Boise Cascade

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

PASSED

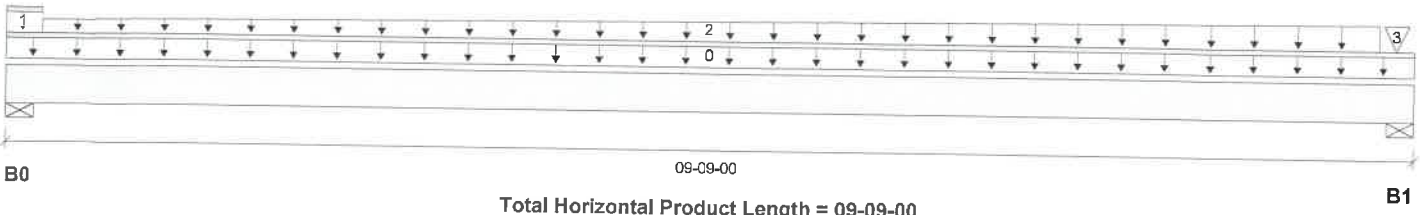
1st Floor\Dropped Beams\BM-100(i1604)

Dry | 1 span | No cant.

February 16, 2018 08:37:15

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: Funchion EWP Model.mmdl
Description: 1st Floor\Dropped Beams\BM-100(i1604)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 09-09-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 3"		480 / 0	244 / 0		
B1, 3"		589 / 0	244 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	09-09-00		9				00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-00-00	00-03-00		69	50			n\a
2	User Load	Trapezoidal (lb/ft)	L	00-03-00			70	50			n\a
					09-06-00		131	50			
3	User Load	Conc. Pt. (lbs)	L	09-07-08	09-07-08		33	12			n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1,756 ft-lbs	17.3%	115%	1	04-11-15
End Shear	709 lbs	10.0%	115%	1	08-08-12
Total Load Deflection	L/999 (0.06")	n\a	n\a	1	04-11-04
Live Load Deflection	L/999 (0.019")	n\a	n\a	6	04-10-08
Max Defl.	0.06"	n\a	n\a	1	04-11-04
Span / Depth	12.2				

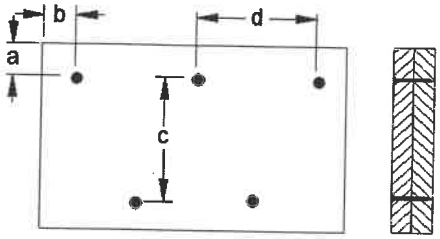
Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	3" x 3-1/2"	724 lbs	8.6%	9.1%	Unspecified
B1	Wall/Plate	3" x 3-1/2"	833 lbs	9.9%	10.6%	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: 09-03-00, Bottom: 09-03-00.
BC CALC® analysis is based on IBC 2009.
Unbalanced snow loads determined from building geometry were used in selected product's verification.
Design based on Dry Service Condition.
Member has no side loads.

Connection Diagram



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.

BC CALC®, BC FRAMER® , AJS™, ALLJOIST® , BC RIM BOARD™, BCI® , BOISE GLULAM™, BC FloorValue® , VERSA-LAM®, VERSA-RIM PLUS® ,

Boise Cascade

Double 1-3/4" x 14" VERSA-LAM® 2.0 3100 SP

PASSED

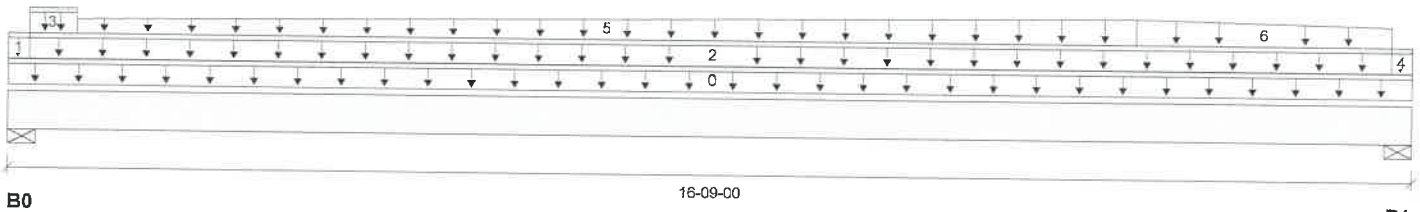
1st Floor\Dropped Beams\BM-101(i1575)

Dry | 1 span | No cant.

February 16, 2018 08:37:15

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: Funchion EWP Model.mmdl
Description: 1st Floor\Dropped Beams\BM-101(i1575)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 16-09-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 3"		1,644 / 0	419 / 0		
B1, 3"		1,590 / 0	419 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	16-09-00		14				00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-00-00	00-03-00		150	50			n\a
2	User Load	Unf. Lin. (lb/ft)	L	00-03-00	16-06-00		40	50			n\a
3	User Load	Unf. Lin. (lb/ft)	L	00-03-00	00-09-12		113				n\a
4	User Load	Unf. Lin. (lb/ft)	L	16-06-00	16-09-00			50			n\a
5	User Load	Trapezoidal (lb/ft)	L	00-09-12			115				n\a
					13-05-00		200				
6	User Load	Trapezoidal (lb/ft)	L	13-05-00			85				n\a
					16-06-00		67				

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	7,066 ft-lbs	95.3%	90%	0	08-06-08
End Shear	1,540 lbs	18.4%	90%	0	01-05-00
Total Load Deflection	L/750 (0.262")	32.0%	n\a	1	08-04-04
Live Load Deflection	L/999 (0.051")	n\a	n\a	6	08-04-04
Max Defl.	0.262"	26.2%	n\a	1	08-04-04
Span / Depth	14.0				

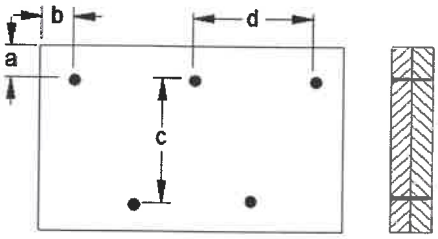
Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	3" x 3-1/2"	2,063 lbs	24.6%	26.2%	Unspecified
B1	Wall/Plate	3" x 3-1/2"	2,009 lbs	23.9%	25.5%	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: 16-03-00, Bottom: 16-03-00.
BC CALC® analysis is based on IBC 2009.
Unbalanced snow loads determined from building geometry were used in selected product's verification.
Design based on Dry Service Condition.
Member has no side loads.

