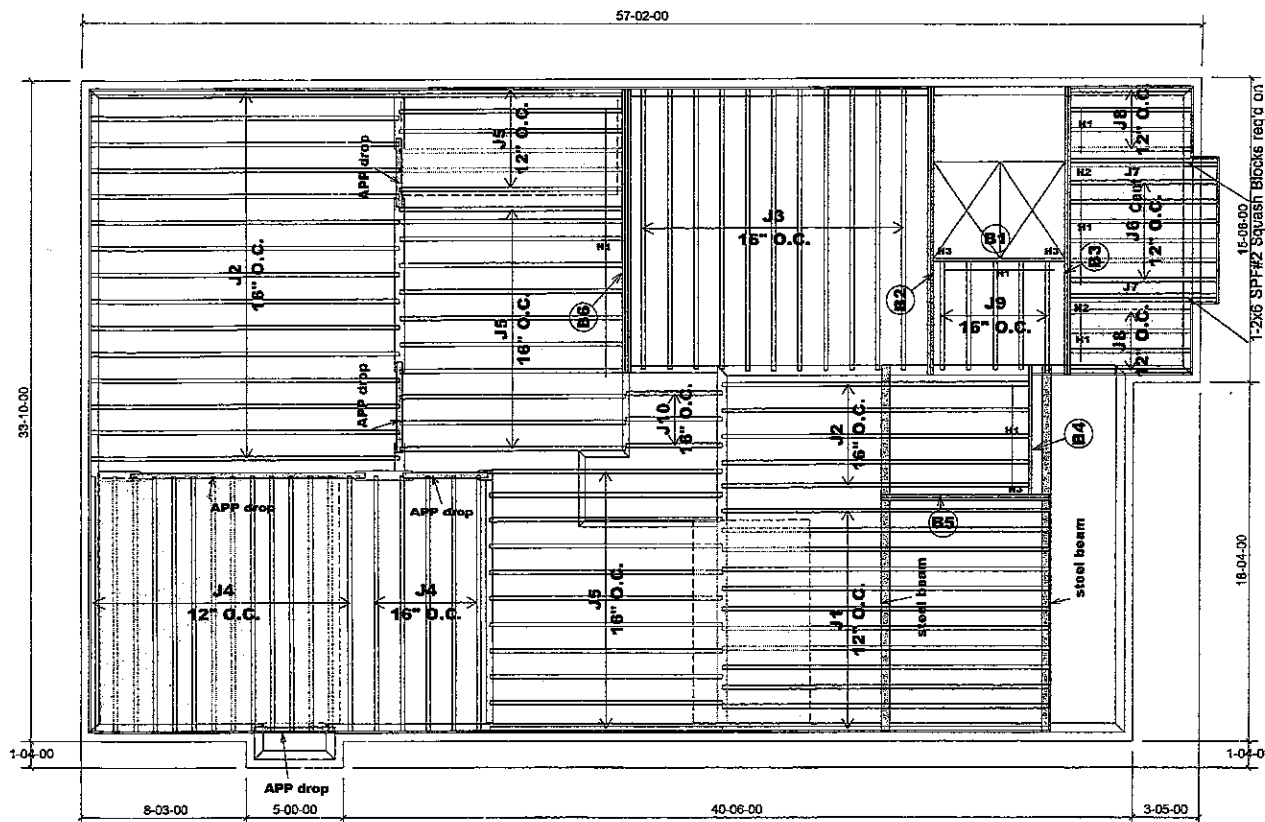




MODEL : 42-3
ELEVATION A

SECOND FLOOR FRAMING

Do not scale - refer to architectural plans for dimensions

Products				
PlotID	Length	Product	Plies	Net Qty
J1	17-00-00	9 1/2" NI-20	1	12
J2	16-00-00	9 1/2" NI-20	1	20
J3	15-00-00	9 1/2" NI-20	1	11
J4	14-00-00	9 1/2" NI-20	1	19
J5	12-00-00	9 1/2" NI-20	1	28
J6	8-00-00	9 1/2" NI-20	1	6
J7	8-00-00	9 1/2" NI-20	2	4
J8	7-00-00	9 1/2" NI-20	1	8
J9	6-00-00	9 1/2" NI-20	1	5
J10	5-00-00	9 1/2" NI-20	1	3
B2	15-00-00	VERSALAM-10 2.0E	2	2
B3	15-00-00	VERSALAM-10 2.0E	2	2
B6	15-00-00	VERSALAM-10 2.0E	3	3
B5	9-00-00	VERSALAM-10 2.0E	2	2
B1	7-00-00	VERSALAM-10 2.0E	1	1
B4	7-00-00	VERSALAM-10 2.0E	1	1

3/2" BLOCKING 8 LF

APP - AS PER PLAN
BBO - BEAM BY OTHERS

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

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

HANGERS SCHEDULE

H1 - LT259
H2 - MIT39.5-2
H3 - HUS1.81/10

TILE AREA

Provide I-Joist Blocking between cantilevered I-Joist (along bearing) and rimboard closure at ends

1-2x6 SPF#2 Squash Block req'd on one side of joists under interior load bearing wall

