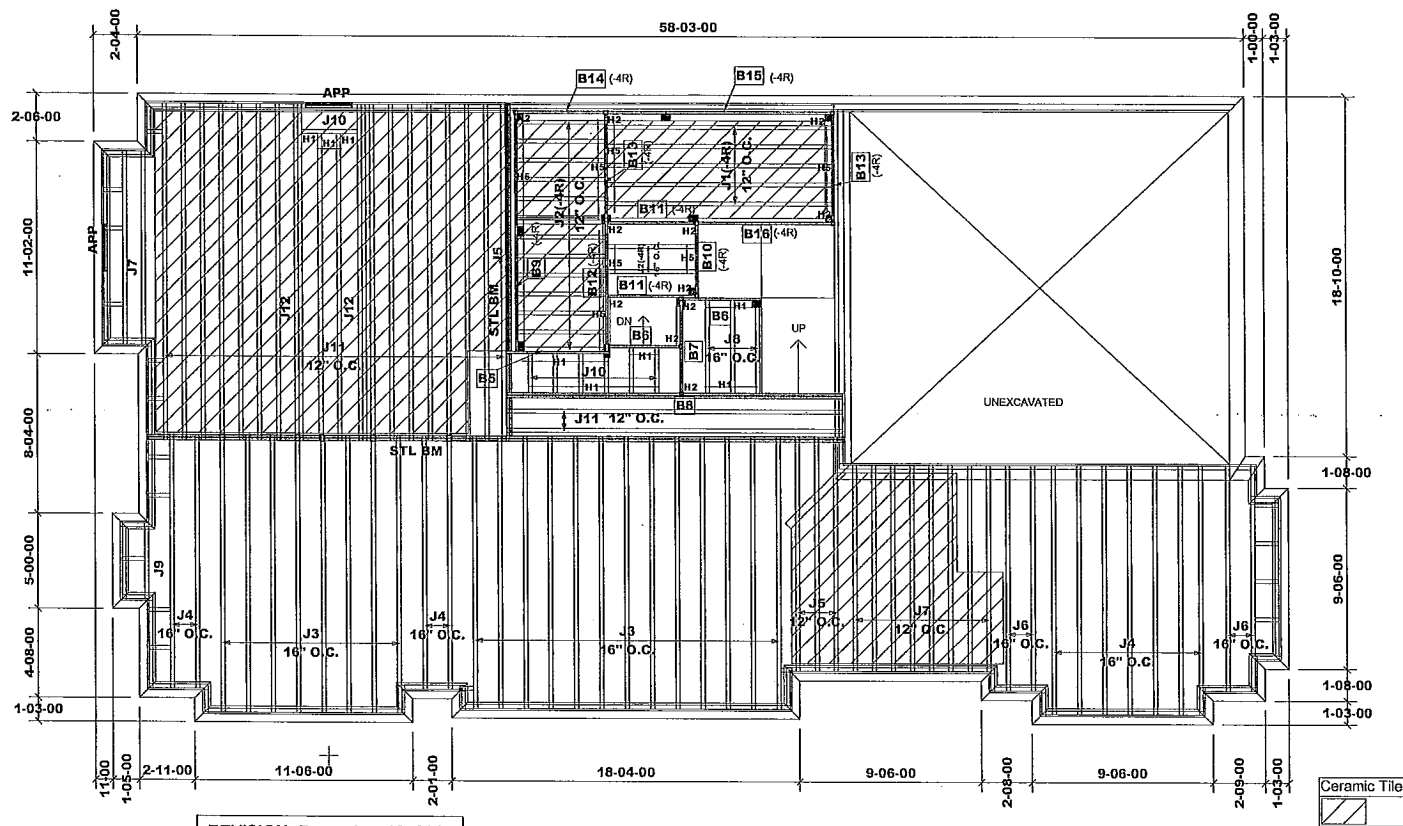




PlotID	Length	Products	Piles	Net Qty
J1	12-00-00	9 1/2" NI-20	1	5
J2	5-00-00	9 1/2" NI-20	1	15
J3	15-00-00	11 7/8" NI-20	1	21
J4	14-00-00	11 7/8" NI-20	1	11
J5	13-00-00	11 7/8" NI-20	1	4
J6	12-00-00	11 7/8" NI-20	1	4
J7	11-00-00	11 7/8" NI-20	1	10
J8	5-00-00	11 7/8" NI-20	1	3
J9	4-00-00	11 7/8" NI-20	1	1
J10	3-00-00	11 7/8" NI-20	1	7
J11	18-00-00	11 7/8" NI-40x	1	19
J12	18-00-00	11 7/8" NI-40x	2	4
B8	18-00-00	VERSALAM-12 2.0E	2	2
B9	13-00-00	VERSALAM-10 2.0E	1	1
B15	9-00-00	VERSALAM-10 2.0E	1	1
B14	8-00-00	VERSALAM-10 2.0E	1	1
B16	8-00-00	VERSALAM-10 2.0E	1	1
B12	7-00-00	VERSALAM-10 2.0E	1	1
B13	6-00-00	VERSALAM-10 2.0E	1	2
B5	6-00-00	VERSALAM-12 2.0E	1	1
B7	6-00-00	VERSALAM-12 2.0E	1	1
B11	5-00-00	VERSALAM-10 2.0E	1	2
B6	5-00-00	VERSALAM-12 2.0E	1	2
B10	4-00-00	VERSALAM-10 2.0E	1	1

HANGER SCHEDULE

H1-----LT251188 (TM)
H2-----HUS1.81/10(TM)
H5-----LT259(TM)

NOTE:

TM-----TOP MOUNT HANGERS
FM-----FACE MOUNT HANGERS

RIMBOARD

1- 1/8" X 9 1/2" O.S.B.
1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED

APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

First Floor Framing

MODEL: UNIT 4006-CORNER- EL.A

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING

TOTAL LENGTH: 34'

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: 290671

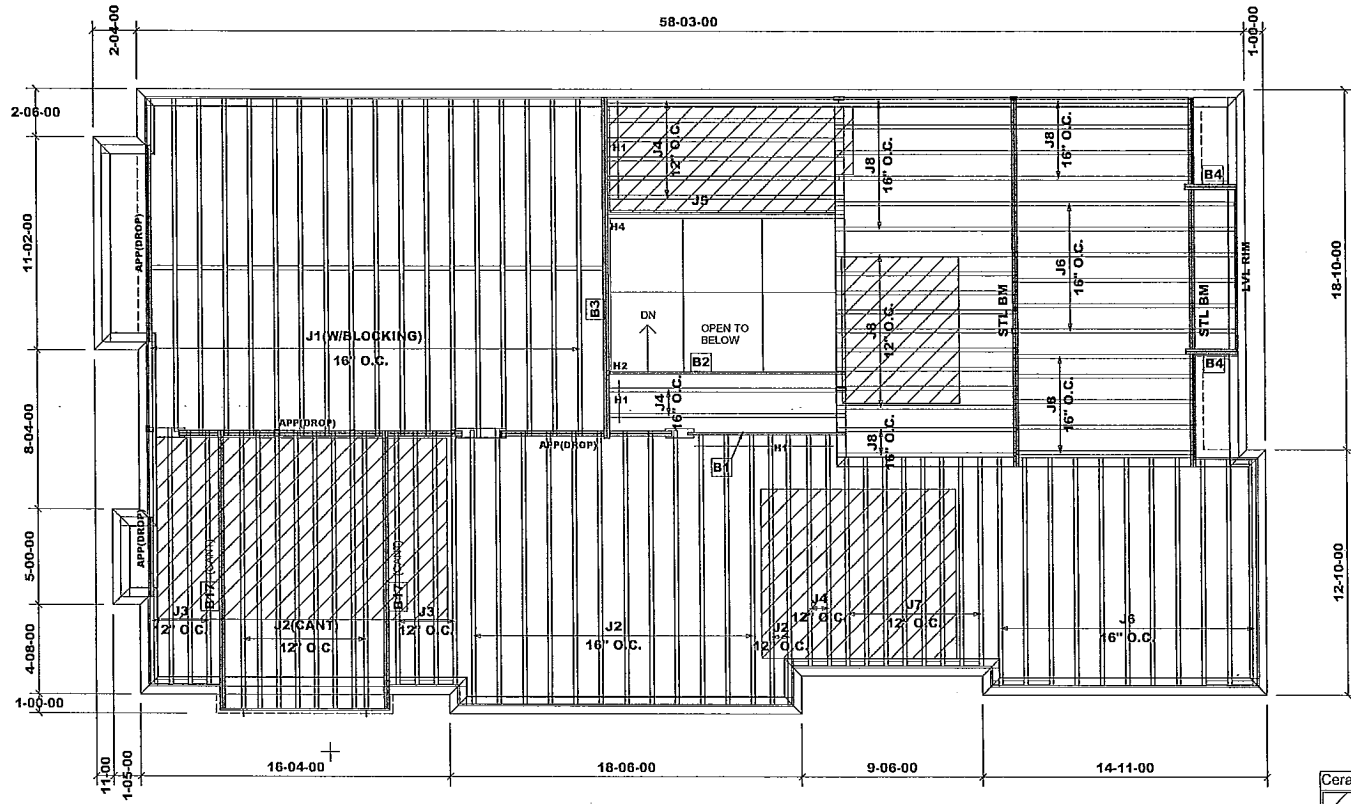
Project: Pine Valley

Date: November 10, 2017

Sheet: 2 of 4

Maple, Ontario

Home Lumber



REVISION: December 18, 2017

MODEL: UNIT 4006-CORNER- EL.B

Second Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING

TOTAL LENGTH: 10'

Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-20	1	18
J2	15-00-00	11 7/8" NI-20	1	22
J3	14-00-00	11 7/8" NI-20	1	8
J4	13-00-00	11 7/8" NI-20	1	10
J5	13-00-00	11 7/8" NI-20	2	2
J6	12-00-00	11 7/8" NI-20	1	17
J7	11-00-00	11 7/8" NI-20	1	8
J8	10-00-00	11 7/8" NI-20	1	26
B3	18-00-00	VERSALAM-12 2.0E	2	2
B17	15-00-00	VERSALAM-12 2.0E	2	4
B2	13-00-00	VERSALAM-12 2.0E	1	1
B1	9-00-00	VERSALAM-12 2.0E	1	1
LVL RIM	9-00-00	VERSALAM-12 2.0E	1	1
B4	3-00-00	VERSALAM-12 2.0E	2	4

HANGER SCHEDULE

H1-----LT251188 (TM)
H2-----HUS1.81/10(FM)
H4-----MIT311.88-2(TM)

NOTE:

TM-----TOP MOUNT HANGERS
FM-----FACE MOUNT HANGERS

RIMBOARD

1- 1/8" X 11 7/8" O.S.B.
SUBFLOOR - 3/4" NAILED & GLUED
APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: 290671

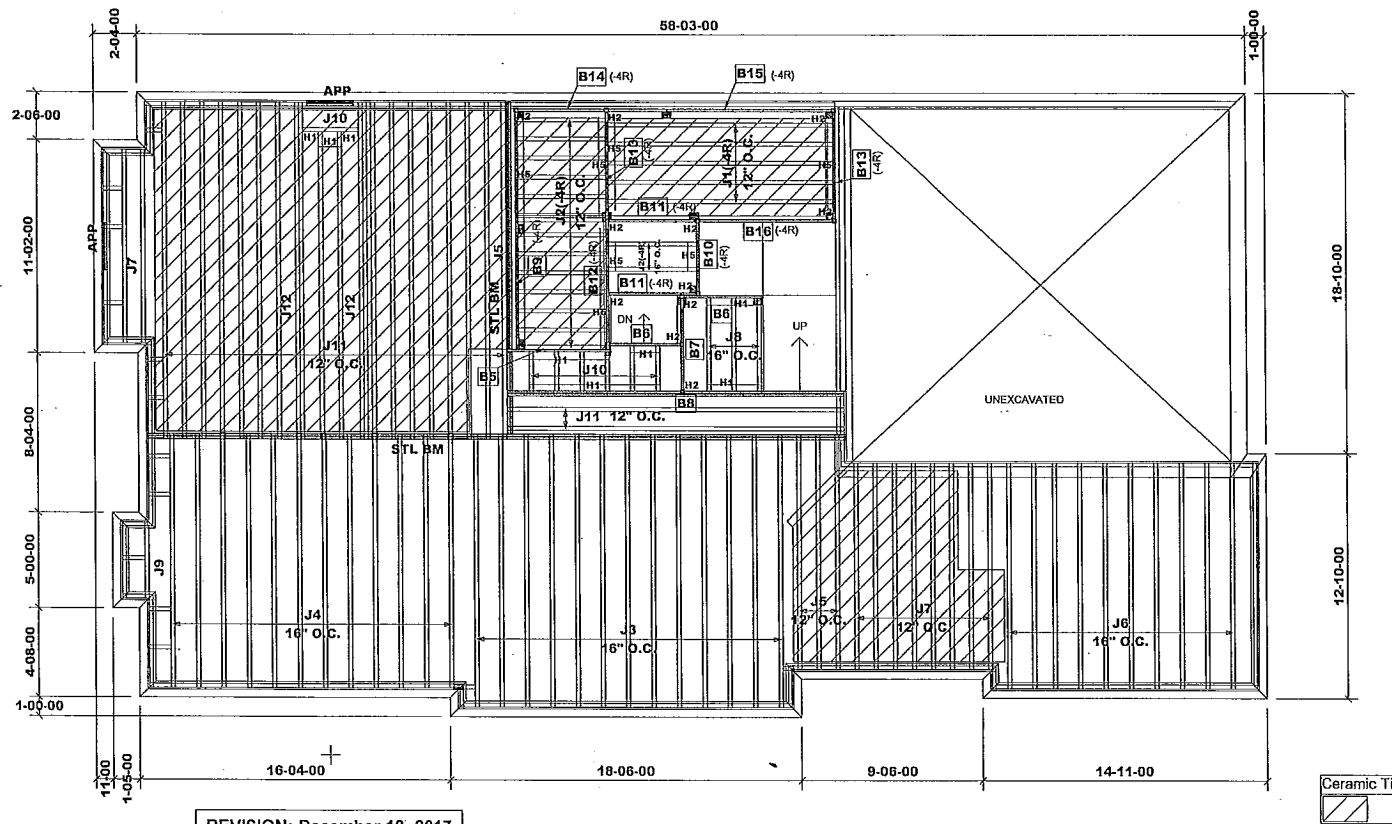
Project: Pine Valley

Date: November 10, 2017

Sheet: 3 of 4

Maple, Ontario

Home Lumber



Products				
PlotID	Length	Product	Pieces	Net Qty
J1	12-00-00	9 1/2" NI-20	1	5
J2	5-00-00	9 1/2" NI-20	1	15
J3	15-00-00	11 7/8" NI-20	1	13
J4	14-00-00	11 7/8" NI-20	1	12
J5	13-00-00	11 7/8" NI-20	1	4
J6	12-00-00	11 7/8" NI-20	1	10
J7	11-00-00	11 7/8" NI-20	1	10
J8	5-00-00	11 7/8" NI-20	1	3
J9	4-00-00	11 7/8" NI-20	1	1
J10	3-00-00	11 7/8" NI-20	1	7
J11	18-00-00	11 7/8" NI-40x	1	19
J12	18-00-00	11 7/8" NI-40x	2	4
B8	18-00-00	VERSALAM-12 2.0E	2	2
B9	13-00-00	VERSALAM-10 2.0E	1	1
B15	9-00-00	VERSALAM-10 2.0E	1	1
B14	8-00-00	VERSALAM-10 2.0E	1	1
B16	8-00-00	VERSALAM-10 2.0E	1	1
B12	7-00-00	VERSALAM-10 2.0E	1	1
B13	6-00-00	VERSALAM-10 2.0E	1	2
B5	6-00-00	VERSALAM-12 2.0E	1	1
B7	6-00-00	VERSALAM-12 2.0E	1	1
B11	5-00-00	VERSALAM-10 2.0E	1	2
B6	5-00-00	VERSALAM-12 2.0E	1	2
B10	4-00-00	VERSALAM-10 2.0E	1	1

