Boise Cascade

Double 1-3/4" x 16" VERSA-LAM® 2.0 3100 SP

Floor Bea

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

October 4, 201

Inspections Division
Date: 10/30/17

BC CALC® Design Report

Build 6080
Job Name: 79 Island Ave
Address:
City, State, Zip: Peaks Island, ME
Customer: Eldredge Lumber
Code reports: ESR-1040

File Name: 79IslandAve
Description: New Beam In Floor
Specifier:
Designer:
Company:
Misc:

Total of Horizontal Design Spans = 17-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0	515 / 0	1,191 / 0	2,783 / 0		
B1	578 / 0	2,386 / 0	6,349 / 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	17-06-00	40	10				01-04-00
2	Reaction from Desi...	Conc. Pt. (lbs)	L	10-10-00	10-10-00	80	1,530	4,566			n/a
3	Reaction from Desi...	Conc. Pt. (lbs)	L	13-06-00	13-06-00	80	1,530	4,566			n/a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	41,315 ft-lbs	96.1%	115%	2	10-10-00
End Shear	8,693 lbs	71%	115%	2	01-04-14
Total Load Defl.	L/262 (0.801")	91.5%	n/a	2	09-04-05
Live Load Defl.	L/362 (0.581")	99.5%	n/a	5	09-07-13
Max Defl.	0.801"	80.1%	n/a	2	09-04-05
Span / Depth	13.1	n/a	n/a	0	00-00-00
Squash Blocks	Valid				

Notes

Entered/Displayed Horizontal Span Length(s) = Clear Span + 1/2 min. end bearing + 1/2 intermediate bearing
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 3-5/16".
Calculations assume member is fully braced.
Design based on Dry Service Condition.

Boise Cascade

Double 1-3/4" x 16" VERSA-LAM® 2.0 3100 SP

Floor Bea

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

October 4, 201

Inspections Division
Date: 10/30/17

BC CALC® Design Report

Build 6080
Job Name: 79 Island Ave
Address:
City, State, Zip: Peaks Island, ME
Customer: Eldredge Lumber
Code reports: ESR-1040

File Name: 79IslandAve
Description: New Beam In Floor
Specifier:
Designer:
Company:
Misc:

Connection Diagram

a minimum = 2" c = 12"
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

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 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™, SIMPLE FRAMING SYSTEM® , VERSA-LAM®, VERSA-RIM PLUS® , VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Boise Cascade

Double 1-3/4" x 11-1/4" VERSA-LAM® 2.0 3100 SP Floor Beam\H

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

October 4, 201

Inspections Division
Date: 10/30/17

BC CALC® Design Report

Build 6080		File Name:	79IslandAve
Job Name:	79 Island Ave	Description:	Designs\Header1
Address:		Specifier:	
City, State, Zip:	Peaks Island, ME	Designer:	
Customer:	Eldredge Lumber	Company:	
Code reports:	ESR-1040	Misc:	

Total of Horizontal Design Spans = 06-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0		775 / 0	2,338 / 0		
B1		970 / 0	2,949 / 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	06-04-00		15	50			02-00-00
2	Reaction from Desi...	Conc. Pt. (lbs)	L	03-07-00	03-07-00		1,483	4,654			n/a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	10,245 ft-lbs	46.4%	115%	1	03-07-00
End Shear	3,776 lbs	43.9%	115%	1	01-00-02
Total Load Defl.	L/999 (0.072")	n/a	n/a	1	03-03-02
Live Load Defl.	L/999 (0.054")	n/a	n/a	2	03-03-02
Max Defl.	0.072"	n/a	n/a	1	03-03-02
Span / Depth	6.8	n/a	n/a	0	00-00-00
Squash Blocks	Valid				

Notes

Entered/Displayed Horizontal Span Length(s) = Clear Span + 1/2 min. end bearing + 1/2 intermediate bearing
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 1-1/2".
Calculations assume member is fully braced.
Design based on Dry Service Condition.