Connection Diagram



a minimum = 2" c = 10"
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.

BC CALC®, BC FRAMER® , AJS™, ALLJOIST® , BC RIM BOARD™, BCI® , BOISE GLULAM™, BC FloorValue® , VERSA-LAM®, VERSA-RIM PLUS® ,

Boise Cascade

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

PASSED

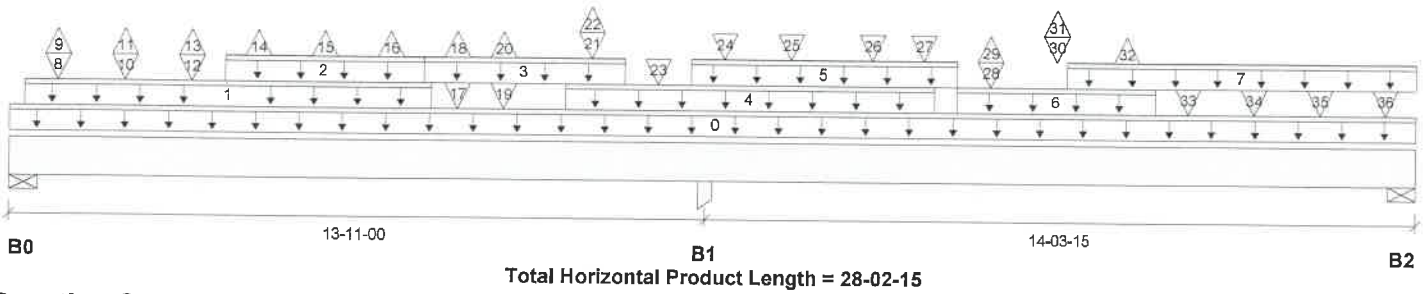
1st Floor\Flush Beams\BM-102(i1914)

Dry | 2 spans | No cant.

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

February 16, 2018 08:37:15

File name: Funchion EWP Model.mmdl
Description: 1st Floor\Flush Beams\BM-102(i1914)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 28-02-15

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 3-7/16"	2,902 / 661	1,075 / 0			
B1, 5-1/2"	9,462 / 326	4,937 / 0			
B2, 3"	2,780 / 468	1,156 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	28-02-15		12				00-00-00
1	I4 109(i614)	Unf. Lin. (lb/ft)	L	00-03-09	08-05-03		65				n\a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	04-03-07	08-03-07	504	91				n\a
3	Smoothed Load	Unf. Lin. (lb/ft)	L	08-03-07	12-03-07	367	92				n\a
4	I4 111(i613)	Unf. Lin. (lb/ft)	L	11-01-03	18-06-00		65				n\a
5	Smoothed Load	Unf. Lin. (lb/ft)	L	13-07-07	18-11-07	368					n\a
6	Smoothed Load	Unf. Lin. (lb/ft)	L	18-11-07	22-11-07	368	102				n\a
7	I4 113(i612)	Unf. Lin. (lb/ft)	L	21-02-00	28-02-15		65				n\a
8	-	Conc. Pt. (lbs)	L	00-11-07	00-11-07	559	143				n\a
9	-	Conc. Pt. (lbs)	L	00-11-07	00-11-07	-32					n\a
10	-	Conc. Pt. (lbs)	L	02-03-07	02-03-07	673	122				n\a
11	-	Conc. Pt. (lbs)	L	02-03-07	02-03-07	-41					n\a
12	-	Conc. Pt. (lbs)	L	03-07-07	03-07-07	672	122				n\a
13	-	Conc. Pt. (lbs)	L	03-07-07	03-07-07	-40					n\a
14	J-101(i1862)	Conc. Pt. (lbs)	L	04-11-07	04-11-07	-40					n\a
15	J-101(i1886)	Conc. Pt. (lbs)	L	06-03-07	06-03-07	-40	234				n\a
16	J-101(i1893)	Conc. Pt. (lbs)	L	07-07-07	07-07-07	-40					n\a
17	J-101(i1981)	Conc. Pt. (lbs)	L	08-11-07	08-11-07	155					n\a
18	J-101(i1981)	Conc. Pt. (lbs)	L	08-11-07	08-11-07	-33					n\a
19	J-101(i1986)	Conc. Pt. (lbs)	L	09-10-07	09-10-07	183	87				n\a
20	J-101(i1986)	Conc. Pt. (lbs)	L	09-10-07	09-10-07	-40					n\a
21	J-102(i1907)	Conc. Pt. (lbs)	L	11-07-07	11-07-07	212					n\a
22	J-102(i1907)	Conc. Pt. (lbs)	L	11-07-07	11-07-07	-47					n\a
23	-	Conc. Pt. (lbs)	L	12-11-07	12-11-07	662	605				n\a
24	-	Conc. Pt. (lbs)	L	14-03-07	14-03-07	421	329				n\a
25	-	Conc. Pt. (lbs)	L	15-07-07	15-07-07	491	418				n\a
26	-	Conc. Pt. (lbs)	L	17-03-01	17-03-01	421	363				n\a
27	-	Conc. Pt. (lbs)	L	18-03-07	18-03-07	355	818				n\a
28	J-100(i1901)	Conc. Pt. (lbs)	L	19-07-07	19-07-07	187					n\a
29	J-100(i1901)	Conc. Pt. (lbs)	L	19-07-07	19-07-07	-71					n\a
30	J-100(i1834)	Conc. Pt. (lbs)	L	20-11-07	20-11-07	193					n\a
31	J-100(i1834)	Conc. Pt. (lbs)	L	20-11-07	20-11-07	-78					n\a
32	J-100(i1920)	Conc. Pt. (lbs)	L	22-04-07	22-04-07	-9					n\a

Boise Cascade

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

PASSED

1st Floor\Flush Beams\BM-102(i1914)

Dry | 2 spans | No cant.