HANGER SCHEDULE

H1-----LT251188 (TM)
H2-----HUS1.81/10(FM)
H5-----LT259(TM)

NOTE:

TM -----TOP MOUNT HANGERS
FM-----FACE MOUNT HANGERS

RIMBOARD

1- 1/8" X 9 1/2" O.S.B.
1- 1/8" X 11 7/8" O.S.B.

SUBFLOOR - 3/4" NAILED & GLUED

APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6

1-2X6 SPF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

First Floor Framing

Do not scale - refer to architectural plans for dimensions

11 7/8" BLOCKING

TOTAL LENGTH: 34'

JT/PL: 45147/95234

Builder: Gold Park

Location: Vaughan

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: 290671

Project: Pine Valley

Date: November 10, 2017

Sheet: 4 of 4

Maple, Ontario

Home Lumber



Boise Cascade

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

Floor Beam\B01



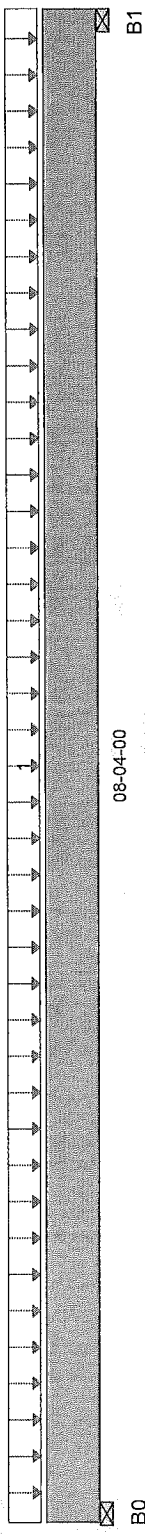
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 09:49:05

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: Second Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Total Horizontal Product Length = 08-04-00

Reaction Summary (Down / Uplift) (lbs)

Tag Description	Load Type	Live		Dead	Snow		Wind		Trib.
		Unf. Area (lb/ft²)	Ref. Start	End	Live	Dead	Snow	Wind	
1			L	00-00-00	08-04-00	40	20	08-00-00	

Load Summary

Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1		L	00-00-00	08-04-00	40	20	08-00-00	

Controls Summary

Pos.	Moment	Factored Demand	5,386 ft-lbs	Factored Resistance	17,696 ft-lbs	Demand / Resistance	30.4%	Load Case	1	Location	04-01-12
End Shear	1,998 lbs				7,232 lbs		27.6%		1		01-02-14
Total Load Defl.	L/999 (0.088")				n/a		n/a		4		04-01-12
Live Load Defl.	L/999 (0.058")				n/a		n/a		5		04-01-12
Max Defl.	0.088"				n/a		n/a		4		04-01-12
Span / Depth	8				n/a		n/a				00-00-00
Squash Blocks	Valid										

Disclosure

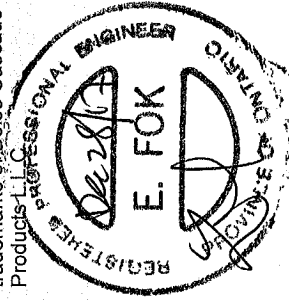
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

	Dim. (L x W)	Demand	Resistance Support	Resistance Member	Material
B0	3" x 1-3/4"	2,850 lbs	88.3%	44.5%	Spruce Pine Fir
B1	3-1/2" x 1-3/4"	2,879 lbs	76.4%	38.5%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4



S.152617



Boise Cascade

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

Floor Beam\B02



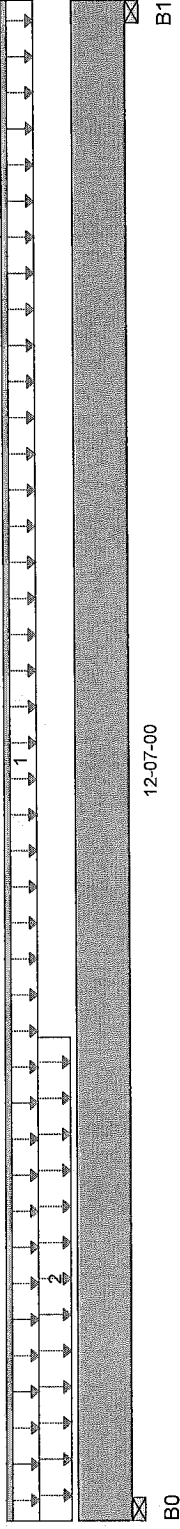
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 09:49:48

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: Second Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



12-07-00

Total Horizontal Product Length = 12-07-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	511 / 0	254 / 0		
B1, 3-1/2"	228 / 0	148 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Lin. (lb/ft)	L	00-00-00	12-07-00	27	14			n/a
2	Unf. Area (lb/ft²)	L	00-00-00	04-00-00	40	15			02-06-00

Controls Summary

Pos.	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,005 ft-lbs	17,696 ft-lbs	11.3%	1	04-06-14
End Shear	748 lbs	7,232 lbs	10.3%	1	01-03-06
Total Load Defl.	L/999 (0.077")	n/a	n/a	4	06-00-10
Live Load Defl.	L/999 (0.049")	n/a	n/a	5	05-11-05
Max Defl.	0.077"	n/a	n/a	4	06-00-10
Span / Depth	12.3	n/a	n/a		00-00-00
Squash Blocks	Valid				

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 1-800-964-6999 before installation.

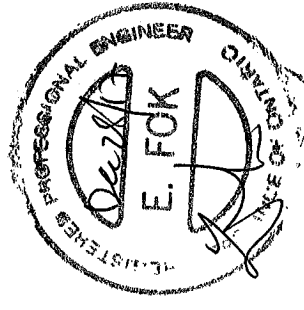
Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	1,084 lbs	28.8%	14.5%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	528 lbs	14%	7.1%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, 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.



5152618



Boise Cascade

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

Floor Beam\B03



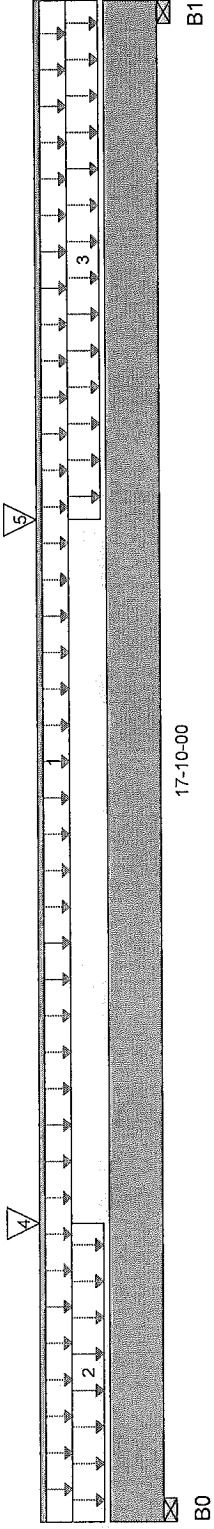
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 09:50:59

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: Second Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Total Horizontal Product Length = 17'-10'-00"

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,728 / 0	1,538 / 0		
B1, 3-1/2"	1,724 / 0	1,757 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Lin. (lb/ft)	L	00-00-00	17-10-00	27	74			n/a
2	Unf. Area (lb/ft²)	L	00-00-00	03-06-00	40	15			06-05-00
3	Unf. Area (lb/ft²)	L	11-09-00	17-10-00	40	20			06-05-00
4	Conc. Pt. (lbs)	L	03-06-00	03-06-00	511	254			n/a
5	Conc. Pt. (lbs)	L	11-09-00	11-09-00		390			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	15,204 ft-lbs	35,392 ft-lbs	43%	1	11-02-13
End Shear	3,894 lbs	14,464 lbs	26.9%	1	16-06-10
Total Load Defl.	L/322 (0.647")	0.869"	74.4%	4	09-02-01
Live Load Defl.	L/718 (0.29")	0.579"	50.1%	5	08-10-15
Max Defl.	0.647"	1"	64.7%	4	09-02-01
Span / Depth	17.6	n/a	n/a		00-00-00
Squash Blocks	Valid				

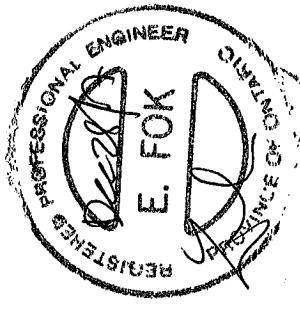
Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	4,515 lbs	59.9%	30.2%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	4,783 lbs	63.5%	32%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4

Nail one ply to another with
3 1/2" spiral nails @ 12"
o.c. staggered in 2 rows





Boise Cascade



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

Floor Beam\B04

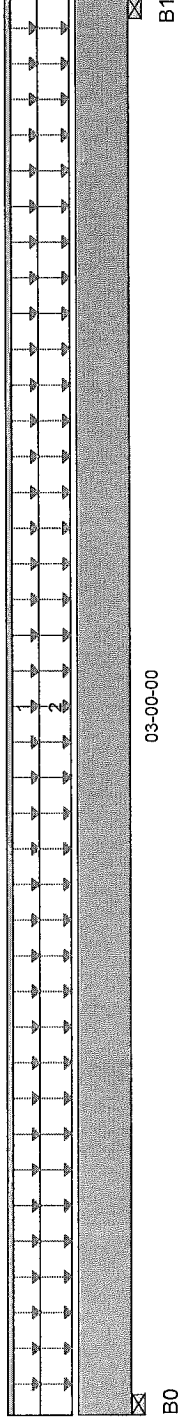
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 11:49:09

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: Second Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Total Horizontal Product Length = 03-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	40 / 0	329 / 0	268 / 0	
B1, 3-1/2"	41 / 0	329 / 0	268 / 0	

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Lin. (lb/ft)	L	00-00-00	03-00-00	27	114		1.00 1.15	n/a
2	Unf. Area (lb/ft²)	L	00-00-00	03-00-00	11	11	21		08-06-00

Controls Summary

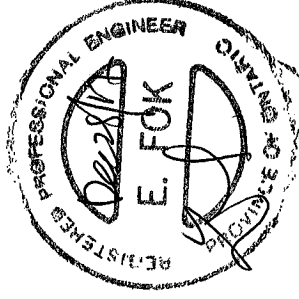
Pos.	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Moment	449 ft-lbs	35,392 ft-lbs	1.3%	5	01-06-00
End Shear	122 lbs	14,464 lbs	0.8%	5	01-03-06
Total Load Defl.	L/999 (0")	n/a	n/a	13	01-06-00
Live Load Defl.	L/999 (0")	n/a	n/a	17	01-06-00
Max Defl.	0"	n/a	n/a	13	01-06-00
Span / Depth	2.6	n/a	n/a		00-00-00
Squash Blocks	Valid				

Bearing Supports

	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	834 lbs	11.1%	5.6%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	834 lbs	11.1%	5.6%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4
Nail one ply to another with
3 1/2" spiral nails @ 6" o.c. staggered in 2 rows



S152620



Boise Cascade

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

Floor Beam\B05



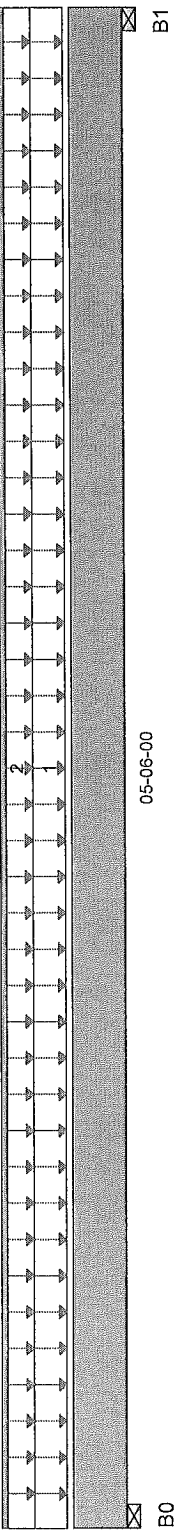
BC CALCO® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 11:49:45

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Total Horizontal Product Length = 05-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	147 / 0	237 / 0		
B1, 3-1/2"	147 / 0	237 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Area (lb/ft²)	L	00-00-00	05-06-00	40	15		1.00 1.15	01-04-00
2	Unf. Lin. (lb/ft)	L	00-00-00	05-06-00	60	60			n/a