Multiple squash blocks are required under concentrated loads

Joists spacing under ceramic tile is 12"o/c

Ceramic tiles application is as per O.B.C 9.30.6

JT: 40297/79712

Builder: Gold Park Homes

Location: Kleinburg

Designer: LA

Alpa Roof Trusses Inc.
Maple, Ontario

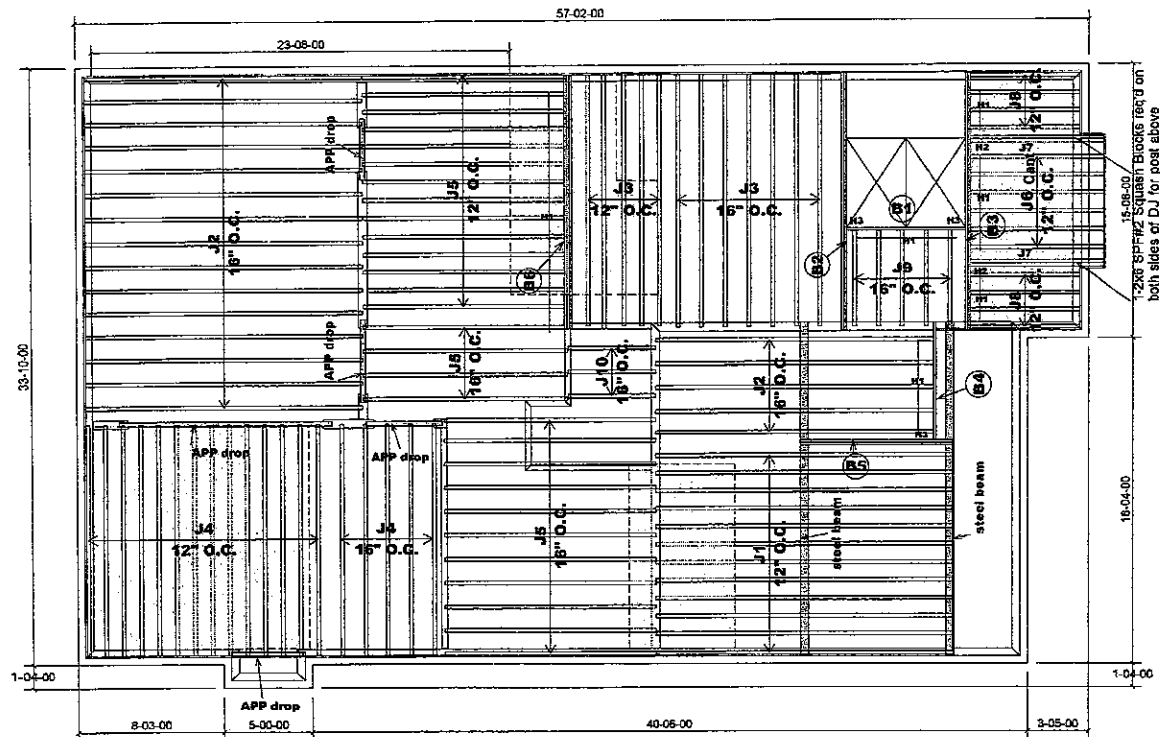
Salesperson: Derek
Home Lumber

File: 253785

Project: Huntington & Nashville

Date: May 01/15

Sheet: 3 of 6



MODEL : 42-3
ELEVATION A
OPT. SECOND FLOOR

SECOND FLOOR FRAMING

Do not scale - refer to architectural plans for dimensions

Products				
PlotID	Length	Product	Plies	Net Qty
J1	17-00-00	9 1/2" NI-20	1	12
J2	16-00-00	9 1/2" NI-20	1	20
J3	15-00-00	9 1/2" NI-20	1	12
J4	14-00-00	9 1/2" NI-20	1	19
J5	12-00-00	9 1/2" NI-20	1	29
J6	8-00-00	9 1/2" NI-20	1	6
J7	8-00-00	9 1/2" NI-20	2	4
J8	7-00-00	9 1/2" NI-20	1	8
J9	6-00-00	9 1/2" NI-20	1	5
J10	5-00-00	9 1/2" NI-20	1	3
B2	15-00-00	VERSALAM-10 2.0E	2	2
B3	15-00-00	VERSALAM-10 2.0E	2	2
B6	15-00-00	VERSALAM-10 2.0E	3	3
B5	9-00-00	VERSALAM-10 2.0E	2	2
B1	7-00-00	VERSALAM-10 2.0E	1	1
B4	7-00-00	VERSALAM-10 2.0E	1	1