Double 1-3/4" x 11-1/4" VERSA-LAM® 2.0 3100 SP Floor Beam\H

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

October 4, 201

Inspections Division
Date: 10/30/17

BC CALC® Design Report

Build 6080
Job Name: 79 Island Ave
Address:
City, State, Zip: Peaks Island, ME
Customer: Eldredge Lumber
Code reports: ESR-1040

File Name: 79IslandAve
Description: Designs\Header1
Specifier:
Designer:
Company:
Misc:

Connection Diagram

a minimum = 2" c = 7-1/4"
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

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 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™, SIMPLE FRAMING SYSTEM® , VERSA-LAM®, VERSA-RIM PLUS® , VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Boise Cascade

Double 1-3/4" x 11-1/4" VERSA-LAM® 2.0 3100 SP Floor Beam\H

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

October 4, 201

Inspections Division
Date: 10/30/17

BC CALC® Design Report

Build 6080		File Name:	79IslandAve
Job Name:	79 Island Ave	Description:	Header #2
Address:		Specifier:	
City, State, Zip:	Peaks Island, ME	Designer:	
Customer:	Eldredge Lumber	Company:	
Code reports:	ESR-1040	Misc:	

Total of Horizontal Design Spans = 06-02-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0		749 / 0	2,258 / 0		
B1		989 / 0	3,012 / 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	06-02-00		15	50			02-00-00
2	Reaction from Desi...	Conc. Pt. (lbs)	L	03-07-00	03-07-00		1,483	4,654			n/a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	9,867 ft-lbs	44.7%	115%	1	03-07-00
End Shear	3,858 lbs	44.8%	115%	1	01-00-02
Total Load Defl.	L/999 (0.066")	n/a	n/a	1	03-03-02
Live Load Defl.	L/999 (0.05")	n/a	n/a	2	03-03-02
Max Defl.	0.066"	n/a	n/a	1	03-03-02
Span / Depth	6.6	n/a	n/a	0	00-00-00
Squash Blocks	Valid				

Notes

Entered/Displayed Horizontal Span Length(s) = Clear Span + 1/2 min. end bearing + 1/2 intermediate bearing
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 1-1/2".
Calculations assume member is fully braced.
Design based on Dry Service Condition.

Double 1-3/4" x 11-1/4" VERSA-LAM® 2.0 3100 SP Floor Beam\H

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

October 4, 201

Inspections Division
Date: 10/30/17

BC CALC® Design Report

Build 6080
Job Name: 79 Island Ave
Address:
City, State, Zip: Peaks Island, ME
Customer: Eldredge Lumber
Code reports: ESR-1040

File Name: 79IslandAve
Description: Header #2
Specifier:
Designer:
Company:
Misc:

Connection Diagram

a minimum = 2" c = 7-1/4"
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

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 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™, SIMPLE FRAMING SYSTEM® , VERSA-LAM®, VERSA-RIM PLUS® , VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Triple 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Floor Beam\Heade

Boise Cascade

BC CALC® Design Report

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

October 4, 201

Inspections Division
Date: 10/30/17

Build 6080
Job Name: 79 Island Ave
Address:
City, State, Zip: Peaks Island, ME
Customer: Eldredge Lumber
Code reports: ESR-1040

File Name: 79IslandAve
Description: Header #3 Option 2
Specifier:
Designer:
Company:
Misc:

Total of Horizontal Design Spans = 03-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0	80 / 0	1,530 / 0	4,566 / 0		
B1	80 / 0	1,529 / 0	4,562 / 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	03-00-00	40	10				01-04-00
2	Reaction from Desi...	Conc. Pt. (lbs)	L	01-06-00	01-06-00		1,833	5,625			n/a
3	Reaction from Desi...	Conc. Pt. (lbs)	L	01-06-00	01-06-00		1,142	3,503			n/a

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	9,106 ft-lbs	37.8%	115%	2	01-06-00
End Shear	6,072 lbs	55.7%	115%	2	00-10-06
Total Load Defl.	L/999 (0.016")	n/a	n/a	2	01-06-00
Live Load Defl.	L/999 (0.012")	n/a	n/a	5	01-06-00
Max Defl.	0.016"	n/a	n/a	2	01-06-00
Span / Depth	3.8	n/a	n/a	0	00-00-00
Squash Blocks	Valid				

Notes

Entered/Displayed Horizontal Span Length(s) = Clear Span + 1/2 min. end bearing + 1/2 intermediate bearing
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 1-9/16".
Minimum bearing length for B1 is 1-9/16".
Calculations assume member is fully braced.
Design based on Dry Service Condition.