Controls Summary

Pos. Moment	596 ft-lbs	17,696 ft-lbs	3.4%	1	02-09-00
End Shear	275 lbs	7,232 lbs	3.8%	1	01-03-06
Total Load Defl.	L/999 (0.004")	n/a	n/a	4	02-09-00
Live Load Defl.	L/999 (0.002")	n/a	n/a	5	02-09-00
Max Defl.	0.004"	n/a	n/a	4	02-09-00
Span / Depth	5.1	n/a	n/a		00-00-00
Squash Blocks	Valid				

Disclosure

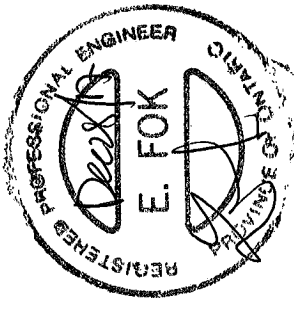
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Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	516 lbs	13.7%	6.9%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	516 lbs	13.7%	6.9%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALCO® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4



S.152624



Boise Cascade

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

Floor Beam\B06



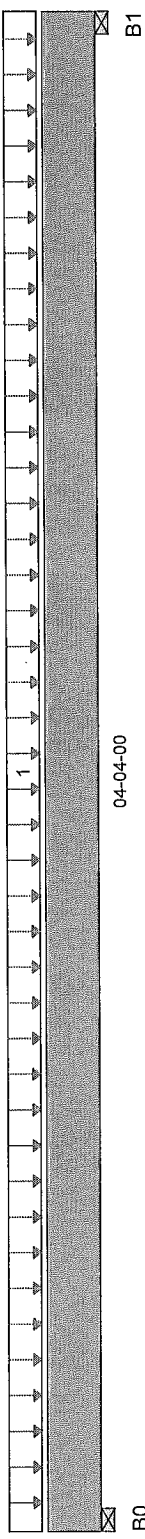
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 11:50:42

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



04-04-00

B1

Total Horizontal Product Length = 04-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	260 / 0	111 / 0		
B1, 3-1/2"	260 / 0	111 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Area (lb/ft²)	L	00-00-00	04-04-00	40	15	1.00	1.15	03-00-00

Controls Summary

Pos.	Factored Demand	458 ft-lbs	Factored Resistance	17,696 ft-lbs	Demand / Resistance	2.6%	Load Case	1	Location
End Shear	216 lbs		7,232 lbs		3%			1	01-03-06
Total Load Defl.	L/999 (0.002")		n/a		n/a			4	02-02-00
Live Load Defl.	L/999 (0.001")		n/a		n/a			5	02-02-00
Max Defl.	0.002"		n/a		n/a			4	02-02-00
Span / Depth	3.9		n/a		n/a				00-00-00
Squash Blocks	Valid								

Disclosure

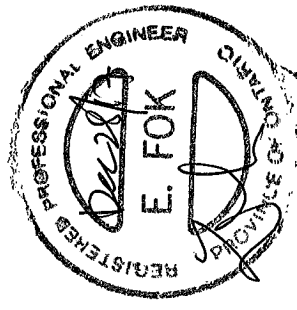
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

	Dim. (L x W)	Demand	Resistance Support	Resistance Member	Demand/ Resistance	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	528 lbs	14%	7.1%		Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	528 lbs	14%	7.1%		Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4



S152622



Boise Cascade

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

Floor Beam\B07



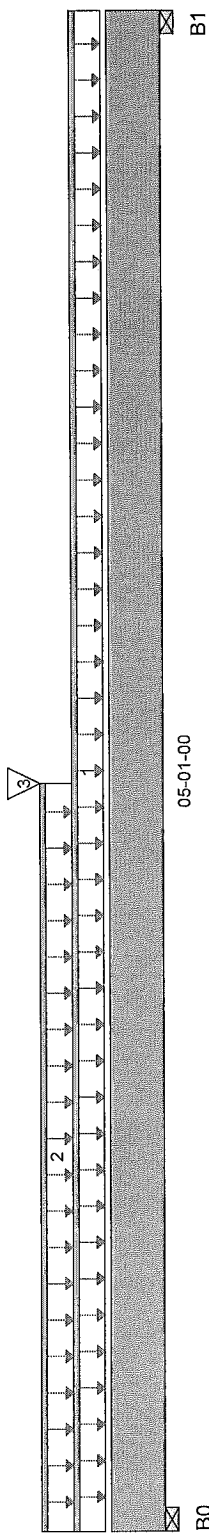
Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 11:51:47

BC CALC® Design Report

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



05-01-00

B1

Total Horizontal Product Length = 05-01-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	253 / 0	135 / 0		
B1, 3-1/2"	211 / 0	113 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Lin. (lb/ft)	L	00-00-00	05-01-00	27	14			n/a
2	Unf. Lin. (lb/ft)	L	00-00-00	02-06-00	27	14			n/a
3	Conc. Pt. (lbs)	L	02-06-00	02-06-00	260	111			n/a

Controls Summary

Pos.	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	862 ft-lbs	17,696 ft-lbs	4.9%	1	02-06-00
End Shear	390 lbs	7,232 lbs	5.4%	1	01-03-06
Total Load Defl.	L/999 (0.004")	n/a	n/a	4	02-06-00
Live Load Defl.	L/999 (0.003")	n/a	n/a	5	02-06-00
Max Defl.	0.004"	n/a	n/a	4	02-06-00
Span / Depth	4.7	n/a	n/a		00-00-00
Squash Blocks	Valid				

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 1-800-964-6999 before installation.

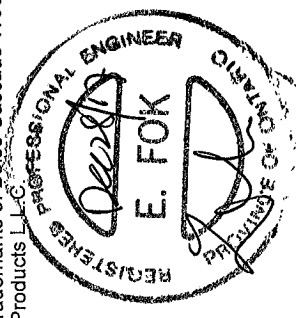
Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	548 lbs	14.6%	7.3%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	458 lbs	12.2%	6.1%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, 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.



S-152623



Boise Cascade



BC CALC® Design Report

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

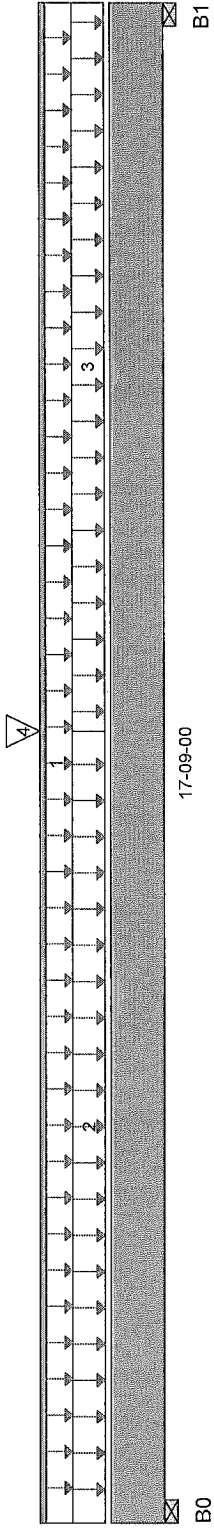
Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B08

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 11:53:18

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Total Horizontal Product Length = 17'-09"-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	966 / 0	523 / 0		
B1, 3-1/2"	1,280 / 0	642 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Lin. (lb/ft)	L	00-00-00	17-09-00	27	14			n/a
2	Unf. Area (lb/ft²)	L	00-00-00	09-03-00	40	15			01-04-00
3	Unf. Area (lb/ft²)	L	09-03-00	17-09-00	40	15			03-00-00
4	Conc. Pt. (lbs)	L	09-03-00	09-03-00	253	135			n/a

Controls Summary

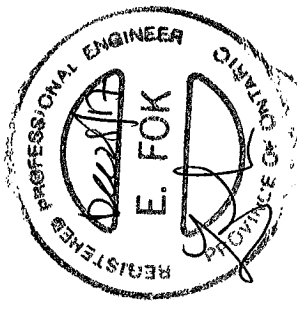
	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	11,349 ft-lbs	35,392 ft-lbs	32.1%	1	09-03-00
End Shear	2,326 lbs	14,464 lbs	16.1%	1	16-05-10
Total Load Defl.	L/492 (0.422")	0.865"	48.8%	4	09-00-00
Live Load Defl.	L/748 (0.278")	0.576"	48.1%	5	09-00-00
Max Defl.	0.422"	1"	42.2%	4	09-00-00
Span / Depth	17.5	n/a	n/a		00-00-00
Squash Blocks	Valid				

Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	2,102 lbs	27.9%	14.1%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	2,722 lbs	36.1%	18.2%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4 Nail one ply to another with 3 1/2" spiral nails @ 12" o.c., staggered in 2 rows



2152624



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

Floor Beam\B09



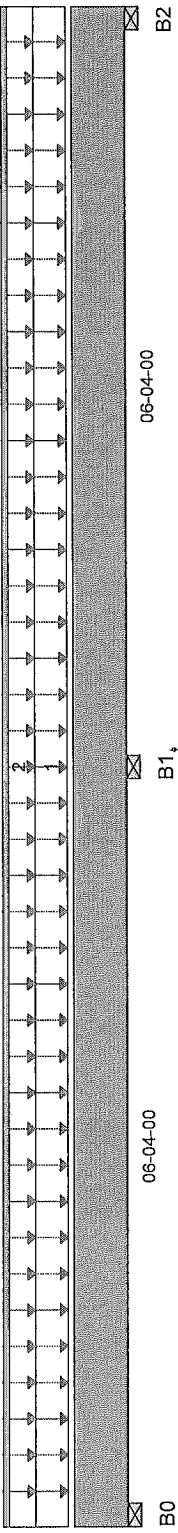
BC CALC® Design Report

Dry | 2 spans | No cantilevers | 0/12 slope (deg)

November 10, 2017 11:53:53

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Total Horizontal Product Length = 12-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	290 / 38	289 / 0		
B1, 3-1/2"	763 / 0	876 / 0		
B2, 3-1/2"	290 / 38	289 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Area (lb/ft²)	L	00-00-00	12-08-00	40	20			02-06-00
2	Unf. Lin. (lb/ft)	L	00-00-00	12-08-00		60			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	906 ft-lbs	11,610 ft-lbs	7.8%	3	09-11-09
Neg. Moment	-1,367 ft-lbs	-11,610 ft-lbs	11.8%	1	06-04-00
End Shear	478 lbs	5,785 lbs	8.3%	2	01-01-00
Cont. Shear	845 lbs	5,785 lbs	14.6%	1	05-04-12
Total Load Defl.	L/999 (0.015")	n/a	n/a	9	02-11-10
Live Load Defl.	L/999 (0.009")	n/a	n/a	12	03-01-04
Total Neg. Defl.	L/999 (-0.001")	n/a	n/a	9	07-01-13
Max Defl.	0.015"	n/a	n/a	9	02-11-10
Span / Depth	7.7	n/a	n/a		00-00-00
Squash Blocks	Valid				

Disclosure

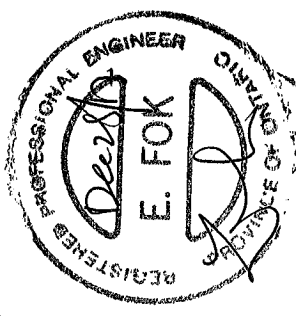
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BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.

Bearing Supports	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	796 lbs	21.1%	10.7%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	2,240 lbs	59.4%	30%	Spruce Pine Fir
B2 Wall/Plate	3-1/2" x 1-3/4"	796 lbs	21.1%	10.7%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4



S152625



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

Floor Beam\B10



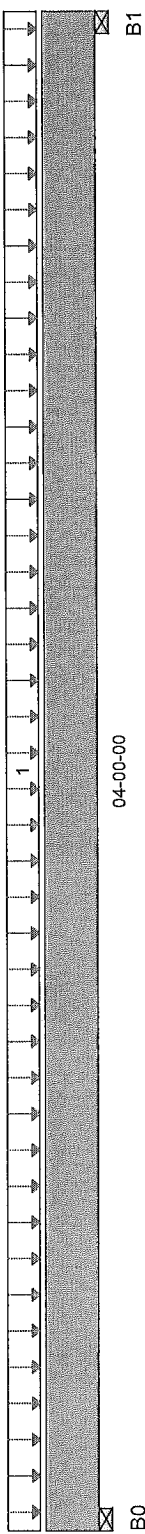
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 11:54:50

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Total Horizontal Product Length = 04-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind	Trib.
B0, 3-1/2"	360 / 0	145 / 0			
B1, 3-1/2"	360 / 0	145 / 0			
Load Summary	Live	Dead	Snow	Wind	Trib.
Tag Description	Load Type	Ref. Start	End	Live	Dead
1	Unf. Area (lb/ft²)	L 00-00-00	04-00-00	40	15
				1.00	0.65
				1.00	1.15
					04-06-00

Controls Summary

Pos.	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Moment	565 ft-lbs	11,610 ft-lbs	4.9%	1	02-00-00
End Shear	330 lbs	5,785 lbs	5.7%	1	01-01-00
Total Load Defl.	L/999 (0.004")	n/a	n/a	4	02-00-00
Live Load Defl.	L/999 (0.003")	n/a	n/a	5	02-00-00
Max Defl.	0.004"	n/a	n/a	4	02-00-00
Span / Depth	4.5	n/a	n/a		00-00-00
Squash Blocks	Valid				

Disclosure

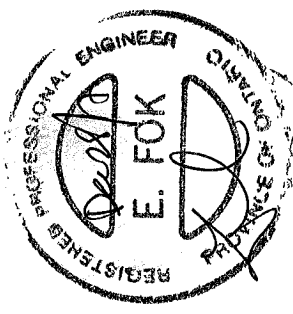
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Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	721 lbs	19.1%	9.6%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	721 lbs	19.1%	9.6%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4



3152626



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

Floor Beam\B11



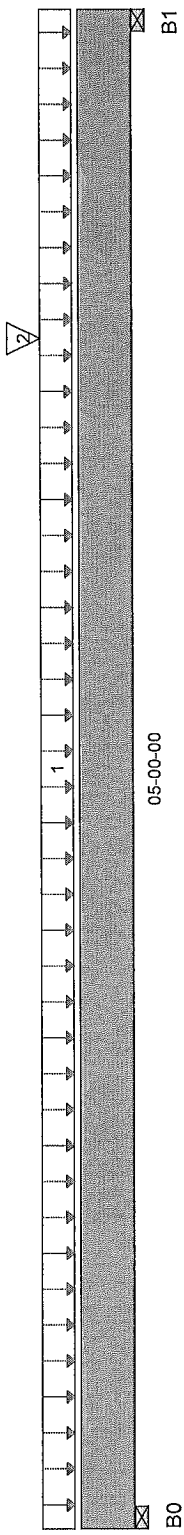
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 11:56:11

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Total Horizontal Product Length = 05-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	318 / 0	131 / 0		
B1, 3-1/2"	542 / 0	215 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Area (lb/ft²)	L	00-00-00	05-00-00	40	15			02-06-00
2	Conc. Pt. (lbs)	L	03-11-00	03-11-00	360	135			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	870 ft-lbs	11,610 ft-lbs	7.5%	1	03-01-15
End Shear	863 lbs	5,785 lbs	14.9%	1	03-11-00
Total Load Defl.	L/999 (0.009")	n/a	n/a	4	02-07-09
Live Load Defl.	L/999 (0.006")	n/a	n/a	5	02-07-09
Max Defl.	0.009"	n/a	n/a	4	02-07-09
Span / Depth	5.7	n/a	n/a		00-00-00
Squash Blocks	Valid				

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 1-800-964-6999 before installation.