February 16, 2018 08:37:15

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: Funchion EWP Model.mmdl
Description: 1st Floor\Flush Beams\BM-102(i1914)
Specifier:
Designer:
Company:

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
33	J-100(i1841)	Conc. Pt. (lbs)	L	23-07-07	23-07-07	495	124				n\a
34	J-100(i1943)	Conc. Pt. (lbs)	L	24-11-07	24-11-07	499	125				n\a
35	J-100(i1962)	Conc. Pt. (lbs)	L	26-03-07	26-03-07	499	145				n\a
36	J-100(i1953)	Conc. Pt. (lbs)	L	27-07-07	27-07-07	499	140				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	12,977 ft-lbs	61.0%	100%	4	20-11-08
Neg. Moment	-18,653 ft-lbs	87.7%	100%	1	13-11-00
End Shear	3,627 lbs	45.9%	100%	3	01-03-05
Cont. Shear	6,855 lbs	86.8%	100%	1	15-01-10
Total Load Deflection	L/387 (0.438")	61.9%	n\a	4	21-02-01
Live Load Deflection	L/514 (0.33")	70.1%	n\a	8	21-02-01
Total Neg. Defl.	L/999 (-0.121")	n\a	n\a	4	09-04-15
Max Defl.	0.438"	43.8%	n\a	4	21-02-01
Span / Depth	14.3				

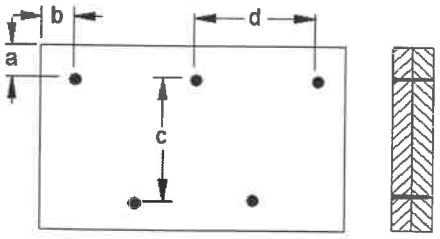
Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	3-7/16" x 3-1/2"	3,977 lbs	77.5%	43.9%	Unspecified
B1	Column	5-1/2" x 3-1/2"	14,399 lbs	93.5%	99.7%	Unspecified
B2	Wall/Plate	3" x 3-1/2"	3,935 lbs	88.2%	50.0%	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 2009.
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.

Connection Diagram



a minimum = 2"
b minimum = 3"
c = 7-7/8"
d = 12"

Connection Diagram

Calculated Side Load = 493.0 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

Boise Cascade

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

PASSED

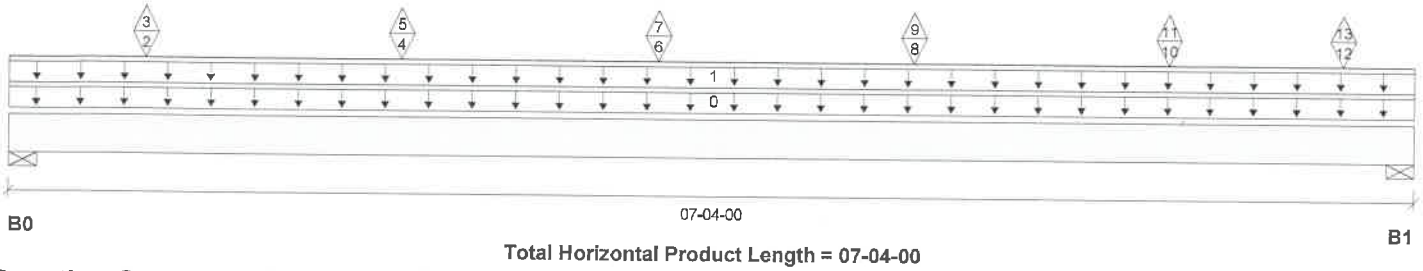
1st Floor\Flush Beams\BM-103(i1843)

Dry | 1 span | No cant.

February 16, 2018 08:37:15

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: Funchion EWP Model.mmdl
Description: 1st Floor\Flush Beams\BM-103(i1843)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 07-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 3-1/2"	602 / 51	469 / 0			
B1, 3-1/2"	695 / 60	510 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	07-04-00		12				00-00-00
1	E4 78(i582)	Unf. Lin. (lb/ft)	L	00-00-00	07-04-00		81				n\a
2	J-101(i1836)	Conc. Pt. (lbs)	L	00-08-08	00-08-08	222	51				n\a
3	J-101(i1836)	Conc. Pt. (lbs)	L	00-08-08	00-08-08	-19					n\a
4	J-101(i1862)	Conc. Pt. (lbs)	L	02-00-08	02-00-08	222	47				n\a
5	J-101(i1862)	Conc. Pt. (lbs)	L	02-00-08	02-00-08	-19					n\a
6	J-101(i1886)	Conc. Pt. (lbs)	L	03-04-08	03-04-08	222	37				n\a
7	J-101(i1886)	Conc. Pt. (lbs)	L	03-04-08	03-04-08	-19					n\a
8	J-101(i1893)	Conc. Pt. (lbs)	L	04-08-08	04-08-08	222	51				n\a
9	J-101(i1893)	Conc. Pt. (lbs)	L	04-08-08	04-08-08	-19					n\a
10	J-101(i1981)	Conc. Pt. (lbs)	L	06-00-08	06-00-08	187	43				n\a
11	J-101(i1981)	Conc. Pt. (lbs)	L	06-00-08	06-00-08	-16					n\a
12	J-101(i1986)	Conc. Pt. (lbs)	L	06-11-07	06-11-07	222	68				n\a
13	J-101(i1986)	Conc. Pt. (lbs)	L	06-11-07	06-11-07	-19					n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1,753 ft-lbs	8.2%	100%	1	03-04-08
End Shear	822 lbs	10.4%	100%	1	06-00-10
Total Load Deflection	L/999 (0.015")	n\a	n\a	1	03-07-08
Live Load Deflection	L/999 (0.009")	n\a	n\a	3	03-07-08
Max Defl.	0.015"	n\a	n\a	1	03-07-08
Span / Depth	6.9				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	3-1/2" x 3-1/2"	1,071 lbs	20.6%	11.7%	Unspecified
B1	Wall/Plate	3-1/2" x 3-1/2"	1,205 lbs	23.1%	13.1%	Unspecified

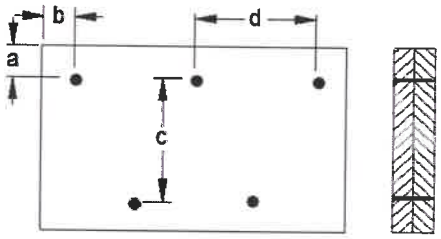
BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: Funchion EWP Model.mmdl
Description: 1st Floor\Flush Beams\BM-103(i1843)
Specifier:
Designer:
Company:

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 2009.
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.

