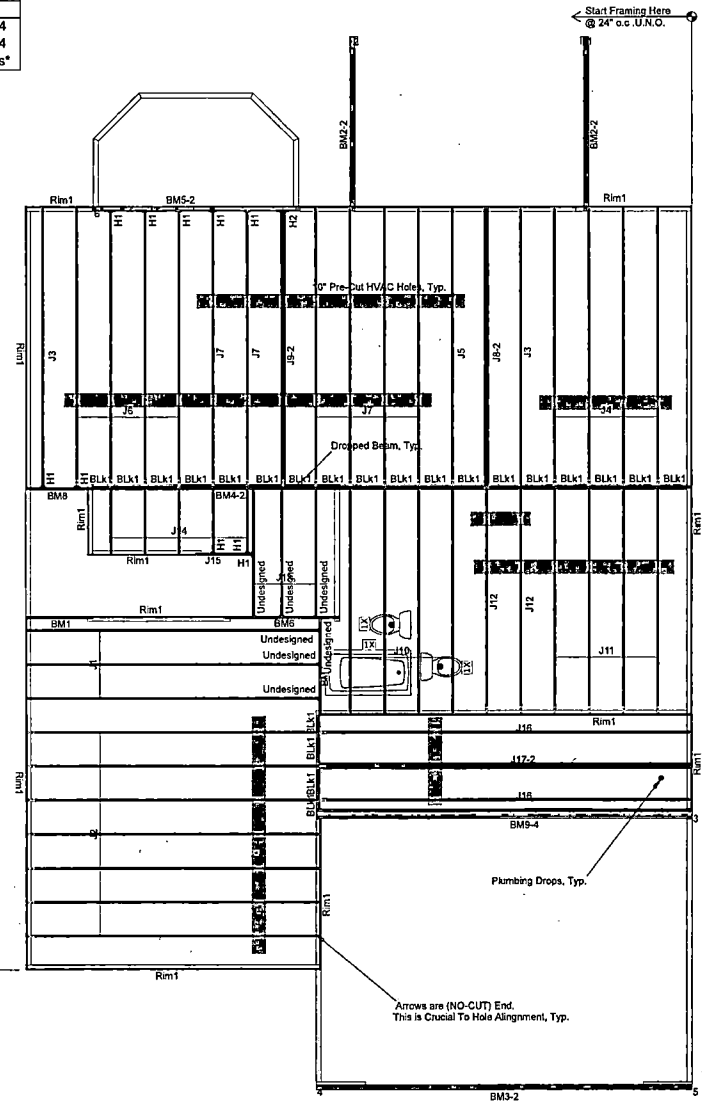
Connector Summary			
PlotID	Qty	Manuf	Product
H1	10	Simpson	IUS 1.81/14
H2	1	Simpson	IUS 3.56/14
*	33		8" Bolt Sets*

Products				
PlotID	Length	Product	Piles	Net Qty
BM1	4' 0"	14" BCI@ 4500s-1.8	1	1
BM9-4	22' 0"	1-3/4" x 16" VERSA-LAM@ 2.0 3100 SP	4	4
BM8	4' 0"	1-3/4" x 14" VERSA-LAM@ 2.0 3100 SP	1	1
BM7	6' 0"	1-3/4" x 14" VERSA-LAM@ 2.0 3100 SP	1	1
BM6	8' 0"	1-3/4" x 14" VERSA-LAM@ 2.0 3100 SP	1	1
BM5-2	14' 0"	1-3/4" x 14" VERSA-LAM@ 2.0 3100 SP	2	2
BM4-2	10' 0"	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
BM3-2	22' 0"	1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP	2	2
BM2-2	12' 0"	1-3/4" x 9-1/4" VERSA-LAM@ 2.0 3100 SP	2	4
J15	4' 0"	14" BCI@ 4500s-1.8	1	1
J14	5' 0"	14" BCI@ 4500s-1.8	1	5
J13	8' 0"	14" BCI@ 4500s-1.8	1	3
J10	14' 0"	14" BCI@ 4500s-1.8	1	4
J11	14' 0"	14" BCI@ 4500s-1.8	1	4
J12	14' 0"	14" BCI@ 4500s-1.8	1	2
J3	17' 0"	14" BCI@ 4500s-1.8	1	2
J4	17' 0"	14" BCI@ 4500s-1.8	1	4
J5	17' 0"	14" BCI@ 4500s-1.8	1	1
J6	17' 0"	14" BCI@ 4500s-1.8	1	4
J7	17' 0"	14" BCI@ 4500s-1.8	1	6
J8-2	17' 0"	14" BCI@ 4500s-1.8	2	2
J9-2	17' 0"	14" BCI@ 4500s-1.8	2	2
J1	18' 0"	14" BCI@ 4500s-1.8	1	3
J2	18' 0"	14" BCI@ 4500s-1.8	1	7
J16	22' 0"	14" BCI@ 60s-2.0	1	2
J17-2	22' 0"	14" BCI@ 60s-2.0	2	2
Rim1	12' 0"	1" x 14" BC RIM BOARD OSB	1	14
BLK1	38' 0"	14" BCI@ 4500s-1.8	1	1