3/4" BLOCKING 8 LF

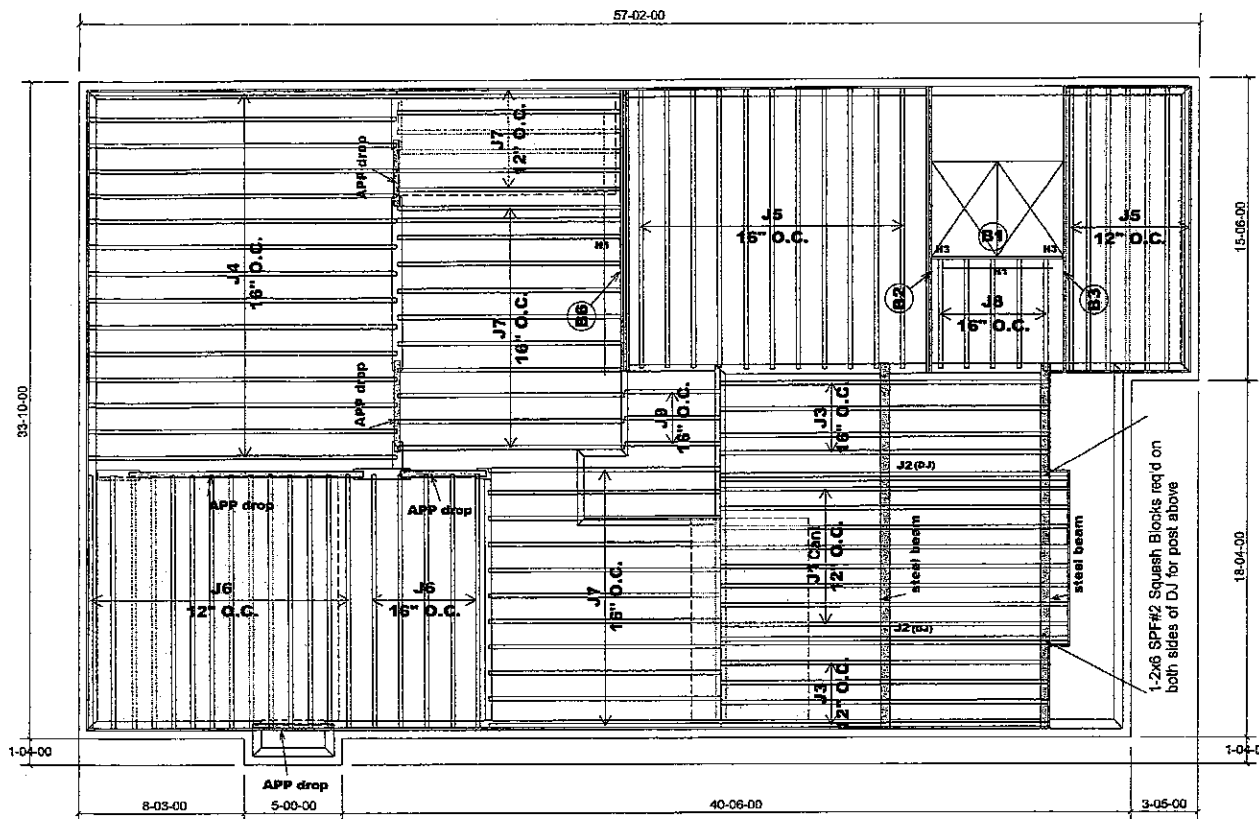
APP - AS PER PLAN
BBO - BEAM BY OTHERS

SUBFLOOR - 5/8" NAILED & GLUED
RIMBOARD
1-1/8" X 9 1/2" O.S.B

HANGERS SCHEDULE
H1 - LT259
H2 - MIT39.5-2
H3 - HUS1.81/10

TILE AREA

Provide I-Joist Blocking between cantilevered I-Joist (along bearing) and rimboard closure at ends
1-2x6 SPF#2 Squash Block req'd on one side of joists under interior load bearing wall
Multiple squash blocks are required under concentrated loads
Joists spacing under ceramic tile is 12" o/c
Ceramic tiles application is as per O.B.C 9.30.6



Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-20	1	8
J2	18-00-00	9 1/2" NI-20	2	4
J3	17-00-00	9 1/2" NI-20	1	8
J4	16-00-00	9 1/2" NI-20	1	15
J5	15-00-00	9 1/2" NI-20	1	18
J6	14-00-00	9 1/2" NI-20	1	19
J7	12-00-00	9 1/2" NI-20	1	28
J8	6-00-00	9 1/2" NI-20	1	5
J9	5-00-00	9 1/2" NI-20	1	3
B3	15-00-00	VERSALAM-10 2.0E	1	1
B2	15-00-00	VERSALAM-10 2.0E	2	2
B6	15-00-00	VERSALAM-10 2.0E	3	3
B1	7-00-00	VERSALAM-10 2.0E	1	1

9 1/2" BLOCKING 8 LF

APP - AS PER PLAN
BBO - BEAM BY OTHERS

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

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

HANGERS SCHEDULE

H1 ——— LT259
H2 ——— MIT39.5-2
H3 ——— HUS1.81/10



TILE AREA

Provide I-Joist Blocking between cantilevered I-Joist (along bearing) and rimboard closure at ends

1-2x6 SPF#2 Squash Block req'd on one side of joists under interior load bearing wall