Connection Diagram



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

Calculated Side Load = 202.2 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 Sinker Nails

Disclosure

Boise Cascade

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

PASSED

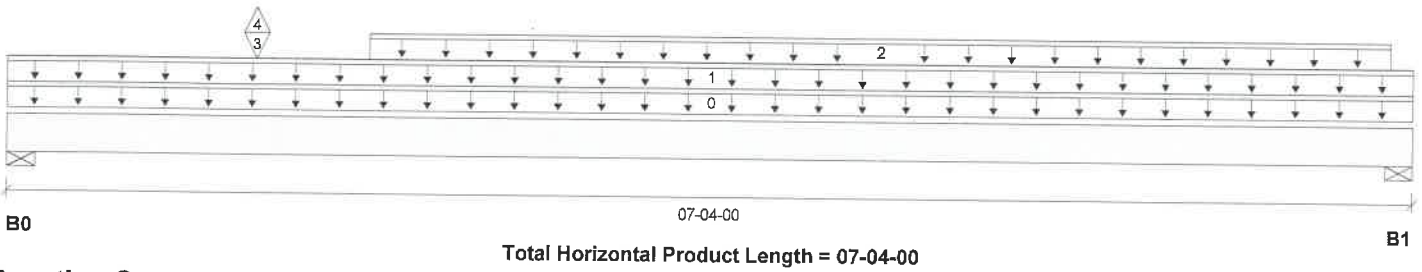
1st Floor\Flush Beams\BM-104(i1947)

Dry | 1 span | No cant.

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

February 16, 2018 08:37:15

File name: Funchion EWP Model.mmdl
Description: 1st Floor\Flush Beams\BM-104(i1947)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 07-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 3-1/2"	701 / 1	517 / 0			
B1, 3-1/2"	854 / 0	554 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	07-04-00		12				00-00-00
1	E4 86(i579)	Unf. Lin. (lb/ft)	L	00-00-00	07-04-00		81				n\a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	01-10-09	07-02-09	242	60				n\a
3	J-100(i1920)	Conc. Pt. (lbs)	L	01-03-09	01-03-09	266	67				n\a
4	J-100(i1920)	Conc. Pt. (lbs)	L	01-03-09	01-03-09	-1					n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	2,363 ft-lbs	11.1%	100%	1	03-10-09
End Shear	1,099 lbs	13.9%	100%	1	01-03-06
Total Load Deflection	L/999 (0.02")	n\a	n\a	1	03-08-09
Live Load Deflection	L/999 (0.012")	n\a	n\a	3	03-08-09
Max Defl.	0.02"	n\a	n\a	1	03-08-09
Span / Depth	6.9				

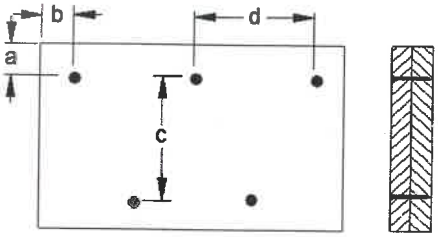
Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	3-1/2" x 3-1/2"	1,218 lbs	23.4%	13.3%	Unspecified
B1	Wall/Plate	3-1/2" x 3-1/2"	1,408 lbs	27.0%	15.3%	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 2009.
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.

Connection Diagram



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

Calculated Side Load = 265.0 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

Boise Cascade

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

PASSED

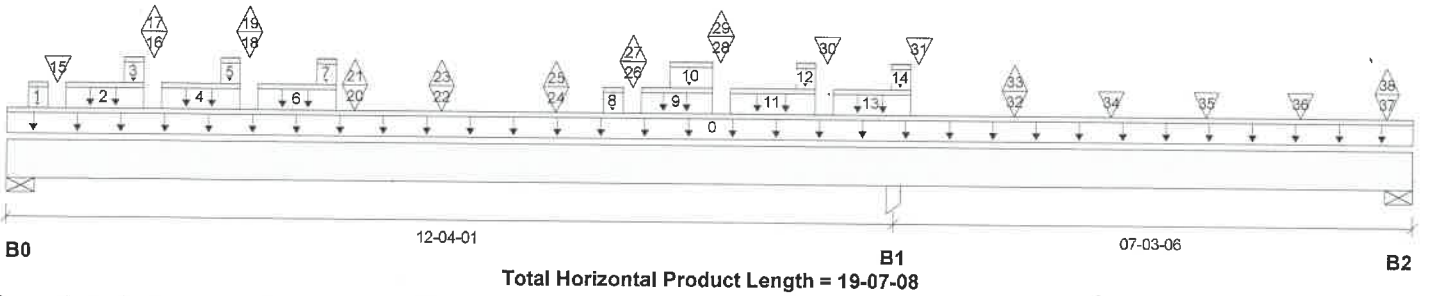
Basement\Dropped Beams\BM-105(i2171)

Dry | 2 spans | No cant.