Note: Refer to current Boise Cascade Installation Guide for details not shown.



### I-Joist Plot ID # & Length on Top of Flange



**2ND FLOOR LAYOUT**

We Recommend Locating Plumbing Drops & Moving Joist Accordingly Before Installation

Revisions:	BY:
Caviness Land Dev. Lot 307 Forest Oaks Model CL-3187 wCP	
Scale: 1/4" = 1'-0"	
Date: 7/20/2018	
By: KOG	
DWG:	
Sheet: 1 of 1	

200 Emmett Drive, Dunn, N.C. 28334 (910) 892 + 8400



BC CALC® Member Report

Build 6621

Job name:

File name: Lot 307 Forest Oaks.mmdl

Address:

Description: 2nd LEVEL Dropped Beams\BM2-2(i683)

City, State, Zip: NC

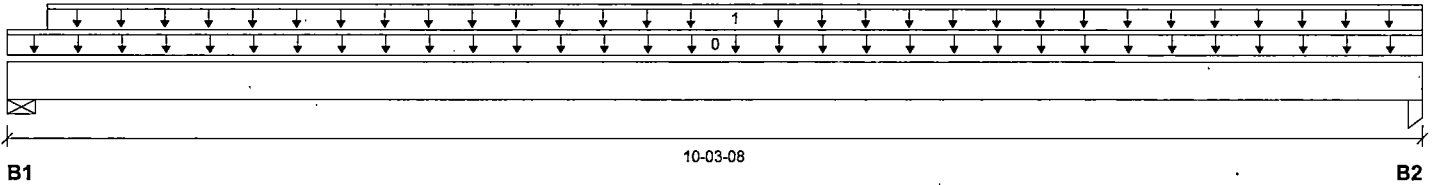
Specifier:

Customer: Caviness Land Development

Designer:

Code reports: ESR-1040

Company: Cav Land



Total Horizontal Product Length = 10-03-08

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

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"		620 / 0			573 / 0
B2, 5-1/2"		677 / 0			627 / 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	10-03-08	Top		9				00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-03-08	10-03-08	Top		120			120	na

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	2,913 ft-lbs	28.2%	125%	1	05-00-12
End Shear	998 lbs	13.0%	125%	1	01-00-12
Total Load Deflection	L/999 (0.106")	na	na	1	05-00-12
Live Load Deflection	L/999 (0.051")	na	na	2	05-00-12
Max Defl.	0.106"	na	na	1	05-00-12
Span / Depth	12.5				

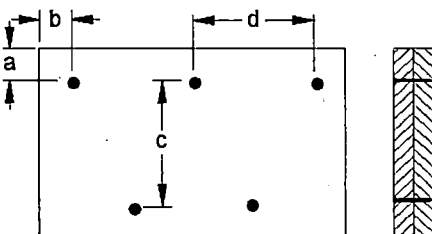
**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	1,193 lbs	13.4%	13.0%	Unspecified
B2	Column 5-1/2" x 3-1/2"	1,304 lbs	9.3%	9.0%	Unspecified

**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: 10-00-00, Bottom: 10-00-00.
- BC CALC® analysis is based on IBC 2012.
- Design based on Dry Service Condition.
- Member has no side loads.