Multiple squash blocks are required under concentrated loads

Joists spacing under ceramic tile is 12"/o/c

Ceramic tiles application is as per O.B.C 9.30.6

Do not scale - refer to architectural plans for dimensions

JT: 40297/79712

File: 253785

Builder: Gold Park Homes

Project: Huntington & Nashville

Location: Kleinburg

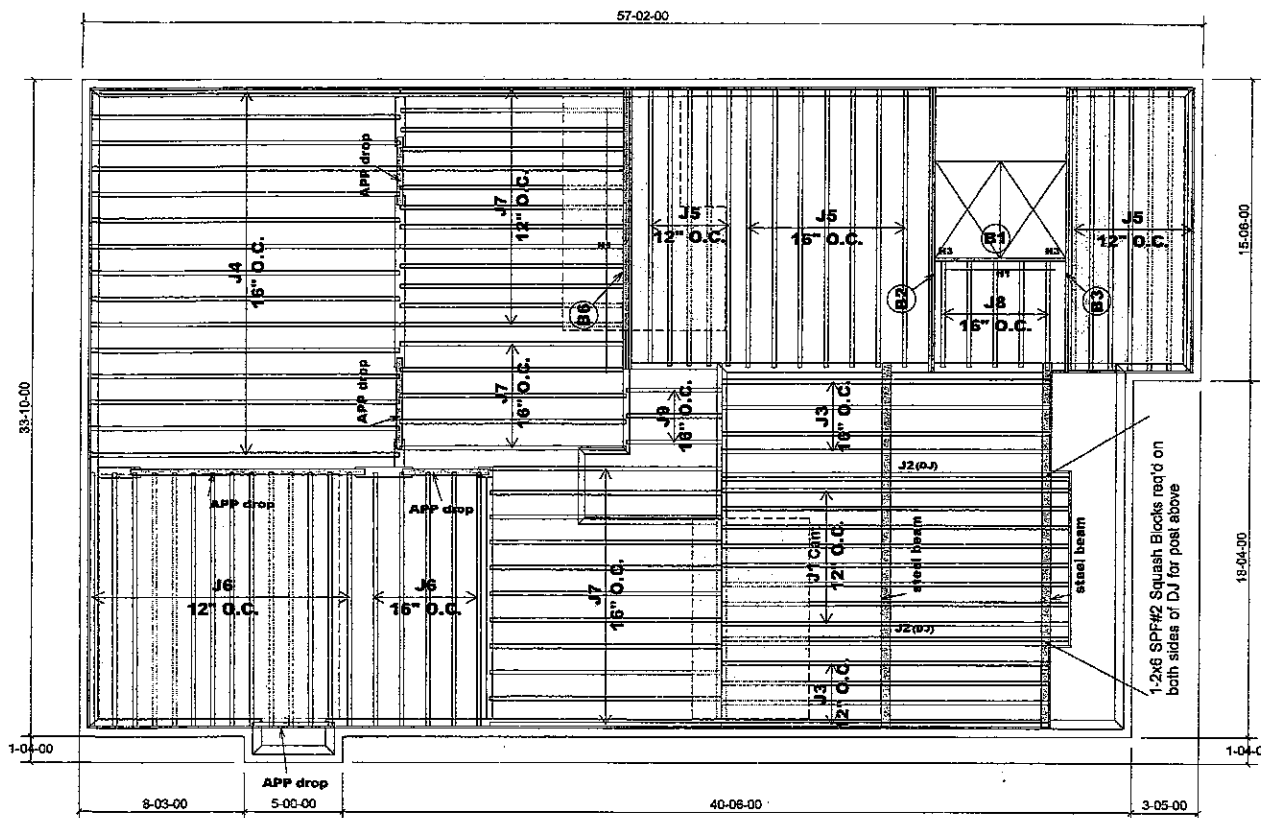
Date: May 01/15

Designer: LA

Sheet: 5 of 6

Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Derek
Home Lumber



MODEL : 42-3
ELEVATION B
OPT. SECOND FLOOR

SECOND FLOOR FRAMING

Do not scale - refer to architectural plans for dimensions

Products				
PlotID	Length	Product	Piles	Net Qty
J1	18-00-00	9 1/2" NI-20	1	8
J2	18-00-00	9 1/2" NI-20	2	4
J3	17-00-00	9 1/2" NI-20	1	8
J4	16-00-00	9 1/2" NI-20	1	15
J5	15-00-00	9 1/2" NI-20	1	19
J6	14-00-00	9 1/2" NI-20	1	19
J7	12-00-00	9 1/2" NI-20	1	29
J8	6-00-00	9 1/2" NI-20	1	5
J9	5-00-00	9 1/2" NI-20	1	3
B3	15-00-00	VERSALAM-10 2.0E	1	1
B2	15-00-00	VERSALAM-10 2.0E	2	2
B6	15-00-00	VERSALAM-10 2.0E	3	3
B1	7-00-00	VERSALAM-10 2.0E	1	1

3 1/2" BLOCKING 8 LF

APP - AS PER PLAN
BBO - BEAM BY OTHERS

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

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

HANGERS SCHEDULE

H1 — LT259
H2 — MIT39.5-2
H3 — HUS1.81/10

TILE AREA

Provide I-Joist Blocking between cantilevered I-Joist (along bearing) and rimboard closure at ends

1-2x6 SPF#2 Squash Block req'd on one side of joists under interior load bearing wall

Multiple squash blocks are required under concentrated loads

Joists spacing under ceramic tile is 12"o/c

Ceramic tiles application is as per O.B.C 9.30.6

JT: 40297/79712

Builder: Gold Park Homes

Location: Kleinburg

Designer: LA

Alpa Roof Trusses Inc. Salesperson: Derek

File: 253785

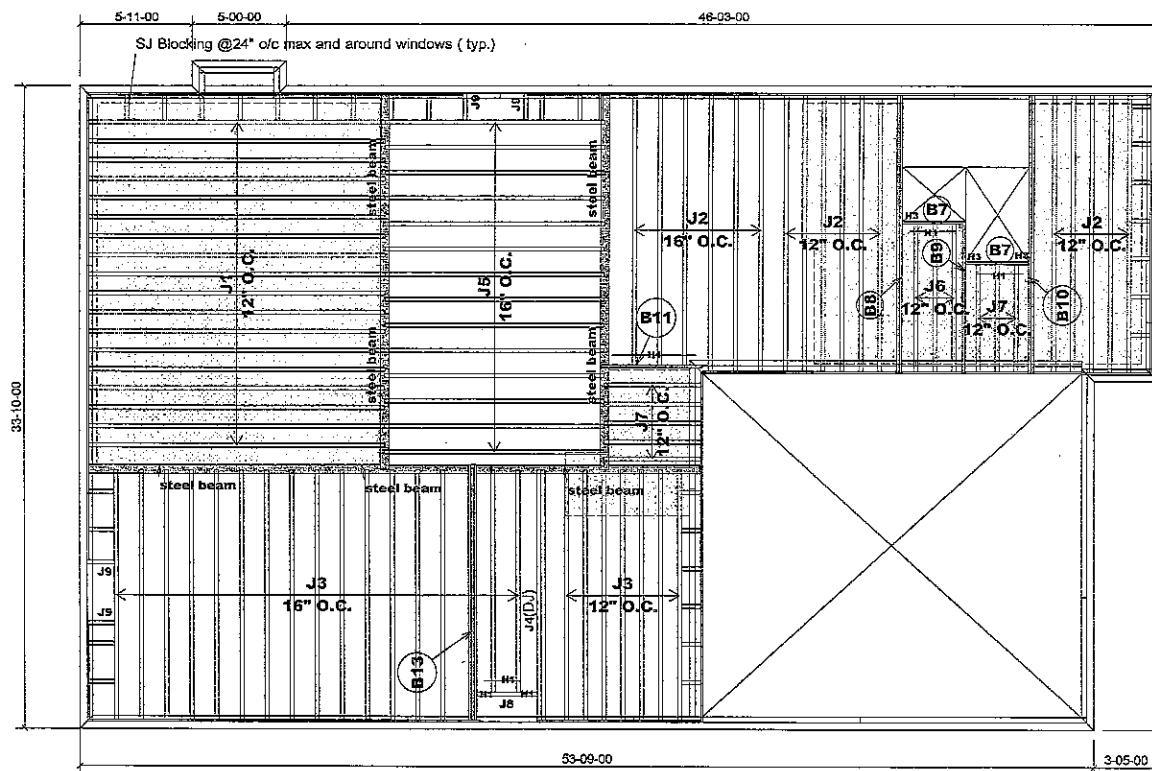
Project: Huntington & Nashville

Date: May 01/15

Sheet: 6 of 6

Maple, Ontario

Home Lumber



Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-20	1	18
J2	15-00-00	9 1/2" NI-20	1	17
J3	14-00-00	9 1/2" NI-20	1	23
J4	14-00-00	9 1/2" NI-20	2	2
J5	12-00-00	9 1/2" NI-20	1	14
J6	8-00-00	9 1/2" NI-20	1	3
J7	6-00-00	9 1/2" NI-20	1	8
J8	4-00-00	9 1/2" NI-20	1	1
J9	2-00-00	9 1/2" NI-20	1	4
B10	15-00-00	VERSALAM-10 2.0E	2	2
B8	15-00-00	VERSALAM-10 2.0E	2	2
B13	14-00-00	VERSALAM-10 2.0E	3	3
B9	8-00-00	VERSALAM-10 2.0E	1	1
B11	6-00-00	VERSALAM-10 2.0E	1	1
B7	4-00-00	VERSALAM-10 2.0E	1	2

9 1/2" BLOCKING 44 LF

APP - AS PER PLAN
BBO - BEAM BY OTHERS

SUBFLOOR - 5/8" NAILED & GLUED
RIMBOARD
1-1/8" X 9 1/2" O.S.B

HANGERS SCHEDULE

H1 — LT259
H3 — HUS1.81/10

TILE AREA

MODEL : 42-3
ELEVATION B UPGRADE

FIRST FLOOR FRAMING

REVISION		
253785	85974	
NO	DATE	PL NO.
1.		

