Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 04/21/15

le

ign Report

Triple 1-3/4" x 20" VERSA-LAM® 2.0 3100 SP

Dry | 1 span | No cantilevers | 0/12 slope

Floor Beam\FB01

Thursday, February 26, 2015

Job Name:
Address: 1706 Forest Ave
City, State, Zip: Portland, ME
Customer: Rufus Deering
Code reports: ESR-1040

File Name: BC CALC Project
Description: Kitchen Beam
Specifier:
Designer:
Company:
Misc:

Total of Horizontal Design Spans = 19-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0	4,655 / 0	4,255 / 0	10,545 / 0		
B1	4,655 / 0	4,255 / 0	10,545 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Trib.
1	Standard Load	Unf. Area (lb/ft^2)	L	00-00-00	19-00-00		15	60			06-00-00
2		Unf. Area (lb/ft^2)	L	00-00-00	19-00-00	40	10				07-00-00
3		Unf. Area (lb/ft^2)	L	00-00-00	19-00-00	30	10				07-00-00
4		Unf. Area (lb/ft^2)	L	00-00-00	19-00-00		15	60			12-06-00

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	74,362 ft-lbs	75.7%	115%	3	09-06-00
End Shear	12,788 lbs	55.7%	115%	3	01-08-14
Total Load Defl.	L/330 (0.69")	72.7%	n/a	3	09-06-00
Live Load Defl.	L/454 (0.503")	79.4%	n/a	6	09-06-00
Max Defl.	0.69"	69%	n/a	3	09-06-00
Span / Depth	11.4	n/a	n/a	0	00-00-00

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.
Minimum bearing length for B0 is 4".
Minimum bearing length for B1 is 4".
Entered/Displayed Horizontal Span Length(s) = Clear Span + 1/2 min. end bearing + 1/2 intermediate bearing
Calculations assume Member is Fully Braced.
Design based on Dry Service Condition.
Deflections less than 1/8" were ignored in the results.
Fastener Manufacturer: Simpson Strong-Tie, Inc.

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Thursday, February 26, 2015

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City, State, Zip: Portland, ME
Customer: Rufus Deering
Code reports: ESR-1040

File Name: BC CALC Project
Description: Kitchen Beam
Specifier:
Designer:
Company:
Misc:

Connection Diagram

a minimum = 1-1/2" c = 8-1/2"
b minimum = 6" d = 24"
e minimum = 1"

Install Screws with screw heads in the loaded ply.
Member has no side loads.
Connectors are: SDW22500

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE 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.\n\nBC CALC®, BC FRAMER® , AJS™, ALLJOIST® , BC RIM BOARD™, BCI® , BOISE GLULAM™, SIMPLE FRAMING SYSTEM® , VERSA-LAM®, VERSA-RIM PLUS® , VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

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Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP — Floor Beam\FB02

ign Report

Dry | 2 spans | No cantilevers | 0/12 slope

Thursday, February 26, 2015

Job Name:		File Name:	BC CALC Project
Address:	1706 Forest Ave	Description:	Gable End Header
City, State, Zip:	Portland, ME	Specifier:	
Customer:	Rufus Deering	Designer:	
Code reports:	ESR-1040	Company:	
		Misc:	

Total of Horizontal Design Spans = 19-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0	905 / 77	1,085 / 0			
B1	2,396 / 0	3,140 / 0			
B2	755 / 179	754 / 0			

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 100%	Dead 90%	Snow 115%	Wind 160%	Roof Live 125%	Trib.
1	Standard Load	Unf. Area (lb/ft^2)	L	00-00-00	19-00-00	40	10				05-00-00
2		Unf. Lin. (lb/ft)	L	00-00-00	19-00-00	0	200				n/a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	4,284 ft-lbs	20.1%	100%	2	04-04-03
Neg. Moment	-5,386 ft-lbs	25.3%	100%	1	10-06-00
End Shear	1,499 lbs	19%	100%	2	01-00-12
Cont. Shear	2,414 lbs	30.6%	100%	1	09-04-06
Total Load Defl.	L/999 (0.074")	n/a	n/a	2	04-08-15
Live Load Defl.	L/999 (0.038")	n/a	n/a	5	04-10-08
Total Neg. Defl.	L/999 (-0.01")	n/a	n/a	2	12-05-15
Max Defl.	0.074"	n/a	n/a	2	04-08-15
Span / Depth	10.6	n/a	n/a	0	00-00-00

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.
Minimum bearing length for B0 is 1-1/2".
Minimum bearing length for B1 is 2-1/8".
Minimum bearing length for B2 is 1-1/2".
Entered/Displayed Horizontal Span Length(s) = Clear Span + 1/2 min. end bearing + 1/2 intermediate bearing
Calculations assume Member is Fully Braced.
Design based on Dry Service Condition.
Deflections less than 1/8" were ignored in the results.
Fastener Manufacturer: Simpson Strong-Tie, Inc.

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Dry | 2 spans | No cantilevers | 0/12 slope

Thursday, February 26, 2015

Job Name:
Address: 1706 Forest Ave
City, State, Zip: Portland, ME
Customer: Rufus Deering
Code reports: ESR-1040

File Name: BC CALC Project
Description: Gable End Header
Specifier:
Designer:
Company:
Misc:

Connection Diagram

a minimum = 1-1/2"
b minimum = 6"
c = 8-7/8"
d = 24"
e minimum = 1"

Install Screws with screw heads in the loaded ply.
Member has no side loads.
Connectors are: SDW22338

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE 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.\n\nBC CALC®, BC FRAMER® , AJS™, ALLJOIST® , BC RIM BOARD™, BCI® , BOISE GLULAM™, SIMPLE FRAMING SYSTEM® , VERSA-LAM®, VERSA-RIM PLUS® , VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.