**Connection Diagram: Full Length of Member**





**Double 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP**  
**2nd LEVEL\Dropped Beams\BM2-2(i683)**

**PASSED**

BC CALC® Member Report  
Build 6621

Dry | 1 span | No cant.

August 15, 2018 15:27:49

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Dropped Beams\BM2-2(i683)  
Specifier:  
Designer:  
Company: Cav Land

**Connection Diagram: Full Length of Member**

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

Member has no side loads.  
Connectors are: 16d Sinker Nails

**Disclosure**

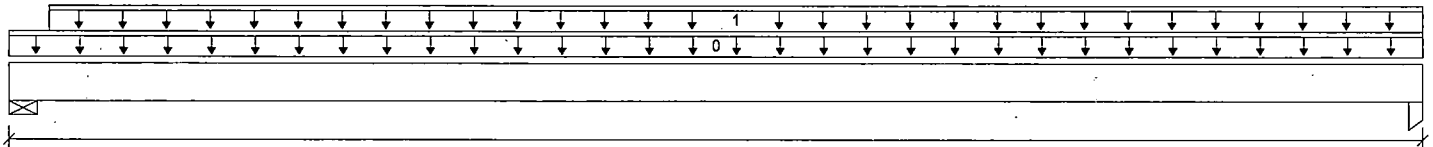
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BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Dropped Beams\BM2-2(i683)  
Specifier:  
Designer:  
Company: Cav Land



B1 B2  
Total Horizontal Product Length = 10-03-08

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

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"		620 / 0			573 / 0
B2, 5-1/2"		677 / 0			627 / 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	10-03-08	Top	9					00-00-00
1	Roof Truss	Unf. Lin. (lb/ft)	L	00-03-08	10-03-08	Top	120				120	n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	2,913 ft-lbs	28.2%	125%	1	05-00-12
End Shear	997 lbs	13.0%	125%	1	01-00-12
Total Load Deflection	L/999 (0.106")	n/a	n/a	1	05-00-12
Live Load Deflection	L/999 (0.051")	n/a	n/a	2	05-00-12
Max Defl.	0.106"	n/a	n/a	1	05-00-12
Span / Depth	12.5				

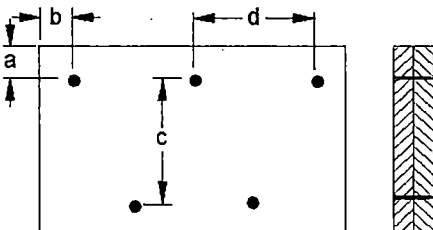
**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	1,193 lbs	13.4%	13.0%	Unspecified
B2	Column 5-1/2" x 3-1/2"	1,304 lbs	9.3%	9.0%	Unspecified

**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: 10-00-00, Bottom: 10-00-00.  
 BC CALC® analysis is based on IBC 2012.  
 Design based on Dry Service Condition.  
 Member has no side loads.

**Connection Diagram: Full Length of Member**





# Double 1-3/4" x 9-1/4" VERSA-LAM® 2.0 3100 SP

**PASSED**

## 2nd LEVEL\Dropped Beams\BM2-2(i683) - 01

Dry | 1 span | No cant.

August 15, 2018 15:27:49

BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Dropped Beams\BM2-2(i683)  
Specifier:  
Designer:  
Company: Cav Land

### Connection Diagram: Full Length of Member

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

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.

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**Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP**

**PASSED**

**2nd LEVEL\Dropped Beams\BM3-2(i696)**

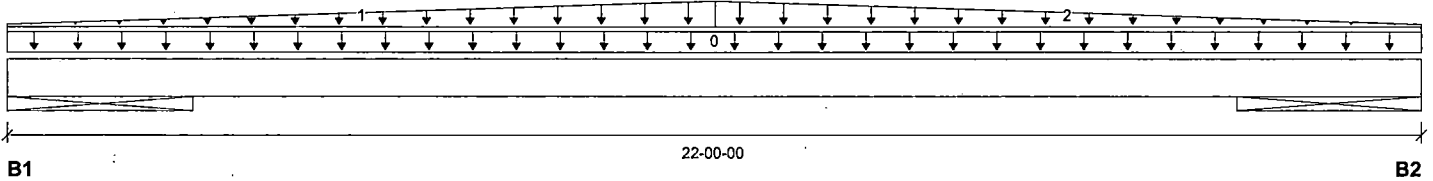
Dry | 1 span | No cant.