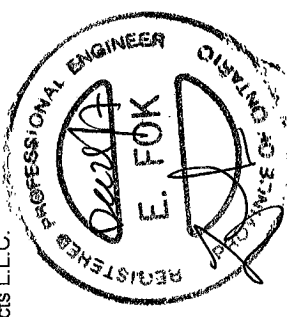
Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	641 lbs	17%	8.6%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	1,083 lbs	28.7%	14.5%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4

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.



3152627



Boise Cascade



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

Floor Beam\B12

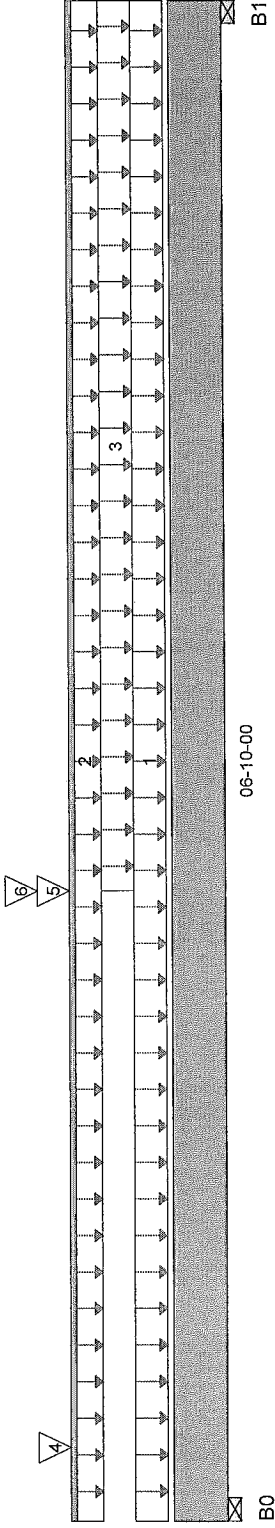
Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 11:57:51

BC CALC® Design Report

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



06-10-00

B1

Total Horizontal Product Length = 06-10-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,163 / 0	721 / 0		
B1, 3-1/2"	948 / 0	625 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Area (lb/ft^2)	L	00-00-00	06-10-00	40	20			02-06-00
2	Unf. Lin. (lb/ft)	L	00-00-00	06-10-00		60			n/a
3	Unf. Area (lb/ft^2)	L	02-10-00	06-10-00	40	15			02-06-00
4	Conc. Pt. (lbs)	L	00-04-00	00-04-00	260	111			n/a
5	Conc. Pt. (lbs)	L	02-10-00	02-10-00	450	169			n/a
6	Conc. Pt. (lbs)	L	02-10-00	02-10-00	318	131			n/a

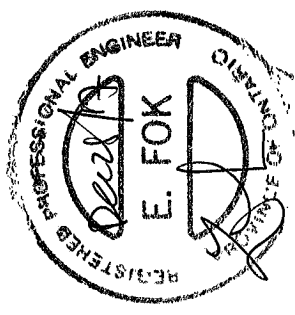
Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	4,398 ft-lbs	11,610 ft-lbs	37.9%	1	02-10-00
End Shear	1,826 lbs	5,785 lbs	31.6%	1	01-01-00
Total Load Defl.	L/999 (0.084")	n/a	n/a	4	03-04-09
Live Load Defl.	L/999 (0.052")	n/a	n/a	5	03-04-09
Max Defl.	0.084"	n/a	n/a	4	03-04-09
Span / Depth	8.1	n/a	n/a		00-00-00
Squash Blocks	Valid				

Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	2,645 lbs	70.2%	35.4%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	2,203 lbs	58.5%	29.5%	Spruce Pine Fir

Notes



S152628



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

Floor Beam\B13



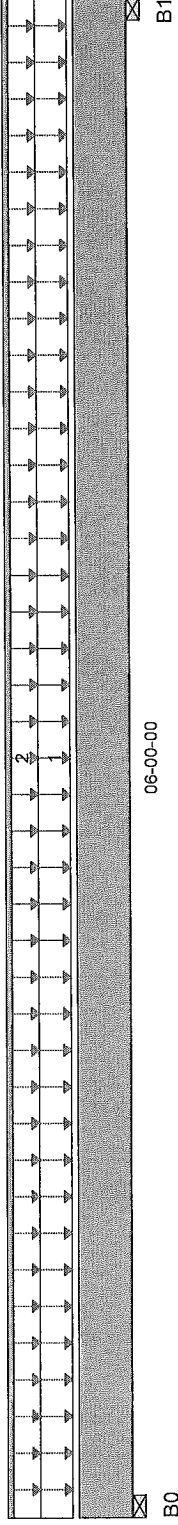
BC CALCO® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 11:58:54

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead
B0, 3-1/2"	1,020 / 0	704 / 0
B1, 3-1/2"	1,020 / 0	704 / 0

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Area (lb/ft²)	L	00-00-00	06-00-00	40	20	1.00	1.15	08-06-00
2	Unf. Lin. (lb/ft)	L	00-00-00	06-00-00	60	60			n/a

Controls Summary

Pos.	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Moment	3,085 ft-lbs	11,610 ft-lbs	26.6%	1	03-00-00
End Shear	1,540 lbs	5,785 lbs	26.6%	1	01-01-00
Total Load Defl.	L/999 (0.049")	n/a	n/a	4	03-00-00
Live Load Defl.	L/999 (0.029")	n/a	n/a	5	03-00-00
Max Defl.	0.049"	n/a	n/a	4	03-00-00
Span / Depth	7	n/a	n/a		00-00-00
Squash Blocks	Valid				

Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	2,411 lbs	64%	32.3%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	2,411 lbs	64%	32.3%	Spruce Pine Fir

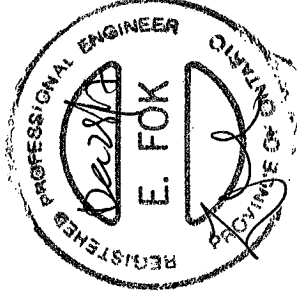
Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALCO® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4

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 1-800-964-6999 before installation.

BC CALCO®, BC FRAMER®, AJST™, ALLJOIST®, BC RIM BOARD™, BC®, 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.



S152629



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

Floor Beam\B14

Dry | 1 span | No cantilevers | 0/12 slope (deg)

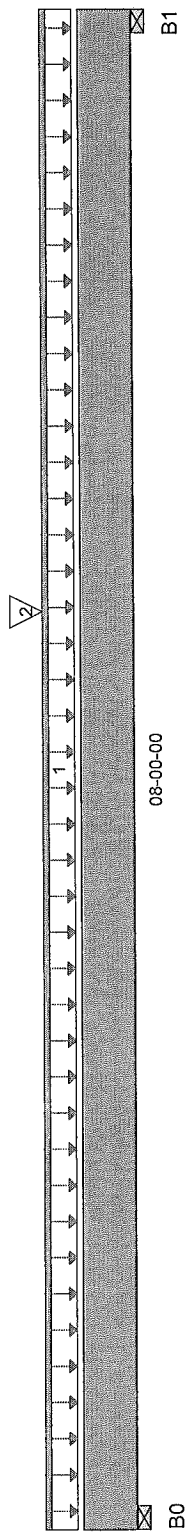
November 10, 2017 11:59:43



BC CALCO® Design Report

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Total Horizontal Product Length = 08-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	505 / 0	590 / 0		
B1, 3-1/2"	731 / 0	745 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Lin. (lb/ft)	L	00-00-00	08-00-00	1.00	0.65			n/a
2	Conc. Pt. (lbs)	L	04-10-00	04-10-00	1,020	704			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	5,263 ft-lbs	11,610 ft-lbs	45.3%	1	04-10-00
End Shear	1,876 lbs	5,785 lbs	32.4%	1	06-11-00
Total Load Defl.	L/694 (0.13")	0.377"	34.6%	4	04-01-09
Live Load Defl.	L/999 (0.067")	n/a	n/a	5	04-02-15
Max Defl.	0.13"	1"	13%	4	04-01-09
Span / Depth	9.5	n/a	n/a		00-00-00
Squash Blocks	Valid				

Disclosure

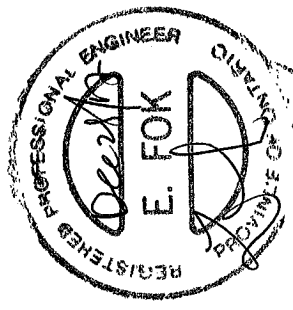
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	1,495 lbs	39.7%	20%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	2,027 lbs	53.8%	27.1%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALCO® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4



S152630



Boise Cascade

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

Floor Beam\B15



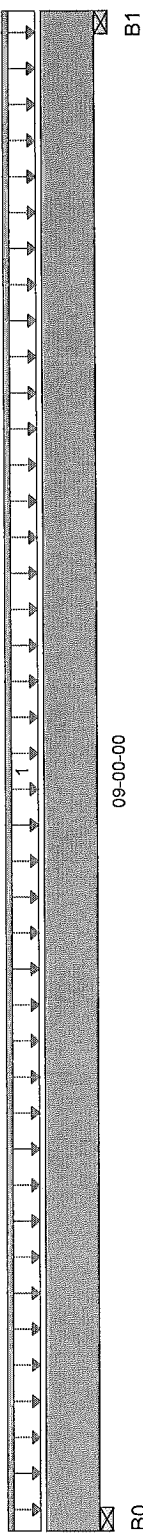
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 12:00:08

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



09-00-00

Total Horizontal Product Length = 09-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	121 / 0	360 / 0		
B1, 3-1/2"	122 / 0	360 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Lin. (lb/ft)	L	00-00-00	09-00-00	27	74		1.00 1.15	n/a

Controls Summary

Pos.	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Moment	1,022 ft-lbs	11,502 ft-lbs	8.9%	0	04-06-00
End Shear	361 lbs	4,701 lbs	7.7%	0	01-03-06
Total Load Defl.	L/999 (0.026")	n/a	n/a	4	04-06-00
Live Load Defl.	L/999 (0.007")	n/a	n/a	5	04-06-00
Max Defl.	0.026"	n/a	n/a	4	04-06-00
Span / Depth	8.6	n/a	n/a		00-00-00
Squash Blocks	Valid				

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 1-800-964-6999 before installation.

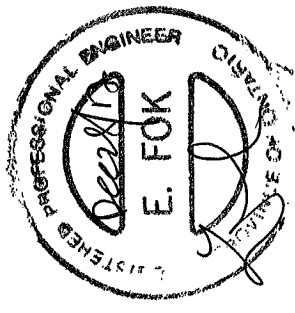
Bearing Supports

	Dim. (L x W)	Demand	Demand/ Resistance Support	Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	504 lbs	20.6%	10.4%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	504 lbs	20.6%	10.4%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4



BC CALC®, BC FRAMER®, AJST™, ALLJOIST®, BC RIM BOARD™, BC®, 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.

S.152631



Boise Cascade

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP

Floor Beam\B16



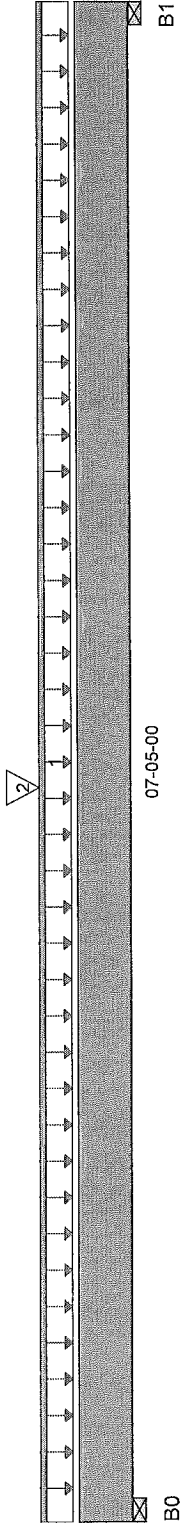
BC CALC® Design Report

Dry | 1 span | No cantilevers | 0/12 slope (deg)

November 10, 2017 14:11:34

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: First Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Total Horizontal Product Length = 07-05-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	287 / 0	362 / 0		
B1, 3-1/2"	274 / 0	357 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Lin. (lb/ft)	L	00-00-00	07-05-00	27	74			n/a
2	Conc. Pt. (lbs)	L	03-07-00	03-07-00	360	135			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,071 ft-lbs	11,610 ft-lbs	17.8%	1	03-07-00
End Shear	732 lbs	5,785 lbs	12.7%	1	01-01-00
Total Load Defl.	L/999 (0.046")	n/a	n/a	4	03-08-01
Live Load Defl.	L/999 (0.023")	n/a	n/a	5	03-08-01
Max Defl.	0.046"	n/a	n/a	4	03-08-01
Span / Depth	8.8	n/a	n/a		00-00-00
Squash Blocks	Valid				

Disclosure

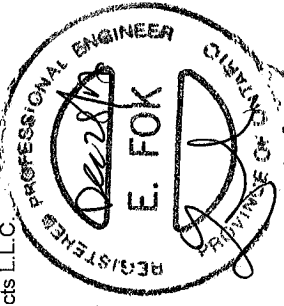
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation.