February 16, 2018 08:37:16

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: Funchion EWP Model.mmdl
Description: Basement\Dropped Beams\BM-105(i2171)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 19-07-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 4"	4,286 / 106	1,636 / 0			
B1, 5-7/8"	8,995 / 64	4,537 / 0			
B2, 3"	2,021 / 1,337	402 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	19-07-08		18				00-00-00
1	Bk1(i292)	Unf. Lin. (lb/ft)	L	00-03-08	00-06-12	663	230				n\a
2	Bk1(i305)	Unf. Lin. (lb/ft)	L	00-09-12	01-10-12		73				n\a
3	Bk1(i305)	Unf. Lin. (lb/ft)	L	01-07-08	01-10-12	831	232				n\a
4	Bk1(i290)	Unf. Lin. (lb/ft)	L	02-01-12	03-02-12		73				n\a
5	Bk1(i290)	Unf. Lin. (lb/ft)	L	02-11-08	03-02-12	826					n\a
6	Bk1(i287)	Unf. Lin. (lb/ft)	L	03-05-12	04-06-12		73				n\a
7	Bk1(i287)	Unf. Lin. (lb/ft)	L	04-03-08	04-06-12	826	267				n\a
8	Bk1(i326)	Unf. Lin. (lb/ft)	L	08-03-08	08-06-12	698					n\a
9	Bk1(i323)	Unf. Lin. (lb/ft)	L	08-09-12	09-09-09		73				n\a
10	Bk1(i323)	Unf. Lin. (lb/ft)	L	09-02-08	09-09-09	826	856				n\a
11	Bk1(i325)	Unf. Lin. (lb/ft)	L	10-00-09	11-02-12		73				n\a
12	Bk1(i325)	Unf. Lin. (lb/ft)	L	10-11-08	11-02-12	960	816				n\a
13	Bk1(i324)	Unf. Lin. (lb/ft)	L	11-05-12	12-06-12		73				n\a
14	Bk1(i324)	Unf. Lin. (lb/ft)	L	12-03-08	12-06-12	841	357				n\a
15	-	Conc. Pt. (lbs)	L	00-08-06	00-08-06	642	195				n\a
16	-	Conc. Pt. (lbs)	L	02-00-06	02-00-06	747	197				n\a
17	-	Conc. Pt. (lbs)	L	02-00-06	02-00-06	-8					n\a
18	-	Conc. Pt. (lbs)	L	03-04-06	03-04-06	750	174				n\a
19	-	Conc. Pt. (lbs)	L	03-04-06	03-04-06	-9					n\a
20	-	Conc. Pt. (lbs)	L	04-09-14	04-09-14	1,424	502				n\a
21	-	Conc. Pt. (lbs)	L	04-09-14	04-09-14	-8					n\a
22	-	Conc. Pt. (lbs)	L	06-00-07	06-00-07	542	74				n\a
23	-	Conc. Pt. (lbs)	L	06-00-07	06-00-07	-8					n\a
24	-	Conc. Pt. (lbs)	L	07-07-09	07-07-09	1,179	298				n\a
25	-	Conc. Pt. (lbs)	L	07-07-09	07-07-09	-8					n\a
26	-	Conc. Pt. (lbs)	L	08-08-06	08-08-06	697	171				n\a
27	-	Conc. Pt. (lbs)	L	08-08-06	08-08-06	-8					n\a
28	-	Conc. Pt. (lbs)	L	09-10-14	09-10-14	645	414				n\a
29	-	Conc. Pt. (lbs)	L	09-10-14	09-10-14	-28					n\a
30	-	Conc. Pt. (lbs)	L	11-04-10	11-04-10	939	598				n\a
31	-	Conc. Pt. (lbs)	L	12-08-01	12-08-01	741	440				n\a
32	-	Conc. Pt. (lbs)	L	14-00-04	14-00-04	421					n\a

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
33	-	Conc. Pt. (lbs)	L	14-00-04	14-00-04	-2					n\a
34	-	Conc. Pt. (lbs)	L	15-04-07	15-04-07	514	74				n\a
35	-	Conc. Pt. (lbs)	L	16-08-07	16-08-07	514	74				n\a
36	-	Conc. Pt. (lbs)	L	18-00-05	18-00-05	514	168				n\a
37	-	Conc. Pt. (lbs)	L	19-03-00	19-03-00	1,067	682				n\a
38	-	Conc. Pt. (lbs)	L	19-03-00	19-03-00	-2					n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	14,890 ft-lbs	46.8%	100%	3	04-11-04
Neg. Moment	-15,034 ft-lbs	47.4%	100%	1	12-04-01
End Shear	5,308 lbs	44.8%	100%	3	01-03-14
Cont. Shear	7,940 lbs	67.0%	100%	1	11-01-04
Total Load Deflection	L/619 (0.234")	38.8%	n\a	3	05-11-08
Live Load Deflection	L/861 (0.168")	41.8%	n\a	7	05-11-08
Total Neg. Defl.	L/999 (-0.048")	n\a	n\a	3	15-03-08
Max Defl.	0.234"	23.4%	n\a	3	05-11-08
Span / Depth	12.2				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	4" x 5-1/4"	5,922 lbs	32.2%	37.6%	Unspecified
B1	Column	5-7/8" x 5-1/4"	13,532 lbs	54.9%	58.6%	Unspecified
B2	Wall/Plate	3" x 5-1/4"	2,423 lbs	19.2%	20.5%	Unspecified
B2	Uplift		935 lbs			

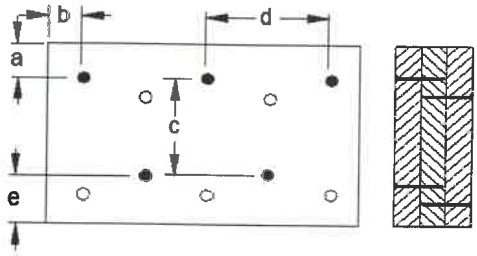
Cautions

Uplift of -934 lbs found at span 2 - Right.

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: 00-04-14, Bottom: 00-04-14.
BC CALC® analysis is based on IBC 2009.
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



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

Boise Cascade

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

PASSED

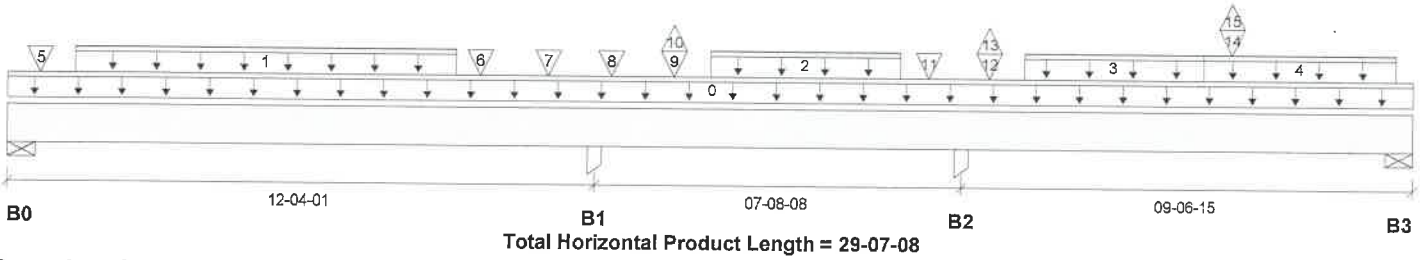
Basement\Dropped Beams\BM-106(i2175)

Dry | 3 spans | No cant.