OFFICE USE ONLY
ENGINEERED FROM
129679 TO S-129695

1-2x6 SPF#2 Squash Block req'd on one side of joists under interior load bearing wall

Multiple squash blocks are required under concentrated loads

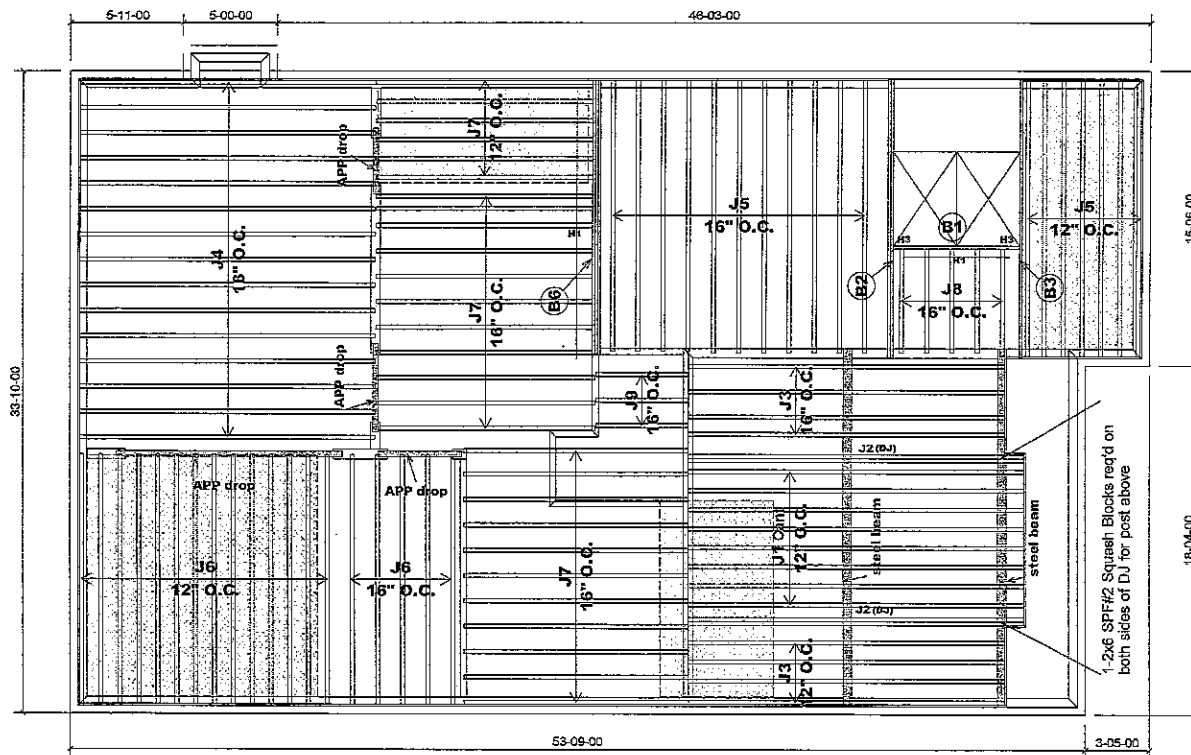
Joists spacing under ceramic tile is 12" o/c

Ceramic tiles application is as per O.B.C 9.30.6

Do not scale - refer to architectural plans for dimensions

JT/PL: 40297/88120 Builder: Gold Park Homes Location: Kleinburg
LI: 271961 Project: Huntington & Nashville Date: Aug 13/16

Designer: LA Alpa Roof Trusses Inc. Salesperson: Derek
Sheet: 1 of 3 Maple, Ontario Home Lumber



MODEL : 42-3
ELEVATION B UPGRADE

SECOND FLOOR FRAMING

REVISION		
NO	DATE	PL. NO.
1.		

Do not scale - refer to architectural plans for dimensions

Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-20	1	8
J2	18-00-00	9 1/2" NI-20	2	4
J3	17-00-00	9 1/2" NI-20	1	8
J4	16-00-00	9 1/2" NI-20	1	15
J5	15-00-00	9 1/2" NI-20	1	18
J6	14-00-00	9 1/2" NI-20	1	19
J7	12-00-00	9 1/2" NI-20	1	28
J8	6-00-00	9 1/2" NI-20	1	5
J9	5-00-00	9 1/2" NI-20	1	3
B3	15-00-00	VERSALAM-10 2.0E	1	1
B2	15-00-00	VERSALAM-10 2.0E	2	2
B6	15-00-00	VERSALAM-10 2.0E	3	3
B1	7-00-00	VERSALAM-10 2.0E	1	1

9 1/2" BLOCKING 8 LF

APP - AS PER PLAN
BBO - BEAM BY OTHERS

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

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

HANGERS SCHEDULE

H1 — LT259
H2 — MIT39.5-2
H3 — HUS1.81/10



TILE AREA

Provide I-Joist Blocking between cantilevered I-Joist (along bearing) and rimboard closure at ends

1-2x6 SPF#2 Squash Block req'd on one side of joists under interior load bearing wall