Bearing Supports

	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	883 lbs	23.4%	11.8%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	857 lbs	22.7%	11.5%	Spruce Pine Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented results per CSA O86.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4



S.152632



Boise Cascade



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

Floor Beam\B17

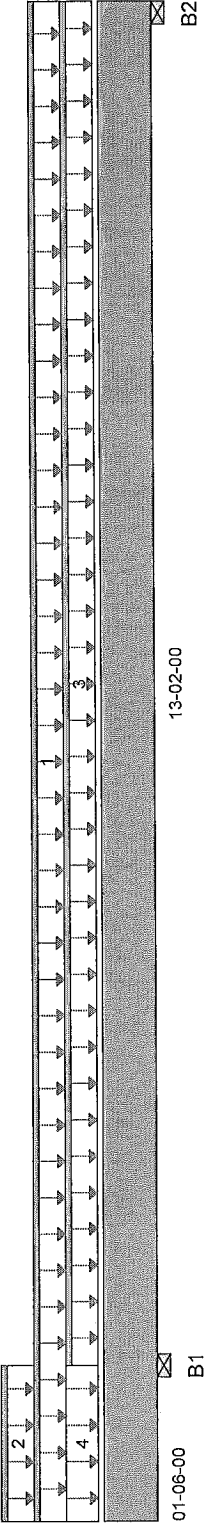
BC CALC® Design Report

Dry | 2 spans | Left cantilever | 0/12 slope (deg)

November 10, 2017 14:15:34

Build 6080
Job Name: 45147 (4006)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R

File Name: 290671.bcc
Description: Second Floor Framing
Specifier:
Designer: NL
Company: Alpa Roof Trusses
Misc:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 3-1/2"	392 / 0	564 / 0	200 / 0	
B2, 3-1/2"	362 / 2	251 / 0	0 / 11	

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Lin. (lb/ft)	L	00-00-00	14-08-00	27	14			n/a
2	Unf. Lin. (lb/ft)	L	00-00-00	01-06-00		100			n/a
3	Unf. Lin. (lb/ft)	L	01-06-00	14-08-00	27	14			n/a
4	Unf. Area (lb/ft²)	L	00-00-00	01-06-00		11	21	1.00 1.15	06-00-00

Controls Summary

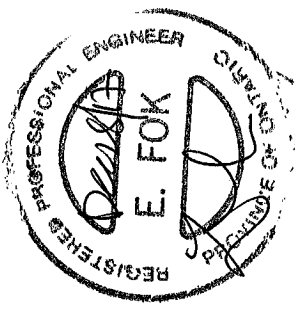
	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,608 ft-lbs	35,392 ft-lbs	7.4%	9	08-02-02
Neg. Moment	-498 ft-lbs	-35,392 ft-lbs	1.4%	13	01-06-00
End Shear	689 lbs	14,464 lbs	4.8%	9	13-04-10
Cont. Shear	729 lbs	14,464 lbs	5%	1	02-07-10
Total Load Defl.	L/999 (0.057")	n/a	n/a	24	08-00-02
Live Load Defl.	L/999 (0.035")	n/a	n/a	34	08-00-02
Total Neg. Defl.	2xL/1,998 (-0.02")	n/a	n/a	24	00-00-00
Max Defl.	0.057"	n/a	n/a	24	08-00-02
Cant. Max Defl.	-0.02"	n/a	n/a	24	00-00-00
Span / Depth	13.1	n/a	n/a		
Squash Blocks	Valid	n/a	n/a		

Bearing Supports

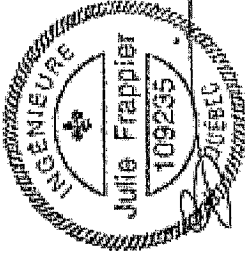
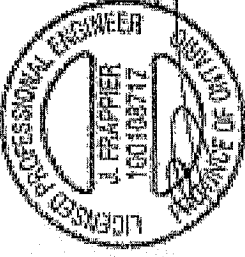
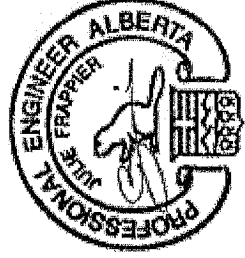
	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1 Wall/Plate	3-1/2" x 3-1/2"	1,393 lbs	18.5%	9.3%	Spruce Pine Fir
B2 Wall/Plate	3-1/2" x 3-1/2"	857 lbs	11.4%	5.7%	Spruce Pine Fir

Notes

Nail one ply to another with
3 1/2" spiral nails @ 12"
o.c., staggered in 2 rows



8.152633



Maximum Floor Spans

Live Load = 40 psf, Dead Load = 15 psf
Simple Spans, L/360 Deflection Limit
3/4" OSB G&N Sheathing

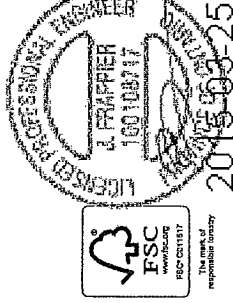
Depth	Series	Bare			1/2" Gypsum Ceiling		
		On Centre Spacing			On Centre Spacing		
9-1/2"	NI-20	12"	15'-10"	15'-0"	12"	15'-5"	14'-6"
	NI-40x	17'-0"	16'-0"	14'-5"	16'-4"	15'-5"	14'-6"
	NI-60	17'-2"	16'-2"	15'-7"	17'-6"	16'-7"	15'-11"
	NI-70	18'-0"	16'-11"	16'-3"	18'-5"	17'-3"	15'-11"
	NI-80	18'-3"	17'-1"	16'-5"	18'-8"	17'-5"	16'-1"
11-7/8"	NI-20	17'-10"	16'-10"	15'-6"	18'-6"	17'-4"	16'-1"
	NI-40x	19'-4"	17'-11"	17'-3"	19'-11"	18'-6"	17'-9"
	NI-60	19'-7"	18'-2"	17'-5"	20'-2"	18'-9"	17'-2"
	NI-70	20'-9"	19'-2"	18'-3"	21'-4"	19'-9"	18'-10"
	NI-80	21'-1"	19'-5"	17'-7"	21'-7"	20'-0"	18'-0"
14"	NI-90x	21'-8"	20'-0"	19'-1"	22'-2"	20'-6"	19'-6"
	NI-40x	21'-5"	19'-10"	17'-11"	22'-1"	20'-6"	19'-7"
	NI-60	21'-10"	20'-2"	18'-2"	22'-5"	20'-10"	19'-11"
	NI-70	23'-0"	21'-3"	20'-3"	23'-8"	21'-11"	20'-10"
	NI-80	23'-5"	21'-7"	20'-7"	24'-0"	22'-3"	21'-2"
16"	NI-90x	24'-1"	22'-3"	21'-2"	24'-8"	22'-10"	21'-9"
	NI-40x	23'-9"	22'-0"	20'-11"	24'-6"	22'-9"	21'-8"
	NI-60	25'-1"	23'-2"	22'-0"	25'-9"	23'-10"	22'-9"
	NI-80	25'-6"	23'-6"	22'-4"	26'-1"	24'-2"	23'-1"
	NI-90x	26'-4"	24'-3"	23'-1"	26'-11"	24'-11"	23'-8"
Depth	Series	Mid-Span Blocking			Mid-Span Blocking and 1/2" Gypsum Ceiling		
		On Centre Spacing			On Centre Spacing		
9-1/2"	NI-20	12"	17'-1"	15'-5"	12"	15'-5"	14'-6"
	NI-40x	18'-8"	17'-6"	16'-7"	19'-2"	17'-8"	16'-7"
	NI-60	18'-11"	17'-8"	16'-10"	19'-4"	18'-0"	16'-10"
	NI-70	20'-0"	18'-7"	17'-9"	20'-5"	19'-0"	18'-2"
	NI-80	20'-3"	18'-10"	17'-11"	20'-8"	19'-3"	18'-4"
11-7/8"	NI-20	20'-2"	18'-8"	17'-6"	20'-7"	18'-8"	17'-6"
	NI-40x	21'-10"	20'-4"	19'-5"	22'-5"	20'-11"	19'-9"
	NI-60	22'-1"	20'-7"	19'-7"	22'-8"	21'-2"	20'-3"
	NI-70	23'-4"	21'-8"	20'-8"	23'-10"	22'-3"	21'-3"
	NI-80	23'-7"	21'-11"	20'-11"	24'-1"	22'-6"	21'-5"
14"	NI-90x	24'-3"	22'-6"	21'-6"	24'-8"	23'-0"	22'-0"
	NI-40x	24'-5"	22'-9"	21'-8"	25'-1"	23'-6"	21'-9"
	NI-60	24'-10"	23'-1"	22'-0"	25'-6"	23'-10"	22'-9"
	NI-70	26'-1"	24'-3"	23'-2"	26'-8"	24'-11"	23'-9"
	NI-80	26'-6"	24'-7"	23'-5"	27'-1"	25'-3"	24'-1"
16"	NI-90x	27'-3"	25'-4"	24'-1"	27'-9"	25'-11"	24'-8"
	NI-60	27'-3"	25'-5"	24'-2"	28'-0"	26'-2"	25'-0"
	NI-70	28'-8"	26'-8"	25'-4"	29'-3"	27'-4"	26'-1"
	NI-80	29'-1"	27'-0"	25'-9"	29'-8"	27'-9"	26'-5"
	NI-90x	29'-11"	27'-10"	26'-6"	30'-6"	28'-5"	27'-2"

- Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/360 and a total load deflection limit of L/240.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 3/4 inch for a joist spacing of 24 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
- Minimum bearing length shall be 1-3/4 inches for the end bearings.
- Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.
- This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, NBC 2010, and OBC 2012.
- Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-L274C.



www.nordicewp.com

Refer to the Installation Guide for Residential Floors for additional information.
CMC EVALUATION REPORT 13032-R



WEB HOLE SPECIFICATIONS

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

- The distance between the inside edge of the support and the centreline of any hole or duct chase opening shall be in compliance with the requirements of Table 1 or 2, respectively.
- I-joist top and bottom flanges must NEVER be cut, notched, or otherwise modified. Whenever possible, field-cut holes should be centred on the middle of the web.
- The maximum size hole or the maximum depth of a duct chase opening that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the hole or opening and the adjacent I-joist flange.

TABLE 1

LOCATION OF CIRCULAR HOLES IN JOIST WEBS
Simple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 psf

Joist Depth	Joist Series	Minimum Distance from Inside Face of Any Support to Centre of Hole (ft - in.)											
		2	3	4	5	6	6-1/4	7	8	8-5/8	9	10	10-3/4
9-1/2"	Ni-20	0-7"	1-6"	2-10"	4-3"	5-8"	6-0"	---	---	---	---	---	12-3/4
	Ni-40x	0-7"	1-6"	3-0"	4-4"	6-0"	6-4"	---	---	---	---	---	---
	Ni-60	1-3"	2-6"	4-0"	5-4"	7-0"	7-5"	---	---	---	---	---	---
	Ni-80	2-0"	3-4"	4-9"	6-3"	8-0"	8-4"	---	---	---	---	---	---
11-7/8"	Ni-20	0-7"	0-8"	1-3"	2-8"	4-0"	4-4"	5-0"	6-6"	7-9"	---	---	---
	Ni-40x	0-7"	0-8"	1-3"	2-8"	4-0"	4-4"	5-0"	6-6"	7-9"	---	---	---
	Ni-60	0-7"	1-3"	2-6"	4-0"	5-4"	6-0"	7-3"	8-10"	10-0"	---	---	---
	Ni-80	1-3"	2-6"	4-0"	5-4"	6-0"	7-3"	8-4"	10-0"	11-2"	---	---	---
14"	Ni-20	0-7"	0-8"	1-3"	2-8"	4-0"	4-4"	5-0"	6-6"	7-9"	---	---	---
	Ni-40x	0-7"	0-8"	1-3"	2-8"	4-0"	4-4"	5-0"	6-6"	7-9"	---	---	---
	Ni-60	0-7"	1-3"	2-6"	4-0"	5-4"	6-0"	7-3"	8-10"	10-0"	---	---	---
	Ni-80	1-3"	2-6"	4-0"	5-4"	6-0"	7-3"	8-4"	10-0"	11-2"	---	---	---
16"	Ni-20	0-7"	0-8"	1-3"	2-8"	4-0"	4-4"	5-0"	6-6"	7-9"	---	---	---
	Ni-40x	0-7"	0-8"	1-3"	2-8"	4-0"	4-4"	5-0"	6-6"	7-9"	---	---	---
	Ni-60	0-7"	1-3"	2-6"	4-0"	5-4"	6-0"	7-3"	8-10"	10-0"	---	---	---
	Ni-80	1-3"	2-6"	4-0"	5-4"	6-0"	7-3"	8-4"	10-0"	11-2"	---	---	---

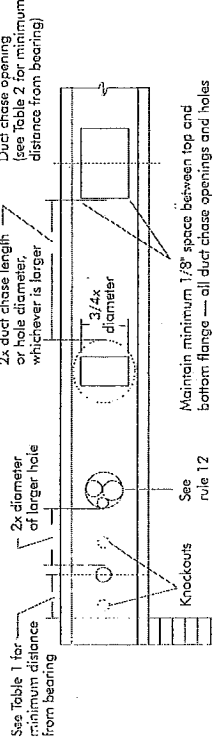
1. Above table may be used for I-joist spacing of 24 inches on centre or less.

2. Hole location distance is measured from inside face of supports to centre of hole.

3. Distances in this chart are based on uniformly loaded joists.

4. The above table is based on the I-joists being used at their maximum spans. The minimum distance as given above may be reduced for shorter spans; contact your local distributor.