Triple 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP Floor Beam\Heade

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

October 4, 201

Inspections Division
Date: 10/30/17

BC CALC® Design Report

Build 6080
Job Name: 79 Island Ave
Address:
City, State, Zip: Peaks Island, ME
Customer: Eldredge Lumber
Code reports: ESR-1040

File Name: 79IslandAve
Description: Header #3 Option 2
Specifier:
Designer:
Company:
Misc:

Connection Diagram

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

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 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™, SIMPLE FRAMING SYSTEM® , VERSA-LAM®, VERSA-RIM PLUS® , VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Double 1-3/4" x 16" VERSA-LAM® 2.0 3100 SP Roof Beam\Ridg

Boise Cascade

BC CALC® Design Report

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

October 4, 201

Inspections Division
Date: 10/30/17

Build 6080
Job Name: 79 Island Ave
Address:
City, State, Zip: Peaks Island, ME
Customer: Eldredge Lumber
Code reports: ESR-1040

File Name: 79IslandAve
Description: Ridge Beam
Specifier:
Designer:
Company:
Misc:

Total of Horizontal Design Spans = 29-02-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Roof Live
B0		1,483 / 0	4,654 / 0		
B1		3,889 / 0	11,931 / 0		
B2		579 / 0	2,471 / 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	29-02-08		15	50			12-06-00

Controls Summary

	Value	% Allowable	Duration	Case	Location
Pos. Moment	22,720 ft-lbs	52.9%	115%	7	07-04-14
Neg. Moment	-25,677 ft-lbs	59.8%	115%	9	18-00-00
End Shear	4,971 lbs	40.6%	115%	7	01-04-14
Cont. Shear	7,659 lbs	62.6%	115%	9	16-06-04
Total Load Defl.	L/454 (0.476")	39.7%	n/a	7	08-00-08
Live Load Defl.	L/591 (0.365")	40.6%	n/a	10	08-04-03
Total Neg. Defl.	L/999 (-0.067")	n/a	n/a	7	21-08-13
Max Defl.	0.476"	47.6%	n/a	7	08-00-08
Span / Depth	13.5	n/a	n/a	0	00-00-00
Squash Blocks	Valid				

Cautions

For roof members with slope (1/4)/12 or less final design must ensure that ponding instability will not occur.
For roof members with slope (1/2)/12 or less final design must account for Rain-on-Snow surcharge load.

Notes

Entered/Displayed Horizontal Span Length(s) = Clear Span + 1/2 min. end bearing + 1/2 intermediate bearing
Design meets Code minimum (L/180) Total load deflection criteria.
Design meets Code minimum (L/240) Live load deflection criteria.
Design meets arbitrary (1") Maximum Total load deflection criteria.
Minimum bearing length for B0 is 2-5/16".
Minimum bearing length for B1 is 6".
Minimum bearing length for B2 is 1-1/2".
Calculations assume member is fully braced.
Design based on Dry Service Condition.

Double 1-3/4" x 16" VERSA-LAM® 2.0 3100 SP Roof Beam\Ridg

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

October 4, 201

Inspections Division
Date: 10/30/17

BC CALC® Design Report

Build 6080
Job Name: 79 Island Ave
Address:
City, State, Zip: Peaks Island, ME
Customer: Eldredge Lumber
Code reports: ESR-1040

File Name: 79IslandAve
Description: Ridge Beam
Specifier:
Designer:
Company:
Misc:

Connection Diagram

a minimum = 2" c = 6"
b minimum = 3" d = 12"

Calculated Side Load = 812.5 lb/ft

Connectors are: 16d Common Nails

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 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™, SIMPLE FRAMING SYSTEM® , VERSA-LAM®, VERSA-RIM PLUS® , VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.