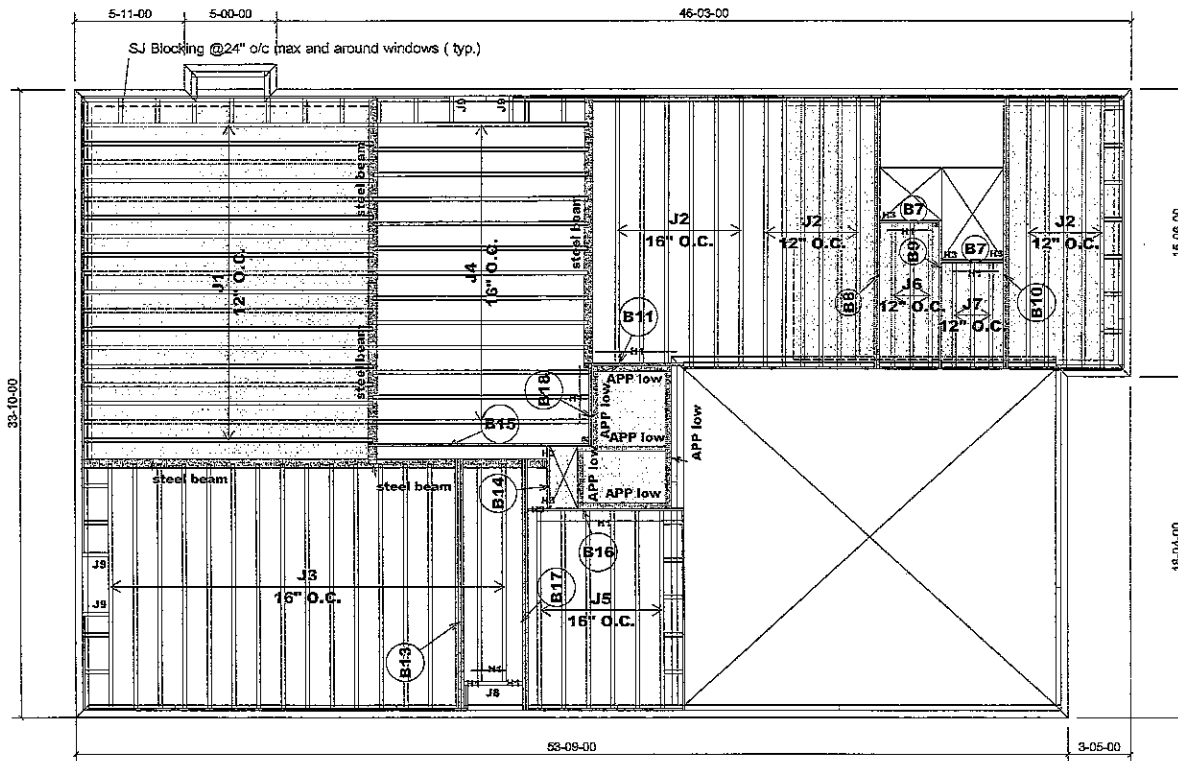
Multiple squash blocks are required under concentrated loads

Joists spacing under ceramic tile is 12"o/c

Ceramic tiles application is as per O.B.C 9.30.6

JT/PL: 40297/88120 Builder: Gold Park Homes Location: Kleinburg
LI: 271961 Project: Huntington & Nashville Date: Aug 13/16

Designer: LA Alpa Roof Trusses Inc. Salesperson: Derek
Sheet: 2 of 3 Maple, Ontario Home Lumber



Products				
PlotID	Length	Product	Piles	Net Qty
J1	16-00-00	9 1/2" NI-20	1	18
J2	15-00-00	9 1/2" NI-20	1	17
J3	14-00-00	9 1/2" NI-20	1	16
J4	12-00-00	9 1/2" NI-20	1	13
J5	11-00-00	9 1/2" NI-20	1	6
J6	8-00-00	9 1/2" NI-20	1	3
J7	6-00-00	9 1/2" NI-20	1	3
J8	4-00-00	9 1/2" NI-20	1	1
J9	2-00-00	9 1/2" NI-20	1	4
B10	15-00-00	VERSALAM-10 2.0E	2	2
B8	15-00-00	VERSALAM-10 2.0E	2	2
B17	14-00-00	VERSALAM-10 2.0E	2	2
B13	14-00-00	VERSALAM-10 2.0E	3	3
B15	13-00-00	VERSALAM-10 2.0E	1	1
B16	9-00-00	VERSALAM-10 2.0E	1	1
B9	8-00-00	VERSALAM-10 2.0E	1	1
B11	6-00-00	VERSALAM-10 2.0E	1	1
B18	5-00-00	VERSALAM-10 2.0E	1	1
B14	4-00-00	VERSALAM-10 2.0E	1	1
B7	4-00-00	VERSALAM-10 2.0E	1	2

9 1/2" BLOCKING 44 LF

APP - AS PER PLAN
BBO - BEAM BY OTHERS

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

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

HANGERS SCHEDULE

H1 — LT258
H3 — HUS1.81/10

TILE AREA

1-2x6 SPF#2 Squash Block req'd on one side of joists under interior load bearing wall