August 15, 2018 15:27:49

BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Dropped Beams\BM3-2(i696)  
Specifier:  
Designer:  
Company: Cav Land



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

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 34-1/2"		737 / 0			
B2, 34-1/2"		737 / 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	22-00-00	Top		12				00-00-00
1	Gable Wall	Trapezoidal (lb/ft)	L	00-00-00		Top		10				n/a
2	Gable Wall	Trapezoidal (lb/ft)	L	11-00-00	22-00-00	Top		100				n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	3,007 ft-lbs	47.5%	90%	0	11-00-00
End Shear	628 lbs	8.8%	90%	0	03-10-06
Total Load Deflection	L/1,349 (0.146")	17.8%	n/a	0	11-00-00
Max Defl.	0.146"	14.6%	n/a	0	11-00-00
Span / Depth	16.5				
Dist. Load (B1)	33.52 lb/ft	0.1%	90%		
Dist. Load (B2)	33.52 lb/ft	0.1%	90%		

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 34-1/2" x 3-1/2"	737 lbs	0.8%	0.8%	Unspecified
B2	Wall/Plate 34-1/2" x 3-1/2"	737 lbs	0.8%	0.8%	Unspecified

**Notes**

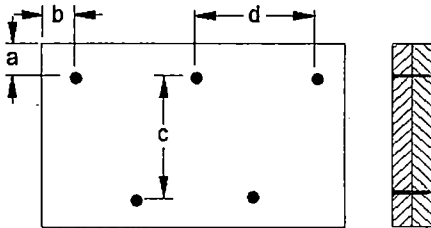
Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets arbitrary (1") Maximum Total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume unbraced length of Top: 16-03-00, Bottom: 16-03-00.  
 BC CALC® analysis is based on IBC 2012.  
 Design based on Dry Service Condition.  
 Member has no side loads.

BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Dropped Beams\BM3-2(i696)  
Specifier:  
Designer:  
Company: Cav Land

**Connection Diagram: Full Length of Member**



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

Member has no side loads.  
Connectors are: 16d Sinker Nails

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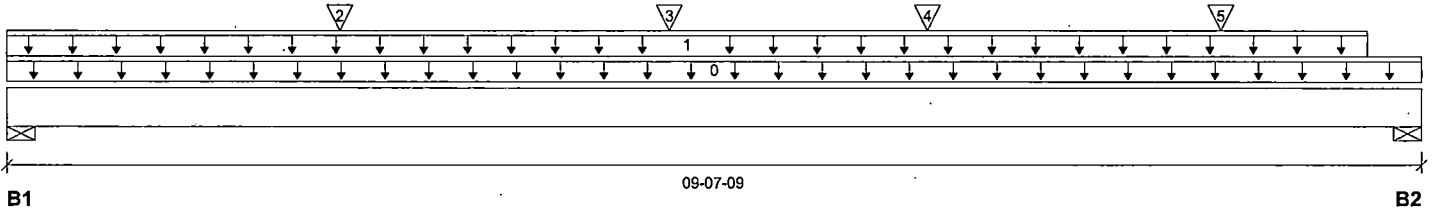
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BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Dropped Beams\BM4-2(i691)  
Specifier:  
Designer:  
Company: Cav Land



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

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	2,407 / 0	659 / 0			
B2, 3-1/2"	2,071 / 0	576 / 0			