FIGURE 7 FIELD-CUT HOLE LOCATOR



SAFETY AND CONSTRUCTION PRECAUTIONS



Do not walk on I-joists until fully fastened and braced, or serious injuries can result.



Never stack building materials over unsheathed I-joists. Once I-joists with concentrated loads from building materials.

WARNING: I-joists are not stable until completely installed, and will not carry any load until fully braced and sheathed.

AVOID ACCIDENTS BY FOLLOWING THESE IMPORTANT GUIDELINES:

- Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bracing at joist ends. When I-joists are applied continuous over interior supports and a load-bearing wall is planned at that location, blocking will be required at the interior support.
- When the building is completed, the floor sheathing will provide lateral support for the top flanges of the I-joists. Until this sheathing is applied, temporary bracing, often called struts, or temporary sheathing must be applied to prevent I-joist rollover or buckling.
 - Temporary bracing or struts must be 1x4 inch minimum, at least 8 feet long and spaced no more than 8 feet on centre, and must be secured with a minimum of two 2-1/2" nails fastened to the top surface of each I-joist. Nail the bracing to a lateral restraint at the end of each bay. Lap ends of adjoining bracing over at least two I-joists.
 - Or, sheathing (temporary or permanent) can be nailed to the top flanges of the first 4 feet of I-joists at the end of the bay.
- For cantilevered I-joists, brace top and bottom flanges, and brace ends with cleave panels, rim board, or cross-bracing.
- Install and fully nail permanent sheathing to each I-joist before placing loads on the floor system. Then, stack building materials over beams or walls only.
- Never install a damaged I-joist.

Improper storage or installation, failure to follow applicable building codes, failure to follow span ratings for Nordic I-joists, failure to follow allowable hole sizes and locations, or failure to use web stiffeners when required can result in serious accidents. Follow these installation guidelines carefully.



PRODUCT WARRANTY

Chantiers Chibougama guarantees that, in accordance with our specifications, Nordic products are free from manufacturing defects in material and workmanship.

Furthermore, Chantiers Chibougama warrants that our products, when utilized in accordance with our handling and installation instructions, will meet or exceed our specifications for the lifetime of the structure.

TABLE 2

DUCT CHASE OPENING SIZES AND LOCATIONS
Simple Span Only

Joist Depth	Joist Series	Minimum distance from inside face of supports to centre of opening (ft - in.)											
		8	10	12	14	16	18	20	22	24	26	28	30
9-1/2"	Ni-20	4-1"	4-5"	4-10"	5-4"	5-8"	6-1"	6-6"	7-1"	7-5"	7-9"	8-3"	8-6"
	Ni-40x	5-3"	5-8"	6-0"	6-5"	6-10"	7-3"	7-8"	8-2"	8-6"	8-9"	9-3"	9-6"
	Ni-60	5-4"	5-9"	6-2"	6-7"	7-1"	7-5"	8-0"	8-3"	8-7"	9-0"	9-4"	9-7"
	Ni-80	5-1"	5-5"	5-10"	6-3"	6-7"	7-1"	7-6"	8-1"	8-4"	8-8"	9-1"	9-4"
11-7/8"	Ni-20	5-9"	6-2"	6-6"	7-1"	7-5"	7-9"	8-3"	8-7"	9-1"	9-4"	9-7"	10-0"
	Ni-40x	6-8"	7-2"	7-6"	8-1"	8-6"	9-1"	9-5"	9-9"	10-3"	10-7"	11-0"	11-4"
	Ni-60	7-3"	7-8"	8-0"	8-6"	9-0"	9-3"	9-9"	10-3"	10-7"	11-0"	11-4"	11-7"
	Ni-80	7-1"	7-4"	7-9"	8-3"	8-7"	9-1"	9-5"	9-9"	10-3"	10-7"	11-0"	11-4"
14"	Ni-20	7-6"	7-7"	8-0"	8-3"	8-10"	9-3"	9-8"	10-1"	10-7"	10-11"	10-11"	10-11"
	Ni-40x	8-1"	8-7"	9-0"	9-6"	10-1"	10-7"	11-2"	12-0"	12-8"	13-2"	13-2"	13-2"
	Ni-60	8-9"	9-3"	9-8"	10-1"	10-6"	11-1"	11-6"	12-1"	12-6"	13-1"	13-3"	13-3"
	Ni-80	8-7"	9-1"	9-5"	9-10"	10-4"	10-8"	11-2"	11-7"	12-3"	12-7"	13-1"	13-3"
16"	Ni-20	9-2"	9-8"	10-0"	10-6"	10-11"	11-5"	11-9"	12-4"	12-8"	13-2"	13-6"	14-0"
	Ni-40x	9-4"	9-9"	10-3"	10-7"	11-1"	11-7"	12-1"	12-7"	13-1"	13-7"	14-1"	14-5"
	Ni-60	10-3"	10-8"	11-2"	11-6"	12-1"	12-6"	13-2"	13-6"	14-1"	14-5"	14-9"	15-2"
	Ni-80	10-4"	10-9"	11-3"	11-7"	12-1"	12-6"	13-1"	13-5"	14-0"	14-4"	14-8"	15-2"

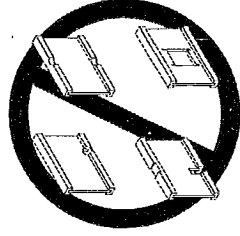
1. Above table may be used for I-joist spacing of 24 inches on centre or less.

2. Duct chase opening location distance is measured from inside face of supports to centre of opening.

3. The above table is based on simple-span joists only. For other applications, contact your local distributor.

4. Distances are based on uniformly loaded floor joists that meet the span requirements for a design live load of 40 psf and a dead load of 15 psf, and a live load deflection limit of L/360.

5. The above table is based on the I-joists being used at their maximum spans. The minimum distance as given above may be reduced for shorter spans; contact your local distributor.

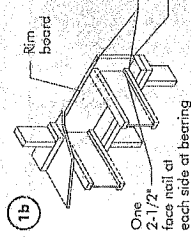
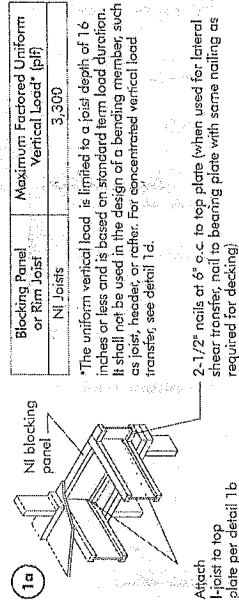


Knockouts are pre-cored holes provided for the contractor's convenience to install electrical or small plumbing lines. They are 1-1/2 inches in diameter, and are spaced 15 inches on centre along the length of the I-joist. Where possible, it is preferable to use knockouts instead of field-cut holes.

Never drill, cut or notch the flange, or over-cut the web.

Holes in webs should be cut with a sharp saw.

For rectangular holes, avoid over-cutting the corners, as this can cause unnecessary stress concentrations. Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1-inch diameter hole in each of the four corners and then making the cuts between the holes is another good method to minimize damage to the I-joist.



Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
1-1/8" Rim Board Plus	8,090

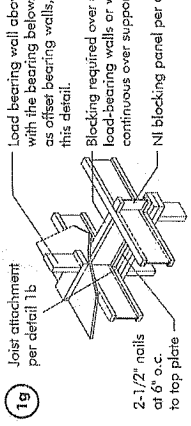
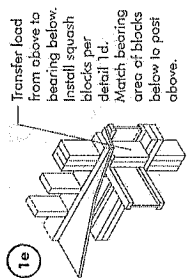
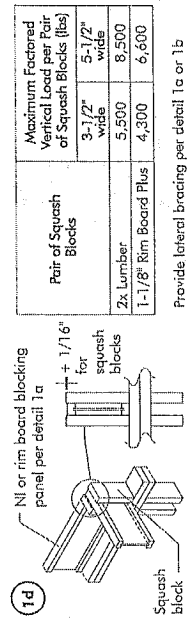
*The uniform vertical load is limited to a rim board depth of 1 1/2 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer, see detail 1d.

One 2-1/2" wire or spiral nail at top and bottom flange

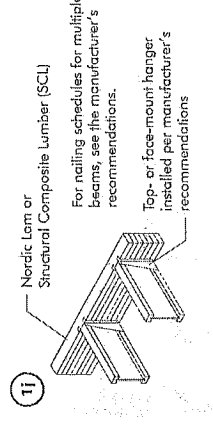
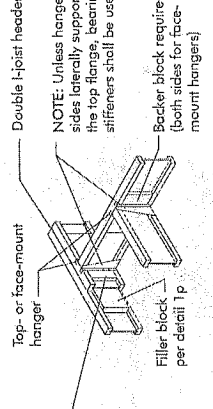
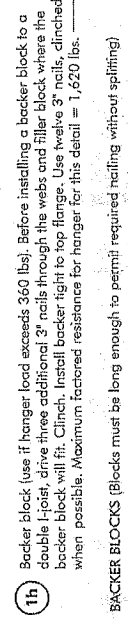
Attach rim board to top plate using 2-1/2" wire or spiral nails at 6" o.c.

To avoid splitting flange, start nails at least 1-1/2" from end of I-joint. Nails may be driven at an angle to avoid splitting of bearing plate.

Minimum bearing length shall be 1-3/4" for the end bearings, and 3-1/2" for the intermediate bearings when applicable.



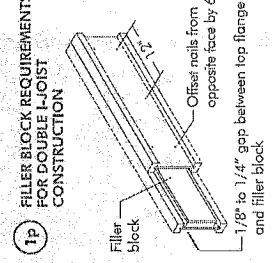
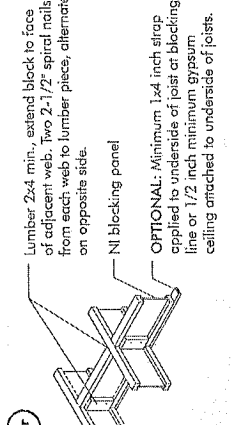
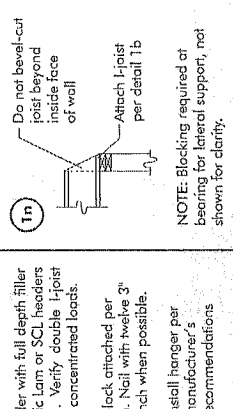
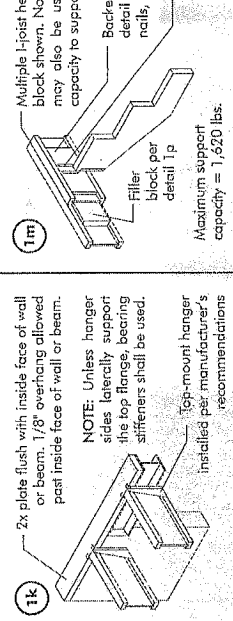
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
1-1/8" Rim Board Plus	8,090



Flange Width	Material Thickness Required*	Minimum Depth**
2-1/2"	1"	5-1/2"
3-1/2"	1-1/2"	7-1/4"

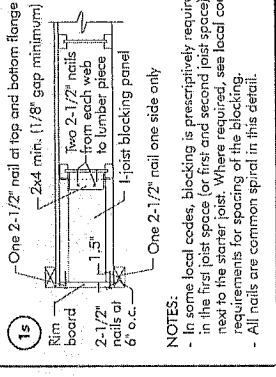
* Minimum grade for backer block material shall be S-P-F No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-C0925 or CAN/CSA-Q437 Standard.

** For face-mount hangers use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges. For 2" thick flanges use net depth minus 4-1/4".



- NOTES:**
- Support back of I-joint web during nailing to prevent damage to web/flange connection.
 - Leave a 1/8 to 1/4-inch gap between top of filler block and bottom of top I-joint flange.
 - Filler block is required between joists for full length of span.
 - Nail joists together with two rows of 3" nails at 12 inches o.c. (clinched when possible) on each side of the double I-joint. Total of four nails per foot required. If nails can be clinched, only two nails per foot are required.
 - The maximum factored load that may be applied to one side of the double joist using this detail is 860 lb/ft. Verify double I-joint capacity.

Flange Size	Net Depth	Filler Block Size
2-1/2" x 1-1/2"	9-1/2"	2-1/8" x 6"
3-1/2" x 1-1/2"	11-7/8"	2-1/8" x 8"
4" x 1-1/2"	14"	2-1/8" x 10"
5" x 1-1/2"	16"	2-1/8" x 12"
6" x 1-1/2"	18"	3" x 6"
7" x 1-1/2"	20"	3" x 8"
8" x 1-1/2"	22"	3" x 10"
9" x 1-1/2"	24"	3" x 12"
10" x 1-1/2"	26"	3" x 14"
11" x 1-1/2"	28"	3" x 16"
12" x 1-1/2"	30"	3" x 18"



All nails shown in the above details are common wire nails unless otherwise noted. 3" (10-122" dia.) common spiral nails may be substituted for 2-1/2" (10-122" dia.) common wire nails. Framing lumber Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for clarity.

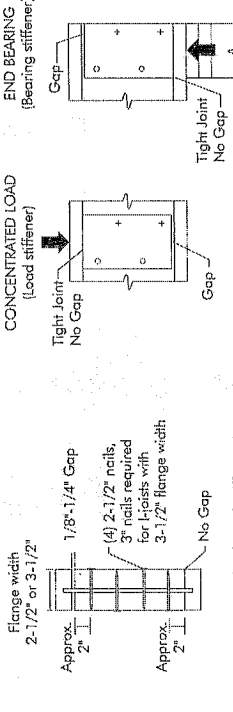
WEB STIFFENERS

RECOMMENDATIONS:

- A bearing stiffener is required in all engineered applications with factored reactions greater than shown in the I-joint properties table found in the Construction Guide (C101). The gap between the stiffener and the flange is at the top.
- A bearing stiffener is required when the I-joint is supported in a hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.
- A load stiffener is required at locations where a factored concentrated load greater than 2,370 lbs is applied to the top flange between supports, or in the case of a cantilever, anywhere between the cantilever tip and the support. These values are for standard term load duration, and may be adjusted for other load durations as permitted by the code. The gap between the stiffener and the flange is at the bottom.