Multiple squash blocks are required under concentrated loads

Joists spacing under ceramic tile is 12" o/c

Ceramic tiles application is as per O.B.C 9.30.6

Do not scale - refer to architectural plans for dimensions

MODEL : 42-3
ELEVATION B UPGRADE
W/OPT.SUNKEN MUDROOM

FIRST FLOOR FRAMING

REVISION		
NO	DATE	PL NO.
1		

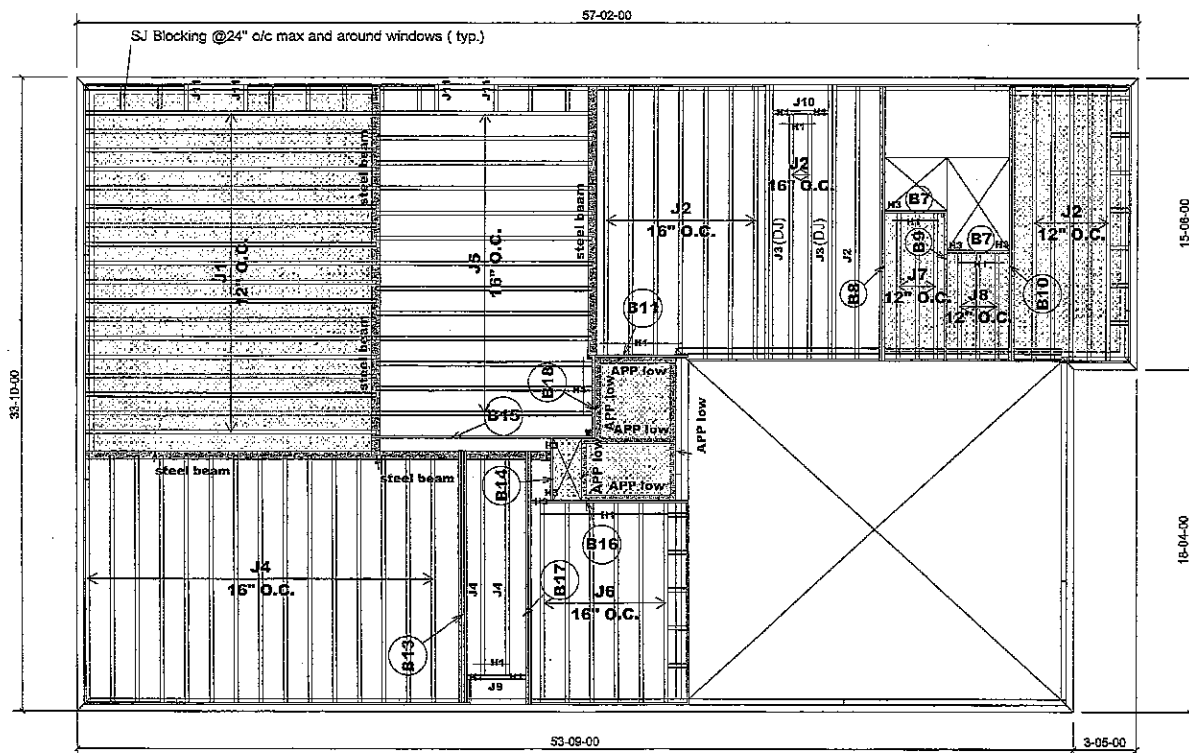
OFFICE USE ONLY

ENGINEERED FROM

S.

JT/PL: 40297/88120 Builder: Gold Park Homes Location: Kleinburg
LI: 271961 Project: Huntington & Nashville Date: Aug 13/16

Designer: LA Alpa Roof Trusses Inc. Salesperson: Derek
Sheet: 2 of 3 Maple, Ontario Home Lumber



MODEL : 42-3
ELEVATION B LOT 81
W/OPT.SUNKEN MUDROOM
W.O.B UPGRADE

REVISION		
253785	85974	
NO	DATE	PL. NO.
1.		
2.		

FIRST FLOOR FRAMING

OFFICE USE ONLY
ENGINEERED FROM
S- 129579 TO S-129595
S-

Do not scale - refer to architectural plans for dimensions

Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-20	1	18
J2	15-00-00	9 1/2" NI-20	1	15
J3	15-00-00	9 1/2" NI-20	2	4
J4	14-00-00	9 1/2" NI-20	1	17
J5	12-00-00	9 1/2" NI-20	1	13
J6	11-00-00	9 1/2" NI-20	1	6
J7	8-00-00	9 1/2" NI-20	1	3
J8	6-00-00	9 1/2" NI-20	1	3
J9	4-00-00	9 1/2" NI-20	1	1
J10	3-00-00	9 1/2" NI-20	1	1
J11	2-00-00	9 1/2" NI-20	1	4
B10	15-00-00	VERSALAM-10 2.0E	2	2
B8	15-00-00	VERSALAM-10 2.0E	2	2
B17	14-00-00	VERSALAM-10 2.0E	2	2
B13	14-00-00	VERSALAM-10 2.0E	3	3
B15	13-00-00	VERSALAM-10 2.0E	1	1
B16	9-00-00	VERSALAM-10 2.0E	1	1
B9	8-00-00	VERSALAM-10 2.0E	1	1
B11	6-00-00	VERSALAM-10 2.0E	1	1
B18	5-00-00	VERSALAM-10 2.0E	1	1
B14	4-00-00	VERSALAM-10 2.0E	1	1
B7	4-00-00	VERSALAM-10 2.0E	1	2

9 1/2" BLOCKING 38 LF

APP - AS PER PLAN
BBO - BEAM BY OTHERS

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

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

HANGERS SCHEDULE

H1 - LT259
H3 - HUS1.81/10



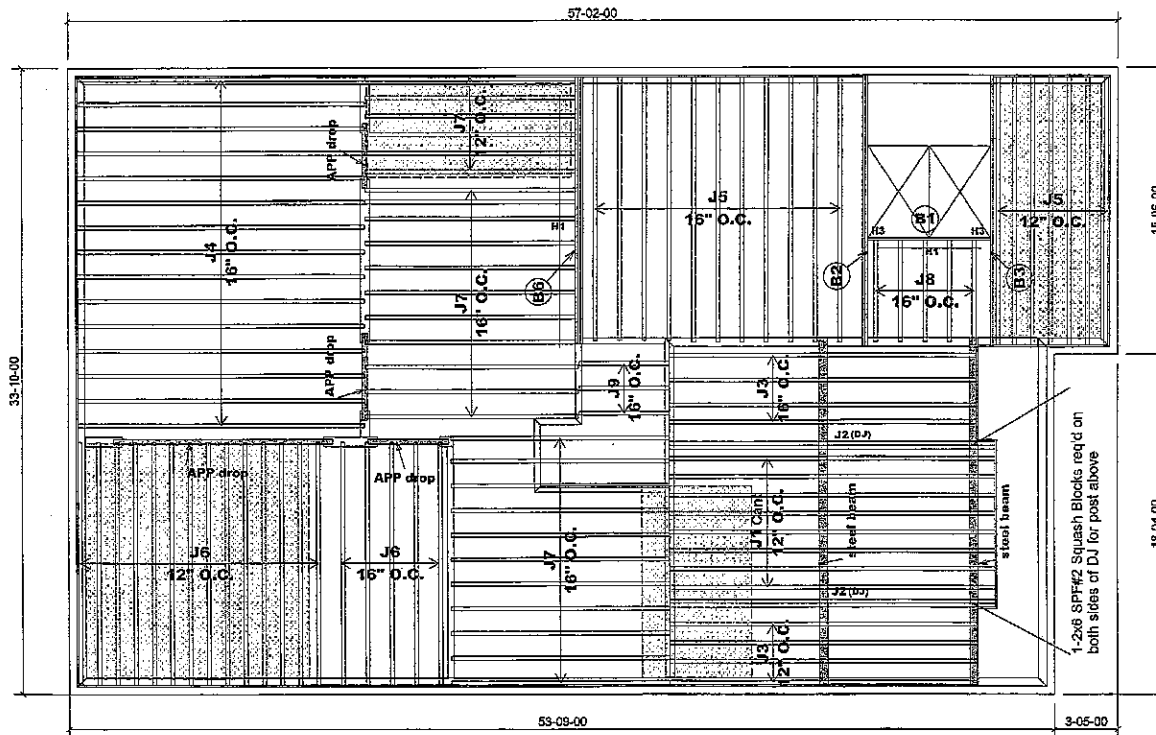
1-2x6 SPF#2 Squash Block req'd on one side of joists under interior load bearing wall

Multiple squash blocks are required under concentrated loads

Joists spacing under ceramic tile is 12" o/c

Ceramic tiles application is as per O.B.C 9.30.6

JT/PL: 40297/88769 Builder: Gold Park Homes Location: Kleinburg Designer: LA
LI: 273976 Project: Huntington & Nashville Date: Oct 13/16 Sheet: 1 of 2 Alpa Roof Trusses Inc. Salesperson: Derek Home Lumber



MODEL : 42-3
ELEVATION B LOT 81

SECOND FLOOR FRAMING

Do not scale - refer to architectural plans for dimensions

REVISION		
NO	DATE	PL NO.
1.		
2.		