February 16, 2018 08:37:16

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: Funchion EWP Model.mmdl
Description: Basement\Dropped Beams\BM-106(i2175)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 29-07-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 4"	2,369 / 98	645 / 0			
B1, 7-1/4"	5,865 / 420	1,508 / 0			
B2, 7-1/4"	4,394 / 990	957 / 0			
B3, 4"	1,193 / 167	307 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	29-07-08		12				00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	01-05-00	09-05-00	446	112				n\a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	14-09-00	18-09-00	510	128				n\a
3	Smoothed Load	Unf. Lin. (lb/ft)	L	21-04-07	25-02-00	365	92				n\a
4	Smoothed Load	Unf. Lin. (lb/ft)	L	25-02-00	29-03-02	69	17				n\a
5	-	Conc. Pt. (lbs)	L	00-08-04	00-08-04	541	149				n\a
6	-	Conc. Pt. (lbs)	L	09-11-01	09-11-01	600	150				n\a
7	-	Conc. Pt. (lbs)	L	11-04-04	11-04-04	621	154				n\a
8	-	Conc. Pt. (lbs)	L	12-08-03	12-08-03	543	136				n\a
9	-	Conc. Pt. (lbs)	L	13-11-14	13-11-14	588	147				n\a
10	-	Conc. Pt. (lbs)	L	13-11-14	13-11-14	-37					n\a
11	-	Conc. Pt. (lbs)	L	19-04-03	19-04-03	677	174				n\a
12	-	Conc. Pt. (lbs)	L	20-07-09	20-07-09	374	94				n\a
13	-	Conc. Pt. (lbs)	L	20-07-09	20-07-09	-10					n\a
14	J-3(i2214)	Conc. Pt. (lbs)	L	25-09-04	25-09-04	667	161				n\a
15	J-3(i2214)	Conc. Pt. (lbs)	L	25-09-04	25-09-04	-24					n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	7,453 ft-lbs	35.2%	100%	3	05-11-08
Neg. Moment	-8,037 ft-lbs	38.1%	100%	5	12-04-01
End Shear	2,555 lbs	32.4%	100%	3	01-03-14
Cont. Shear	3,691 lbs	46.7%	100%	5	11-00-09
Total Load Deflection	L/812 (0.178")	29.6%	n\a	3	05-09-11
Live Load Deflection	L/1,009 (0.144")	35.7%	n\a	11	05-11-08
Total Neg. Defl.	L/999 (-0.043")	n\a	n\a	3	15-08-10
Max Defl.	0.178"	17.8%	n\a	3	05-09-11
Span / Depth	12.2				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	4" x 3-1/2"	3,014 lbs	24.6%	28.7%	Unspecified
B1	Column	7-1/4" x 3-1/2"	7,373 lbs	36.3%	38.7%	Unspecified
B2	Column	7-1/4" x 3-1/2"	5,351 lbs	26.4%	28.1%	Unspecified

Boise Cascade

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

PASSED

Basement\Dropped Beams\BM-106(i2175)

Dry | 3 spans | No cant.

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

February 16, 2018 08:37:16

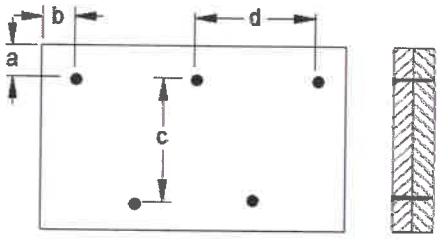
File name: Funchion EWP Model.mmdl
Description: Basement\Dropped Beams\BM-106(i2175)
Specifier:
Designer:
Company:

Bearing Supports		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B3	Wall/Plate	4" x 3-1/2"	1,500 lbs	12.2%	14.3%	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: 00-06-07, Bottom: 00-06-07.
BC CALC® analysis is based on IBC 2009.
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.

Connection Diagram



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

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® ,

Boise Cascade

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

PASSED

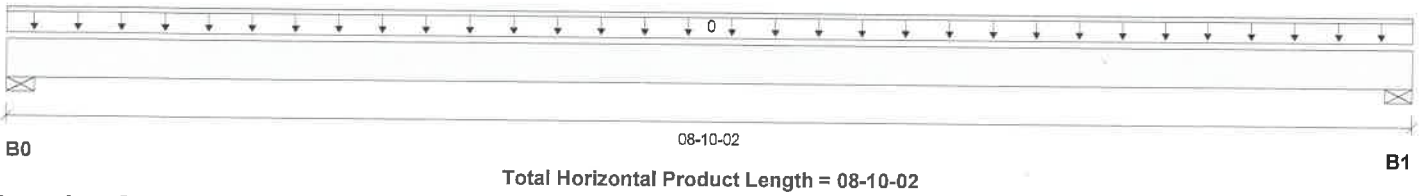
Basement\Dropped Beams\BM-107(i2024)

Dry | 1 span | No cant.

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

February 16, 2018 08:37:15

File name: Funchion EWP Model.mmdl
Description: Basement\Dropped Beams\BM-107(i2024)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 08-10-02

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 6"		41 / 0			
B1, 6-1/2"		42 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	08-10-02		9				00-00-00

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	74 ft-lbs	0.8%	90%	0	04-04-13
End Shear	29 lbs	0.5%	90%	0	01-03-04
Total Load Deflection	L/999 (0.002")	n\a	n\a	0	04-04-13
Max Defl.	0.002"	n\a	n\a	0	04-04-13
Span / Depth	10.3				

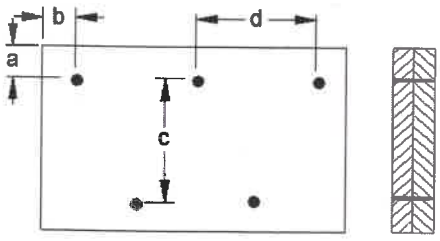
Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	6" x 3-1/2"	41 lbs	0.2%	0.3%	Unspecified
B1	Wall/Plate	6-1/2" x 3-1/2"	42 lbs	0.2%	0.2%	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: 07-09-09, Bottom: 07-09-09.
BC CALC® analysis is based on IBC 2009.
Design based on Dry Service Condition.
Member has no side loads.

Connection Diagram



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

Connection Diagram

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

Disclosure

Boise Cascade

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

PASSED

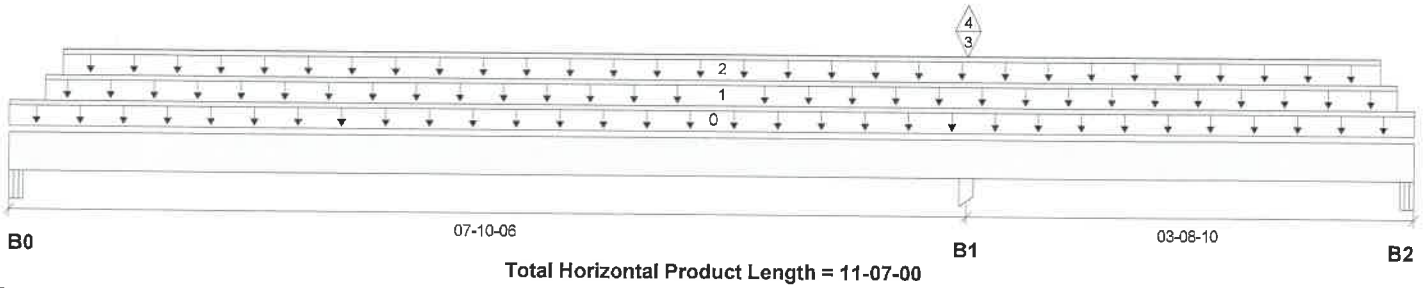
Basement\Flush Beams\BM-108(i2199)

Dry | 2 spans | No cant.