**Load Summary**

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Roof Live	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	09-07-09	Top		12				00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-00-00	09-03-02	Top	370	92				n/a
2	J14(i633)	Conc. Pt. (lbs)	L	02-03-02	02-03-02	Top	158	39				n/a
3	-	Conc. Pt. (lbs)	L	04-06-00	04-06-00	Top	307	76				n/a
4	J13(i626)	Conc. Pt. (lbs)	L	06-03-02	06-03-02	Top	282	71				n/a
5	J13(i588)	Conc. Pt. (lbs)	L	08-03-02	08-03-02	Top	307	77				n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	6,198 ft-lbs	29.2%	100%	1	04-07-04
End Shear	2,631 lbs	33.3%	100%	1	08-04-03
Total Load Deflection	L/999 (0.095")	n/a	n/a	1	04-09-12
Live Load Deflection	L/999 (0.074")	n/a	n/a	2	04-09-12
Max Defl.	0.095"	n/a	n/a	1	04-09-12
Span / Depth	9.3				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 3-1/2"	3,067 lbs	34.5%	33.4%	Unspecified
B2	Wall/Plate 3-1/2" x 3-1/2"	2,646 lbs	29.8%	28.8%	Unspecified

**Notes**

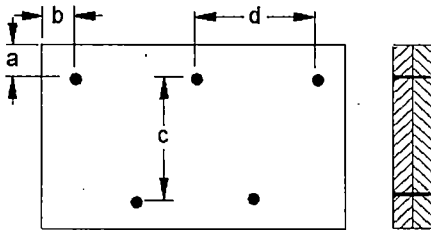
Design meets Code minimum (L/240) Total load deflection criteria.  
 Design meets Code minimum (L/360) Live load deflection criteria.  
 Design meets arbitrary (1") Maximum Total load deflection criteria.  
 Design meets arbitrary (0.75") Maximum live load deflection criteria.  
 Calculations assume unbraced length of Top: 00-03-04, Bottom: 00-03-04.  
 BC CALC® analysis is based on IBC 2012.  
 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.  
 Member has no side loads.

BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Dropped Beams\BM4-2(i691)  
Specifier:  
Designer:  
Company: Cav Land

**Connection Diagram: Full Length of Member**



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

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.

Member has no side loads.  
Connectors are: 16d Sinker Nails

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**2nd LEVEL\Flush Beams\BM5-2(i679)**

Dry | 1 span | No cant.

August 15, 2018 15:27:49

BC CALC® Member Report

Build 6621

Job name:

File name: Lot 307 Forest Oaks.mmdl

Address:

Description: 2nd LEVEL\Flush Beams\BM5-2(i679)

City, State, Zip: NC

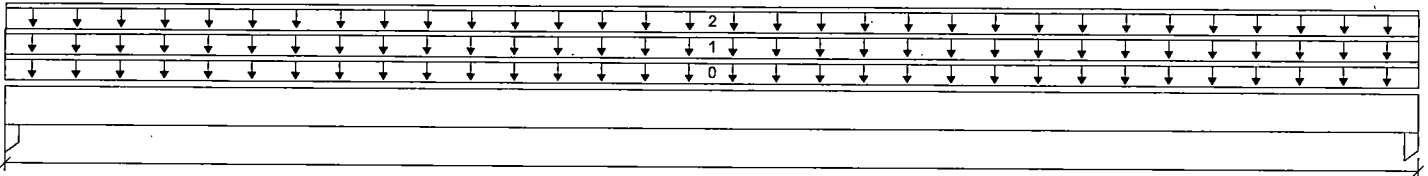
Specifier:

Customer: Caviness Land Development

Designer:

Code reports: ESR-1040

Company: Cav Land



B1

12-00-01

B2

Total Horizontal Product Length = 12-00-01

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

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	2,013 / 0	3,470 / 0	2,881 / 0		
B2, 3-1/2"	2,032 / 0	3,474 / 0	2,881 / 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	12-00-01	Top		14				00-00-00
1	Roof Truss	Unf. Lin. (lb/ft)	L	00-00-00	12-00-01	Top		480	480			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	00-00-01	12-00-01	Top	337	84				n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	19,821 ft-lbs	59.4%	115%	7	06-00-01
End Shear	5,635 lbs	52.6%	115%	7	01-05-08
Total Load Deflection	L/465 (0.298")	51.6%	n/a	7	06-00-01
Live Load Deflection	L/903 (0.153")	39.9%	n/a	18	06-00-01
Max Defl.	0.298"	29.8%	n/a	7	06-00-01
Span / Depth	9.9				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Column 3-1/2" x 3-1/2"	7,141 lbs	80.4%	77.7%	Unspecified
B2	Column 3-1/2" x 3-1/2"	7,159 lbs	80.6%	77.9%	Unspecified