WEB STIFFENER INSTALLATION DETAILS

CONCENTRATED LOAD

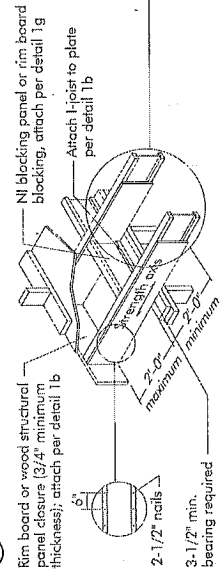


Flange Width	Web Stiffener Size Each Side of Web
2-1/2"	1" x 2-5/16" minimum width
3-1/2"	1-1/2" x 2-5/16" minimum width

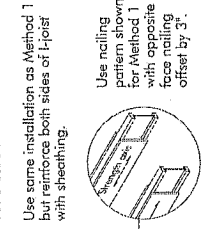
See the adjacent table for web stiffener size requirements

CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET

Method 1 — SHEATHING REINFORCEMENT ONE SIDE

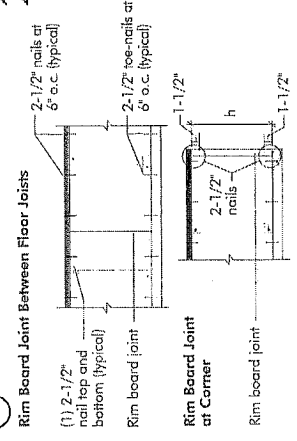


Method 2 — SHEATHING REINFORCEMENT TWO SIDES



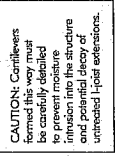
RIM BOARD INSTALLATION DETAILS

ATTACHMENT DETAILS WHERE RIM BOARDS ABUT

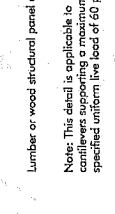


NOTE: Canadian softwood plywood sheathing or equivalent (minimum thickness 3/4") required on sides of joist. Depth shall match the full height of the joist. Nail with 2-1/2" nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach I-joint to plate at all supports per detail 1b. Verify reinforced I-joint capacity.

3g I-JOIST CANTILEVER DETAIL FOR BALCONIES (No Wall Load)



3b) LUMBER CANTILEVER DETAIL FOR BALCONIES (No Wall Load)



Method 1 — SHEATHING REINFORCEMENT ONE SIDE



- Use same installation as Method 1 but reinforce both sides of joist with sheathing.
- Use nailing pattern shown for Method 1 with opposite face nailing offset by 3".

top and bottom flange. Install with face grain parallel to the wall.



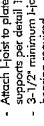
For I-joint flange widths greater than 3 inches place an additional row of

CREATING REINFORCEMENT



Notes:

- Provide full depth blocking between joists over support (not shown for clarity)
- Attach I-joist to plate at all supports per detail 1b.
- 3-1/2" minimum I-joist



Vertical solid sawn blocks —
(2x6 S-P-F No. 2 or better) nailed
through joist web and web of girder
using 2-1/2" nails.
Alternate for opposite side.

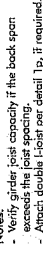
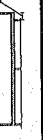


FIGURE 4 (continued)



maximum cantilever

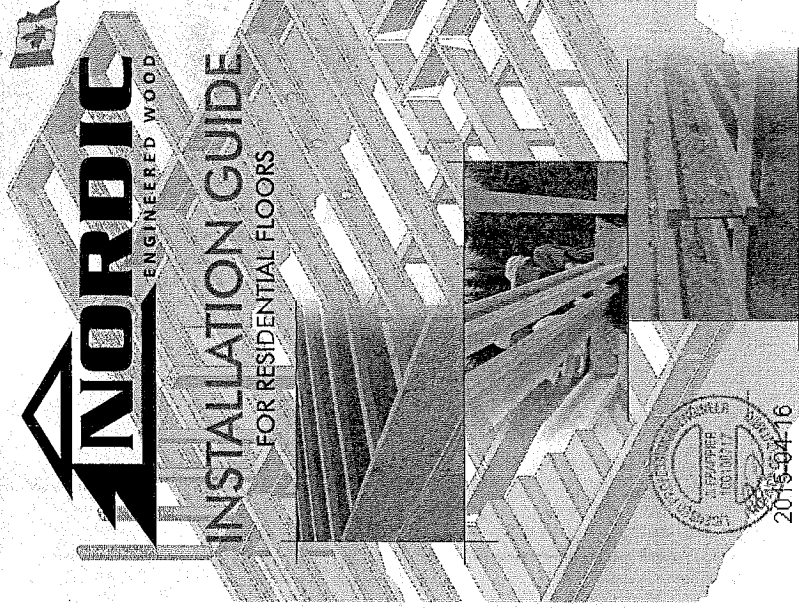
CANTILEVER REINFORCEMENT METHOD(S) ALLOWED		ROOF TRUSS		ROOF LOADING (UNFACTORED)	
		JOIST DEPTH (in.)	JOIST SPACING (in.)	LL = 30 psf, DL = 15 psf	LL = 40 psf, DL = 15 psf
9 1/2"	20	12	16	19.2	24
	22	12	16	19.2	24
	24	12	16	19.2	24
	26	12	16	19.2	24
11 7/8"	20	12	16	19.2	24
	22	12	16	19.2	24
	24	12	16	19.2	24
	26	12	16	19.2	24
14"	20	12	16	19.2	24
	22	12	16	19.2	24
	24	12	16	19.2	24
	26	12	16	19.2	24
16"	20	12	16	19.2	24
	22	12	16	19.2	24
	24	12	16	19.2	24
	26	12	16	19.2	24

5. Cantilevered or roof beams reinforcing.

BRICK CANTILEVER REINFORCEMENT METHODS ALLOWED

[illegible]

5. Cantilever roof beam.



SAFETY AND CONSTRUCTION PRECAUTIONS



WARNING

I-joists are not stable until completely installed, and will not carry any load until fully braced and sheathed.

Avoid Accidents by Following these Important Guidelines:

1. Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bridging at joist ends. When I-joists are applied continuous over interior supports and a load-bearing wall is planned at that location, blocking will be required on this interior support.

2. When the building is completed, the floor sheathing will provide lateral bracing will be required at the intermediate supports.

support for the top flanges of the I-beams. Until this sheathing is applied, temporary bracing, often called struts, or temporary sheathing must be applied to prevent I-beam rollover or buckling.

- Temporary bracing or struts must be 1x4 inch minimum, at least 8 feet long and spaced no more than 8 feet on centre, and must be secured with a minimum of two 2-1/2" nails fastened to the top surface of each I-joist. Nail the bracing to a lateral restraint at the end of each bay. Lap ends of adjoining bracing over at least two I-joists.

- Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet of I-beams at the end of the bay.

3. For cantilevered joists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-bridding.

4. Install and fully nail permanent sheathing to each joist before placing loads on the floor system. Then stack building materials over beams or walls only.

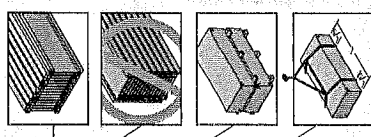
5. **Never install a demand list.**
On the floor system, there's stock standing materials over beams or under slabs.

2. Never install a damaged rotor.

Follow these installation guidelines carefully.

100

STORAGE AND HANDLING GUIDELINES



1. Bundle wrap can be slippery when wet. Avoid walking on wrapped bundles.
2. Store, stack, and handle I-loops vertically and level only.
3. Always stack and handle I-loops in the upright position only.
4. Do not store I-loops in direct contact with the ground and/or flammable.
5. Protect I-loops from weather, and use spacers to separate bundles.
6. Bundled units should be kept intact until time of installation.
7. When handling I-loops with a crane on the job site, take a few simple precautions to prevent damage to the I-loops and injury to your work crew.
 - Pick I-loops in bundles as shipped by the supplier
 - Orient the bundles so that the webs of the I-loops are vertical.
 - Pick the bundles at the 5th points, using a spreader bar if necessary.
9. NEVER USE OR TRY TO REPAIR A DAMAGED I-POST.

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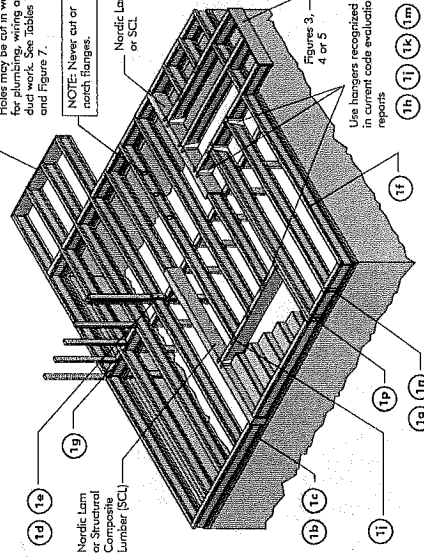


INSTALLING NORDIC L-JOISTS

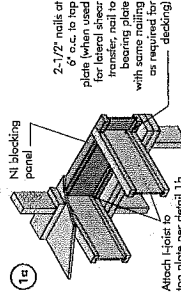
1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not, supplier.
2. Except for cutting to length, I-joist flanges should **never** be cut, drilled, or notched.
3. Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
4. I-joists must be anchored securely to supports before floor sheathing is attached, and supports must be braced to prevent lateral movement.
5. Minimum bearing lengths: 1-3/4 inches for end bearings and 3-1/2 inches for intermediate bearings.
6. When using hangers, seat I-joists firmly in hanger bottoms to minimize settlement.
7. Leave a 1/16-inch gap between the I-joist and a chheader.
8. Concentrated loads greater than those that can normally be expected in residential construction should only be applied to the top surface of the top flange. Normal concentrated loads include track lighting, HVAC, audio equipment and security cameras. Do not apply concentrated loads to the bottom flange. When applying concentrated loads from the top of the I-joist, Or, attach the load to blocking that has been securely fastened to the I-joist webs.
9. Never install I-joists where they will be permanently exposed to weather, or where they will remain in direct contact with concrete or masonry.
10. Restrain ends of floor joists to prevent rollover. Use rim board, rim joist or I-joist blocking panels.
11. For I-joists installed over and beneath bearing walls, use full depth blocking panels, rim board, or squash blocks (cripple members) to transfer gravity loads through the floor system to the wall or foundation below.
12. Due to shrinkage, common framing lumber set as edges may **never** be used as blocking or rim boards. I-joist blocking panels or other engineered wood products – such as rim board – must be cut to fit between the I-joists, and an I-joist-compatible depth support.
13. Provide permanent lateral support of the bottom flange of all I-joists at interior supports of multiple-span joists. Similarly, support the bottom flange of all cantilevered I-joists at the end support next to the cantilever extension. In the completed structure, the gypsum wallboard ceiling provides this lateral support. Until the final finished ceiling is applied, temporary bracing or studs must be used.
14. If square-edge panels are used, edges must be supported between I-joists with 2x4 blocking. Glue panels to blocking to minimize squeaks. Blocking is not required under structural finish flooring, such as wood strip flooring, or if a separate underlayment layer is installed.
15. Nail spacing: Some nails installed to the flange's top face in accordance with the applicable building code requirements of approved building plans.

FIGURE 1

Some framing requirements such as erection bracing and blocking details have been omitted for clarity.

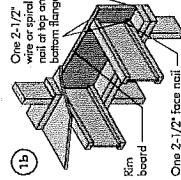


All nails shown in the above details are assumed to be common wire nails unless otherwise noted. 3" (0.122" dia.) common spiral nails may be substituted for 2-1/2" (0.128" dia.) common wire nails. Framing lumber assumed to be Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for clarity.



Blacking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
NI Joists	3,300

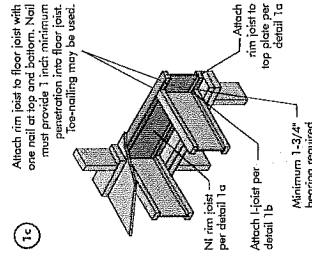
*The uniform vertical load is limited to a joist depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. For concentrated vertical load transfer, see detail 1d.



Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
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1-1/8" Rim Board Plus	8,090
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*The uniform vertical load is limited to a rim board depth of 1 1/2 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rafter. See concentrated vertical load transfer section detail 1-1.



Pair of Squash Blocks	Maximum Factored Vertical load per Pair of Squash Blocks (lbs)	
	3-1/2" wide	5-1/2" wide
2x Lumber	5,500	8,500
1-1/8" Rim Board Plus	4,300	6,600

Provide lateral bracing per detail 1a, 1b, or 1c

MAXIMUM FLOOR SPANS

1. Maximum clear spans applicable to simple-span or multiple-span residential floor construction with a design live load of 40 psf. The maximum clear span and limit spans are based on the factored loads of 1,500 + 1,250. The serviceability limit states include the consideration for floor vibration and a live load deflection limit of $L/480$. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.

2. Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less and 3/4 inch for joist spacing of 24 inches. The OSB shall meet the requirements in CGSB 71.26 Standard. No concrete topping or bridging element was assumed. Increased spans may be achieved with the use of gypsum and/or a row of blocking at mid-span.

3. Minimum bearing length shall be 1 3/4 inches for the end bearings, and 3 1/2 inches for the intermediate bearings. 4. Bearing stiffeners are not required when I-joists are used with the spans and loadings given in this table, except as required for hangers.

5. This span chart is based on uniform loads. For applications with other than uniform loads, an engineering analysis may be required based on the use of the design properties.