February 16, 2018 08:37:15

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: Funchion EWP Model.mmdl
Description: Basement\Flush Beams\BM-108(i2199)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 11-07-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 5-1/4"	85 / 2	53 / 0			
B1, 7-1/4"	4,093 / 134	2,192 / 0			
B2, 3-1/2"	45 / 37	6 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-07-00		9				00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-03-08	11-05-04	17	4				n\a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-05-04	11-03-08	10	2				n\a
3	PBO100(i73)	Conc. Pt. (lbs)	L	07-10-07	07-10-07	3,888	2,068				n\a
4	PBO100(i73)	Conc. Pt. (lbs)	L	07-10-07	07-10-07	-134					n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	203 ft-lbs	1.5%	100%	3	03-05-12
Neg. Moment	-225 ft-lbs	1.7%	100%	1	07-10-06
End Shear	96 lbs	1.6%	100%	3	01-02-08
Cont. Shear	144 lbs	2.3%	100%	1	06-09-08
Total Load Deflection	L/999 (0.004")	n\a	n\a	3	03-09-15
Live Load Deflection	L/999 (0.002")	n\a	n\a	7	03-09-15
Total Neg. Defl.	L/999 (-0.001")	n\a	n\a	3	09-03-07
Max Defl.	0.004"	n\a	n\a	3	03-09-15
Span / Depth	9.7				

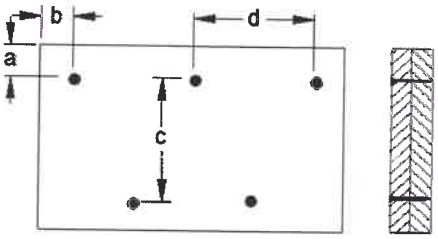
Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Beam	5-1/4" x 3-1/2"	137 lbs	1.0%	1.0%	Unspecified
B1	Column	7-1/4" x 3-1/2"	6,285 lbs	31.0%	33.0%	Unspecified
B2	Beam	3-1/2" x 3-1/2"	51 lbs	0.6%	0.6%	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 2009.
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.

Connection Diagram



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

Disclosure

Boise Cascade

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

PASSED

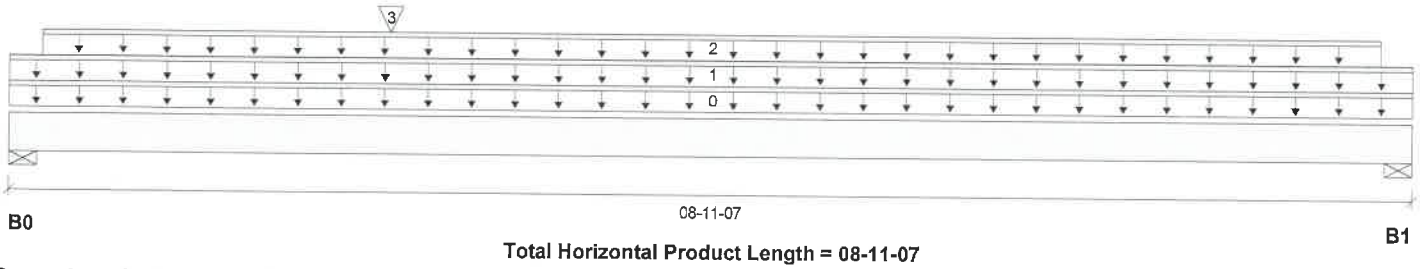
1st Floor\Flush Beams\BM-109(i1926)

Dry | 1 span | No cant.

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

February 16, 2018 08:37:15

File name: Funchion EWP Model.mmdl
Description: 1st Floor\Flush Beams\BM-109(i1926)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 08-11-07

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 2-1/2"	135 / 0	447 / 0			
B1, 2-1/2"	135 / 0	438 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	08-11-07		12				00-00-00
1	FC100 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	08-11-07	30	8				n\a
2	E4 75(i580)	Unf. Lin. (lb/ft)	L	00-02-08	08-08-15		81				n\a
3	FC100 Floor Material	Conc. Pt. (lbs)	L	02-05-01	02-05-01		19				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	1,246 ft-lbs	5.9%	100%	1	04-05-01
End Shear	442 lbs	5.6%	100%	1	01-02-06
Total Load Deflection	L/999 (0.017")	n\a	n\a	1	04-06-01
Live Load Deflection	L/999 (0.004")	n\a	n\a	2	04-06-01
Max Defl.	0.017"	n\a	n\a	1	04-06-01
Span / Depth	8.8				

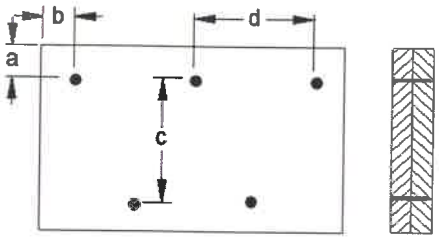
Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	2-1/2" x 3-1/2"	582 lbs	15.6%	8.9%	Unspecified
B1	Wall/Plate	2-1/2" x 3-1/2"	573 lbs	15.4%	8.7%	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 2009.
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.