**Notes**

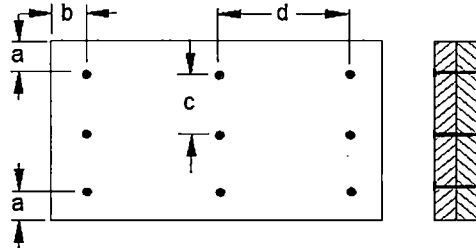
- Design meets Code minimum (L/240) Total load deflection criteria.
- Design meets Code minimum (L/360) Live load deflection criteria.
- Design meets arbitrary (1") Maximum Total load deflection criteria.
- Design meets arbitrary (0.75") Maximum live load deflection criteria.
- Calculations assume member is fully braced.
- BC CALC® analysis is based on IBC 2012.
- Unbalanced snow 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.

BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Flush Beams\BM5-2(i679)  
Specifier:  
Designer:  
Company: Cav Land

**Connection Diagram: Full Length of Member**



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

Calculated Side Load = 421.1 lb/ft  
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.  
Connectors are: 16d Common Nails

**Disclosure**

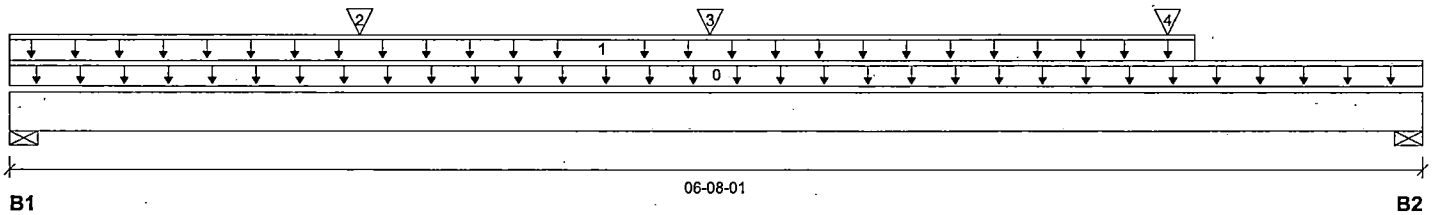
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BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Flush Beams\BM6(i714)  
Specifier:  
Designer:  
Company: Cav Land



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

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	542 / 0	162 / 0			
B2, 3-1/2"	1,218 / 0	344 / 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	06-08-01	Top		7				00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	05-07-01	Top	17	4				n/a
2	J13(i622)	Conc. Pt. (lbs)	L	01-07-12	01-07-12	Top	208	52				n/a
3	J13(i626)	Conc. Pt. (lbs)	L	03-03-09	03-03-09	Top	279	70				n/a
4	-	Conc. Pt. (lbs)	L	05-05-09	05-05-09	Top	1,180	314				n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1,581 ft-lbs	10.9%	100%	1	03-05-00
End Shear	1,231 lbs	26.4%	100%	1	05-02-09
Total Load Deflection	L/999 (0.014")	n/a	n/a	1	03-05-12
Live Load Deflection	L/999 (0.011")	n/a	n/a	2	03-05-12
Max Defl.	0.014"	n/a	n/a	1	03-05-12
Span / Depth	5.3				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 3-1/2" x 1-3/4"	704 lbs	27.1%	15.3%	Unspecified
B2	Wall/Plate 3-1/2" x 1-3/4"	1,562 lbs	60.0%	34.0%	Unspecified

**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.  
 Design based on Dry Service Condition.

**Disclosure**

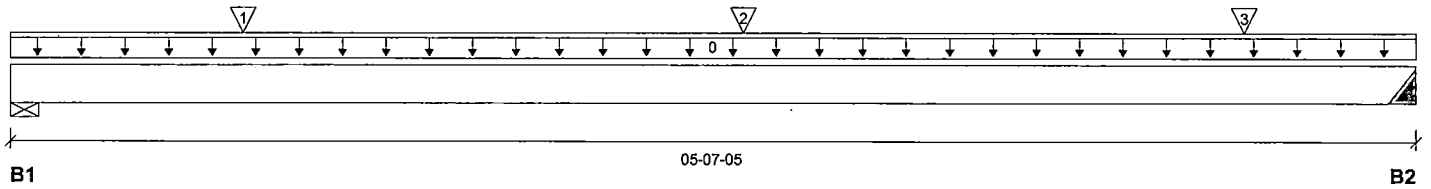
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BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Flush Beams\BM7(i711)  
Specifier:  
Designer:  
Company: Cav Land