6. Tables are based on Limit States Design per CAN/CSA C084.09 Standard, and NEC 2010.

7. SI units conversion: 1 inch = 25.4 mm
1 foot = 0.305 m

MAXIMUM FLOOR SPANS FOR NORDIC I-JOISTS SIMPLE AND MULTIPLE SPANS

Joist Depth	Joist Series	Simple Span			Multiple Span		
		Span	End Span	Interior Span	Span	End Span	Interior Span
9 1/2"	N-20	12'0"	14'0"	15'0"	12'0"	14'0"	15'0"
	N-24	16'0"	18'0"	19'0"	16'0"	18'0"	19'0"
	N-28	18'0"	20'0"	21'0"	18'0"	20'0"	21'0"
	N-32	20'0"	22'0"	23'0"	20'0"	22'0"	23'0"
	N-36	22'0"	24'0"	25'0"	22'0"	24'0"	25'0"
	N-40	24'0"	26'0"	27'0"	24'0"	26'0"	27'0"
	N-44	26'0"	28'0"	29'0"	26'0"	28'0"	29'0"
	N-48	28'0"	30'0"	31'0"	28'0"	30'0"	31'0"
	N-52	30'0"	32'0"	33'0"	30'0"	32'0"	33'0"
	N-56	32'0"	34'0"	35'0"	32'0"	34'0"	35'0"
11 7/8"	N-20	12'0"	14'0"	15'0"	12'0"	14'0"	15'0"
	N-24	16'0"	18'0"	19'0"	16'0"	18'0"	19'0"
	N-28	18'0"	20'0"	21'0"	18'0"	20'0"	21'0"
	N-32	20'0"	22'0"	23'0"	20'0"	22'0"	23'0"
	N-36	22'0"	24'0"	25'0"	22'0"	24'0"	25'0"
	N-40	24'0"	26'0"	27'0"	24'0"	26'0"	27'0"
	N-44	26'0"	28'0"	29'0"	26'0"	28'0"	29'0"
	N-48	28'0"	30'0"	31'0"	28'0"	30'0"	31'0"
	N-52	30'0"	32'0"	33'0"	30'0"	32'0"	33'0"
	N-56	32'0"	34'0"	35'0"	32'0"	34'0"	35'0"
14"	N-20	12'0"	14'0"	15'0"	12'0"	14'0"	15'0"
	N-24	16'0"	18'0"	19'0"	16'0"	18'0"	19'0"
	N-28	18'0"	20'0"	21'0"	18'0"	20'0"	21'0"
	N-32	20'0"	22'0"	23'0"	20'0"	22'0"	23'0"
	N-36	22'0"	24'0"	25'0"	22'0"	24'0"	25'0"
	N-40	24'0"	26'0"	27'0"	24'0"	26'0"	27'0"
	N-44	26'0"	28'0"	29'0"	26'0"	28'0"	29'0"
	N-48	28'0"	30'0"	31'0"	28'0"	30'0"	31'0"
	N-52	30'0"	32'0"	33'0"	30'0"	32'0"	33'0"
	N-56	32'0"	34'0"	35'0"	32'0"	34'0"	35'0"
16"	N-20	12'0"	14'0"	15'0"	12'0"	14'0"	15'0"
	N-24	16'0"	18'0"	19'0"	16'0"	18'0"	19'0"
	N-28	18'0"	20'0"	21'0"	18'0"	20'0"	21'0"
	N-32	20'0"	22'0"	23'0"	20'0"	22'0"	23'0"
	N-36	22'0"	24'0"	25'0"	22'0"	24'0"	25'0"
	N-40	24'0"	26'0"	27'0"	24'0"	26'0"	27'0"
	N-44	26'0"	28'0"	29'0"	26'0"	28'0"	29'0"
	N-48	28'0"	30'0"	31'0"	28'0"	30'0"	31'0"
	N-52	30'0"	32'0"	33'0"	30'0"	32'0"	33'0"
	N-56	32'0"	34'0"	35'0"	32'0"	34'0"	35'0"

RECOMMENDATIONS:

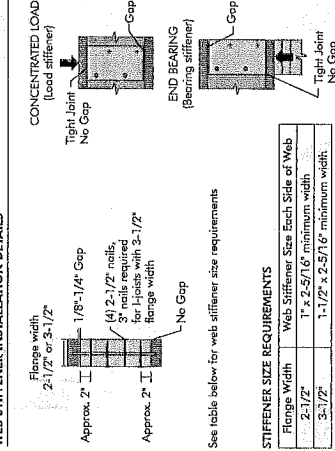
■ A bearing stiffener is required in all engineered applications with factored reactions greater than shown in the Construction Guide (CIG). The gap between the stiffener and the flange is at the top.

■ A bearing stiffener is required when the I-joist is supported in a hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.

■ A load stiffener is required at locations where a factored concentrated load greater than 2,370 lbs is applied to the top flange between supports, or in the case of a cantilever, anywhere between the cantilever and the first support. The stiffener must be designed for other load durations as permitted by the code. The gap between the stiffener and the flange is at the bottom.

SI units conversion: 1 inch = 25.4 mm

FIGURE 2
WEB STIFFENER INSTALLATION DETAILS



See table below for web stiffener size requirements

STIFFENER SIZE REQUIREMENTS

Flange Width	Web Stiffener Size Each Side of Web
2 1/2"	1" x 2 5/16" minimum width
3 1/2"	1 1/2" x 2 5/16" minimum width

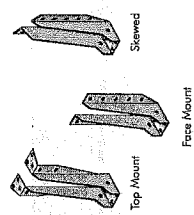
NORDIC I-JOIST SERIES

Series	33 pieces per unit	23 pieces per unit	23 pieces per unit	23 pieces per unit
N-20	5.8' No. 2	19.0' ASR	21.0' ASR	24.0' ASR
N-24	7.8' No. 2	21.0' ASR	23.0' ASR	26.0' ASR
N-28	9.8' No. 2	23.0' ASR	25.0' ASR	28.0' ASR
N-32	11.8' No. 2	25.0' ASR	27.0' ASR	30.0' ASR
N-36	13.8' No. 2	27.0' ASR	29.0' ASR	32.0' ASR
N-40	15.8' No. 2	29.0' ASR	31.0' ASR	34.0' ASR
N-44	17.8' No. 2	31.0' ASR	33.0' ASR	36.0' ASR
N-48	19.8' No. 2	33.0' ASR	35.0' ASR	38.0' ASR
N-52	21.8' No. 2	35.0' ASR	37.0' ASR	40.0' ASR
N-56	23.8' No. 2	37.0' ASR	39.0' ASR	42.0' ASR

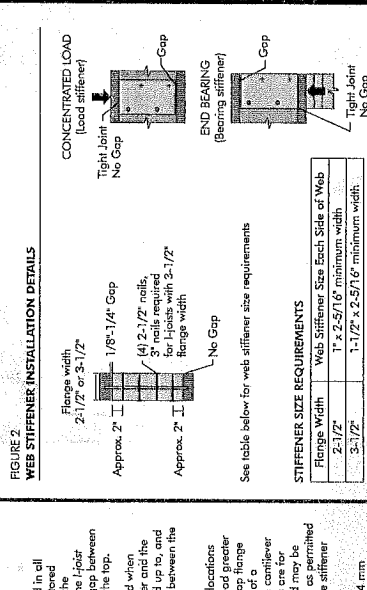
Cheniers Chibougouville Ltd. harvests its own trees, which enables it to produce products to adhere to strict quality control procedures throughout the entire manufacturing process. Every phase of the operation, from the selection of the finished product, reflects our commitment to quality. Nordic Engineered Wood I-joists use only finger-jointed black spruce (P. canadensis) lumber in their flanges, ensuring consistent quality, superior strength and longer span carrying capacity.

I-JOIST HANGERS

- Hangers shown illustrate the three most commonly used metal hangers to support I-joists.
- All nailing must meet the hanger manufacturer's recommendations.
- Hangers should be selected based on the joist depth, flange width and load capacity based on the maximum spans.
- Web stiffeners are required when the sides of the hangers do not laterally brace the top flange of the I-joist.



WEB STIFFENERS

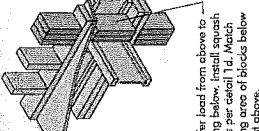


See table below for web stiffener size requirements

STIFFENER SIZE REQUIREMENTS

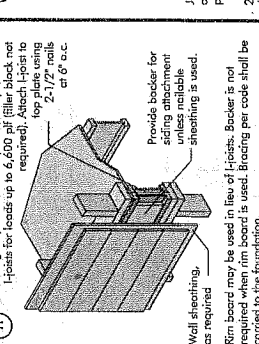
Flange Width	Web Stiffener Size Each Side of Web
2 1/2"	1" x 2 5/16" minimum width
3 1/2"	1 1/2" x 2 5/16" minimum width

1a



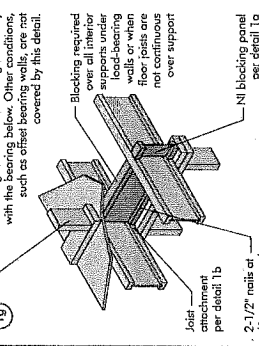
Transfer load from above to bearing below. Install squash blocks per detail 1d. Match bearing area of blocks below to post above.

1b



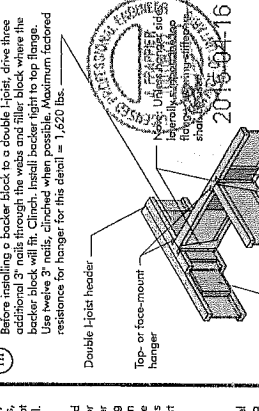
Use single I-joist for loads up to 3,300 plf, double I-joists for loads up to 6,600 plf (filler block not required). Attach I-joist to top plate using 2-1/2" nails at 6" o.c.

1c



Blocking required over all interior supports under load-bearing walls or when floor joists are not continuous over support.

1d



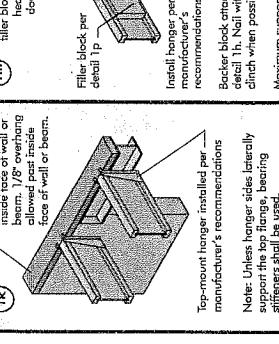
Backer block (use if hanger load exceeds 360 lbs). Before installing a backer block to a double I-joist, drive three additional 3" nails through the web and filler block where the backer block will sit. Install metal backer block tight to top flange. Use 3" double flange metal backer block with minimum factored resistance for hanger for this detail = 1,620 lbs.

1e



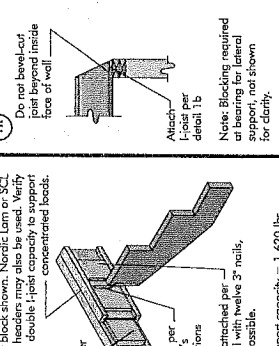
Top- or face-mount hanger installed per manufacturer's recommendations. For nailing schedules for multiple beams, see the manufacturer's recommendations.

1f



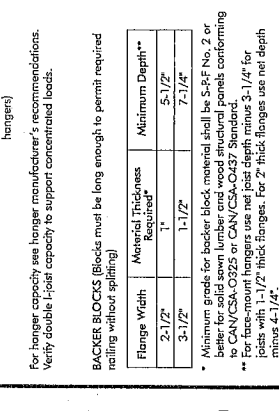
Multiple I-joist header with full depth filler block shown. Nordic Lam or SCL headers may also be used. Verify headers may also be used. Note: Blocking required at bearing for lateral support, not shown for clarity.

1g



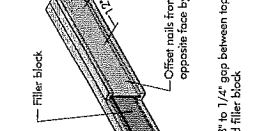
Do not bawl-out filler per detail 1b. Attach I-joist per detail 1b.

1h



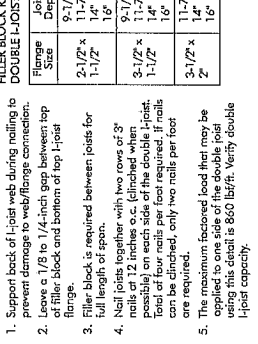
Backer block required (both sides for face-mount hangers). Filler block per detail 1p.

1i



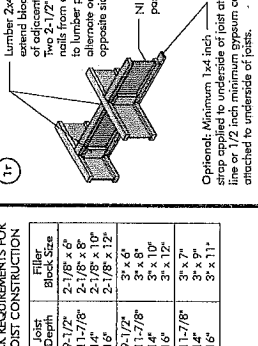
One 2-1/2" nails at top and bottom flange. Two 2-1/2" nails from each web to lumber piece. 2x4 min. (1/8" gap minimum). Two 2-1/2" nails from each web to lumber piece. L-joist blocking panel. One 2-1/2" nails one side only. One 2-1/2" nails at 6" o.c.

1j



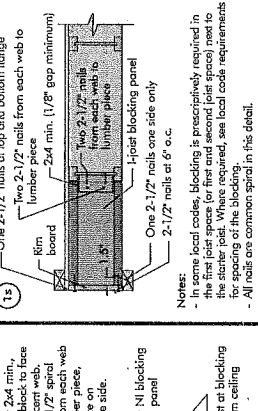
Lumber 2x4 min. One side of adjacent web. Two 2-1/2" nails from each web to lumber piece. L-joist blocking panel. One 2-1/2" nails one side only. One 2-1/2" nails at 6" o.c.

1k



Attach I-joist per detail 1b. Note: Blocking required at bearing for lateral support, not shown for clarity.

1l



Backer block required (both sides for face-mount hangers). Filler block per detail 1p.

FILLER BLOCK REQUIREMENTS FOR DOUBLE I-JOIST CONSTRUCTION

Flange Size	Joist Depth	Filler Block Size
2 1/2" x 1 1/2"	9 1/2"	2 1/8" x 6"
2 1/2" x 1 1/2"	11 7/8"	2 1/8" x 8"
2 1/2" x 1 1/2"	14"	2 1/8" x 10"
2 1/2" x 1 1/2"	16"	2 1/8" x 12"
3 1/2" x 1 1/2"	9 1/2"	3" x 6"
3 1/2" x 1 1/2"	11 7/8"	3" x 8"
3 1/2" x 1 1/2"	14"	3" x 10"
3 1/2" x 1 1/2"	16"	3" x 12"
4" x 1 1/2"	9 1/2"	3" x 6"
4" x 1 1/2"	11 7/8"	3" x 8"
4" x 1 1/2"	14"	3" x 10"
4" x 1 1/2"	16"	3" x 12"

Notes:

- Support back of I-joist web during nailing to prevent damage to web/flange connection.
- Leave a 1/8 to 1/4 inch gap between top of filler block and bottom of top I-joist flange.
- Filler block is required between joists for I-joist to I-joist connections.
- Nail joist together with two rows of 8" nails on 12" centers, c. clamped when possible on each side of the double I-joist. Total of four nails per foot required. If nails can be clamped, only two nails per foot are required.
- The maximum factored load that may be applied to one side of the double joist is 860 lb/ft. Verify double I-joist capacity.