Connection Diagram



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

Disclosure

Boise Cascade

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

PASSED

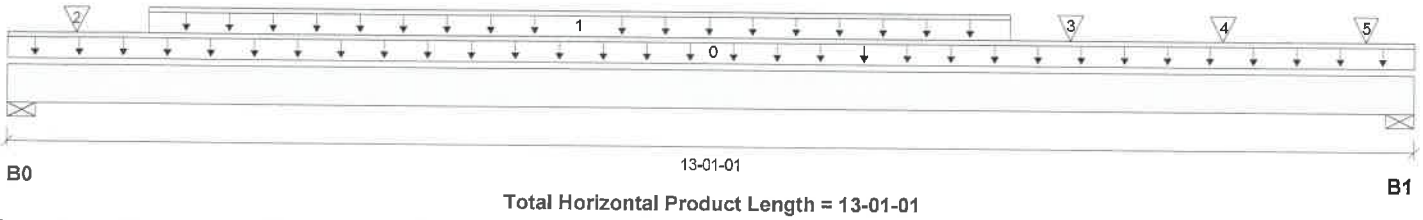
Basement\Dropped Beams\BM-110(i2185)

Dry | 1 span | No cant.

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

February 16, 2018 08:37:15

File name: Funchion EWP Model.mmdl
Description: Basement\Dropped Beams\BM-110(i2185)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 13-01-01

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 4"	5,003 / 0	1,607 / 0			
B1, 4"	5,167 / 0	1,415 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	13-01-01		18				00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	01-03-08	09-03-08	762	190				n\a
2	J-1(i2189)	Conc. Pt. (lbs)	L	00-07-08	00-07-08	981	492				n\a
3	J-1(i2213)	Conc. Pt. (lbs)	L	09-10-05	09-10-05	1,022	255				n\a
4	J-1(i2187)	Conc. Pt. (lbs)	L	11-03-08	11-03-08	1,061	265				n\a
5	J-1(i2219)	Conc. Pt. (lbs)	L	12-07-08	12-07-08	1,013	253				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	19,206 ft-lbs	61.1%	100%	1	05-11-08
End Shear	5,548 lbs	46.8%	100%	1	01-03-14
Total Load Deflection	L/405 (0.372")	59.3%	n\a	1	06-05-08
Live Load Deflection	L/517 (0.291")	69.6%	n\a	2	06-05-08
Max Defl.	0.372"	37.2%	n\a	1	06-05-08
Span / Depth	12.7				

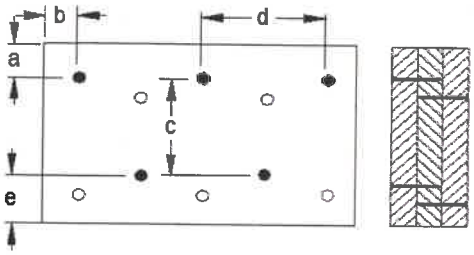
Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	4" x 5-1/4"	6,610 lbs	36.0%	42.0%	Unspecified
B1	Wall/Plate	4" x 5-1/4"	6,583 lbs	35.8%	41.8%	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: 01-03-12, Bottom: 01-03-12.
BC CALC® analysis is based on IBC 2009.
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



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

Boise Cascade

Single 3-1/2" x 16" VERSA-LAM® 2.0 3100 SP

1st Floor\Flush Beams\BM-111(i2005)

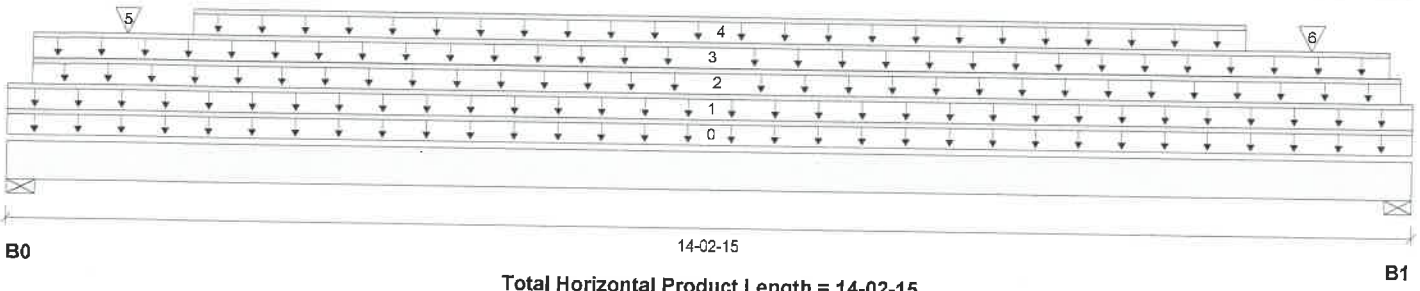
Dry | 1 span | No cant.

PASSED

February 16, 2018 08:37:15

BC CALC® Design Report
Build 6215
Job name:
Address:
City, State, Zip:
Customer:
Code reports: ESR-1040

File name: Funchion EWP Model.mmdl
Description: 1st Floor\Flush Beams\BM-111(i2005)
Specifier:
Designer:
Company:



Total Horizontal Product Length = 14-02-15

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0, 6-1/2"	2,430 / 0	4,036 / 0	3,267 / 0		
B1, 6-1/2"	2,514 / 0	4,398 / 0	3,319 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	14-02-15		16				00-00-00
1	E4 90(i2006)	Unf. Lin. (lb/ft)	L	00-00-00	14-02-15		81				n\a
2	E4 90(i2006)	Unf. Lin. (lb/ft)	L	00-02-15	14-01-06		360	450			n\a
3	M3 PLF	Unf. Lin. (lb/ft)	L	00-03-00	13-11-15		20	25			n\a
4	Smoothed Load	Unf. Lin. (lb/ft)	L	01-10-07	12-06-07	373	93				n\a
5	J-100(i1968)	Conc. Pt. (lbs)	L	01-02-07	01-02-07	471	229				n\a
6	J-109(i1897)	Conc. Pt. (lbs)	L	13-02-07	13-02-07	497	560				n\a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	26,763 ft-lbs	62.3%	115%	7	07-00-07
End Shear	6,726 lbs	55.0%	115%	7	12-04-07
Total Load Deflection	L/447 (0.357")	53.7%	n\a	7	07-02-07
Live Load Deflection	L/854 (0.187")	42.2%	n\a	18	07-02-07
Max Defl.	0.357"	35.7%	n\a	7	07-02-07
Span / Depth	10.0				

Bearing Supports

		Dim. (LxW)	Value	% Allow Support	% Allow Member	Material
B0	Wall/Plate	6-1/2" x 3-1/2"	8,308 lbs	85.9%	48.7%	Unspecified
B1	Wall/Plate	6-1/2" x 3-1/2"	8,773 lbs	90.5%	51.3%	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 2009.
Unbalanced snow loads determined from building geometry were used in selected product's verification.
Design based on Dry Service Condition.

Disclosure