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

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-1/2"	974 / 0	264 / 0			
B2, 2"	892 / 0	243 / 0			

**Load Summary**

Tag	Description	Load Type	Ref.	Start	End	Loc.	100%	90%	115%	160%	125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	05-07-05	Top		7				00-00-00
1	J1(i719)	Conc. Pt. (lbs)	L	00-11-01	00-11-01	Top	683	171				n/a
2	J1(i447)	Conc. Pt. (lbs)	L	02-11-01	02-11-01	Top	689	172				n/a
3	J1(i494)	Conc. Pt. (lbs)	L	04-11-01	04-11-01	Top	488	122				n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1,682 ft-lbs	11.6%	100%	1	02-11-01
End Shear	896 lbs	19.2%	100%	1	01-04-08
Total Load Deflection	L/999 (0.01")	n/a	n/a	1	02-09-15
Live Load Deflection	L/999 (0.008")	n/a	n/a	2	02-09-15
Max Defl.	0.01"	n/a	n/a	1	02-09-15
Span / Depth	4.6				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 2-1/2" x 1-3/4"	1,237 lbs	66.5%	37.7%	Unspecified
B2	Hanger 2" x 1-3/4"	1,134 lbs	n/a	43.2%	Hanger

**Cautions**

Hanger model Hanger was not found. Hanger has not been analyzed for adequate capacity.

**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.  
 Hanger Manufacturer: Unassigned  
 BC CALC® analysis is based on IBC 2012.  
 Design based on Dry Service Condition.

**Disclosure**

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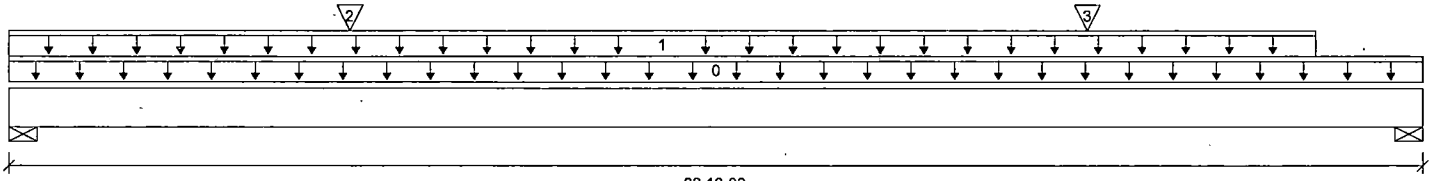
BC CALC® Member Report  
Build 6621

Dry | 1 span | No cant.

August 15, 2018 15:27:49

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Flush Beams\BM8(i678)  
Specifier:  
Designer:  
Company: Cav Land



Total Horizontal Product Length = 03-10-00

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

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 2-1/2"	520 / 0	143 / 0			
B2, 3-1/2"	645 / 0	175 / 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	03-10-00	Top		7				00-00-00
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-06-08	Top		1				n/a
2	J3(i677)	Conc. Pt. (lbs)	L	00-11-01	00-11-01	Top	496	124				n/a
3	J6(i676)	Conc. Pt. (lbs)	L	02-11-01	02-11-01	Top	657	164				n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	554 ft-lbs	3.8%	100%	1	02-11-01
End Shear	416 lbs	8.9%	100%	1	02-04-08
Total Load Deflection	L/999 (0.002")	n/a	n/a	1	01-10-14
Live Load Deflection	L/999 (0.001")	n/a	n/a	2	01-10-14
Max Defl.	0.002"	n/a	n/a	1	01-10-14
Span / Depth	3.0				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Wall/Plate 2-1/2" x 1-3/4"	663 lbs	35.7%	20.2%	Unspecified
B2	Wall/Plate 3-1/2" x 1-3/4"	820 lbs	31.5%	17.9%	Unspecified

**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.  
 Design based on Dry Service Condition.

**Disclosure**

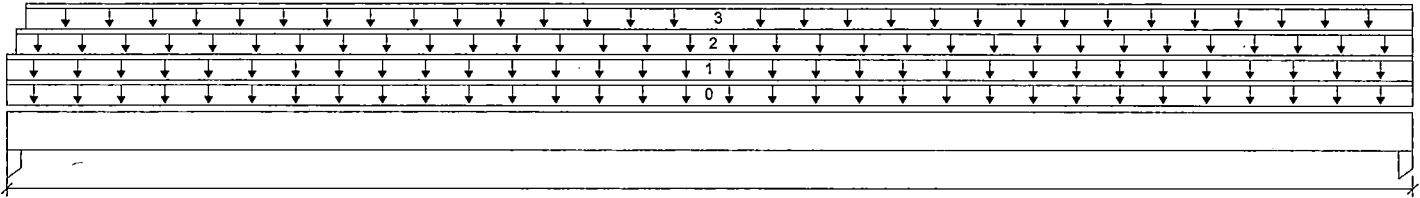
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BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmd  
Description: 2nd LEVEL\Flush Beams\BM9-4(i739)  
Specifier:  
Designer:  
Company: Cav Land



B1 22-00-00 B2  
Total Horizontal Product Length = 22-00-00

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

Bearing	Live	Dead	Snow	Wind	Roof Live
B1, 3-1/2"	302 / 0	4,612 / 0			4,180 / 0
B2, 3-1/2"	307 / 0	4,614 / 0			4,180 / 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	22-00-00	Top		32				00-00-00
1	Roof Truss	Unf. Lin. (lb/ft)	L	00-00-00	22-00-00	Top		380			380	n/a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-01-12	22-00-00	Top	16	4				n/a
3	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-03-08	22-00-00	Top	12					n/a

**Controls Summary**

	Value	% Allowable	Duration	Case	Location
Pos. Moment	46,371 ft-lbs	49.6%	125%	2	11-00-00
End Shear	7,493 lbs	28.2%	125%	2	01-07-08
Total Load Deflection	L/319 (0.811")	75.3%	n/a	2	11-00-00
Live Load Deflection	L/671 (0.385")	53.7%	n/a	5	11-00-00
Max Defl.	0.811"	64.8%	n/a	2	11-00-00
Span / Depth	16.2				

**Bearing Supports**

	Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B1	Column 3-1/2" x 7"	8,792 lbs	49.5%	47.8%	Unspecified
B2	Column 3-1/2" x 7"	8,794 lbs	49.5%	47.9%	Unspecified

**Notes**

- Design meets Code minimum (L/240) Total load deflection criteria.
- Design meets Code minimum (L/360) Live load deflection criteria.
- Design meets arbitrary (1.25") 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.
- Design based on Dry Service Condition.
- Beams 7 inches wide will be assumed to be either top-loaded only, or equally loaded from each side.
- Bolts are assumed to be Grade A307 or Grade 2 or higher.
- Member has no side loads.

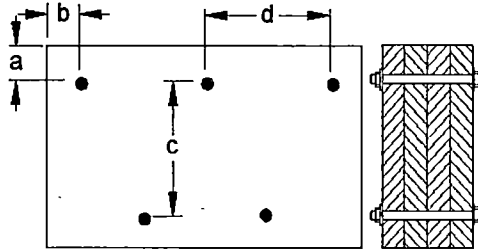


BC CALC® Member Report  
Build 6621

Job name:  
Address:  
City, State, Zip: NC  
Customer: Caviness Land Development  
Code reports: ESR-1040

File name: Lot 307 Forest Oaks.mmdl  
Description: 2nd LEVEL\Flush Beams\BM9-4(i739)  
Specifier:  
Designer:  
Company: Cav Land

**Connection Diagram: Full Length of Member**



a minimum = 2"      c = 12"  
b minimum = 2-1/2"      d = 24"

Beams 7 inches wide will be assumed to be either top-loaded only, or equally loaded from each side.  
Bolts are assumed to be Grade A307 or Grade 2 or higher.  
Member has no side loads.  
Connectors are: 1/2 in. Staggered Through Bolt

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