Products				
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	9 1/2" NI-20	1	8
J2	18-00-00	9 1/2" NI-20	2	4
J3	17-00-00	9 1/2" NI-20	1	8
J4	18-00-00	9 1/2" NI-20	1	15
J5	15-00-00	9 1/2" NI-20	1	18
J6	14-00-00	9 1/2" NI-20	1	19
J7	12-00-00	9 1/2" NI-20	1	28
J8	6-00-00	9 1/2" NI-20	1	5
J9	5-00-00	9 1/2" NI-20	1	3
B3	15-00-00	VERSALAM-10 2.0E	1	1
B2	15-00-00	VERSALAM-10 2.0E	2	2
B6	15-00-00	VERSALAM-10 2.0E	3	3
B1	7-00-00	VERSALAM-10 2.0E	1	1

9 1/2" BLOCKING 8 LF

APP - AS PER PLAN
BBO - BEAM BY OTHERS

SUBFLOOR - 5/8" NAILED & GLUED

RIMBOARD

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

HANGERS SCHEDULE

H1 — LT259
H2 — MIT39.5-2
H3 — HUS1.81/10

TILE AREA

Provide I-Joist Blocking between cantilevered I-Joist (along bearing) and rimboard closure at ends

1-2x6 SPF#2 Squash Block req'd on one side of joists under interior load bearing wall

Multiple squash blocks are required under concentrated loads

Joists spacing under ceramic tile is 12" o/c

Ceramic tiles application is as per O.B.C 9.30.6

JT/PL: 40297/88769 Builder: Gold Park Homes Location: Kleinburg
LI: 273976 Project: Huntington & Nashville Date: Oct 13/16

Designer: LA Alpa Roof Trusses Inc. Salesperson: Derek
Sheet: 2 of 2 Maple, Ontario Home Lumber



Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

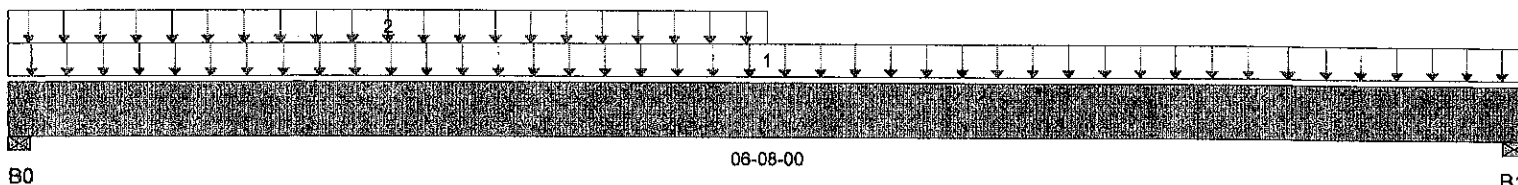
Description: Designs\01

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	633 / 0	254 / 0		
B1, 3-1/2"	455 / 0	187 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Unf. Area (lb/ft²)	L	00-00-00	06-08-00	40	15			02-10-00
2		Unf. Area (lb/ft²)	L	00-00-00	03-04-00	40	15			02-06-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,606 ft-lbs	12,704 ft-lbs	0.13	1	02-11-12
End Shear	806 lbs	5,785 lbs	0.14	1	01-01-00
Total Load Defl.	L/999 (0.031")	n/a	n/a	4	03-03-02
Live Load Defl.	L/999 (0.022")	n/a	n/a	5	03-03-02
Max Defl.	0.031"	n/a	n/a	4	03-03-02
Span / Depth	7.8	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	1,267 lbs	0.34	0.17	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	917 lbs	0.24	0.12	Spruce Pine Fir

Notes

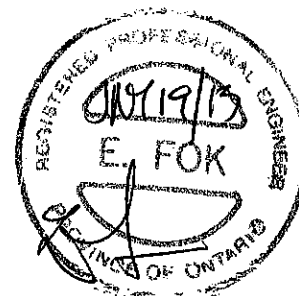
Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation. \n\nBC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.





Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

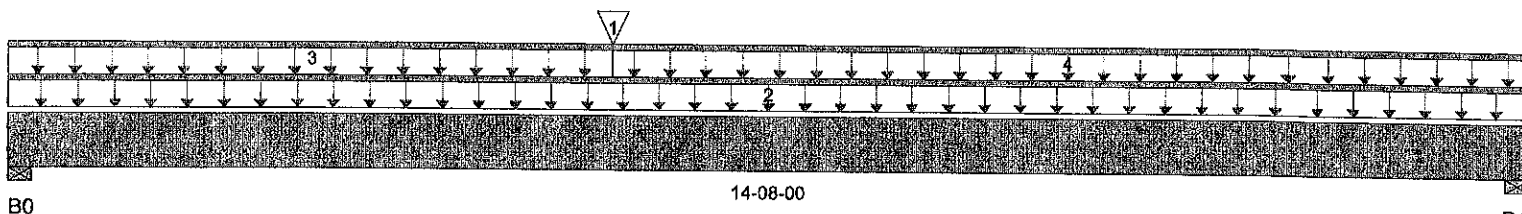
Description: Designs\02

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



Total Horizontal Product Length = 14-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	709 / 0	501 / 0		
B1, 3-1/2"	477 / 0	629 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Conc. Pt. (lbs)	L	05-10-00	05-10-00	633	254			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	14-08-00	27	10			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	05-10-00	27	10			n/a
4		Unf. Lin. (lb/ft)	L	05-10-00	14-08-00	0	60			n/a

Controls Summary

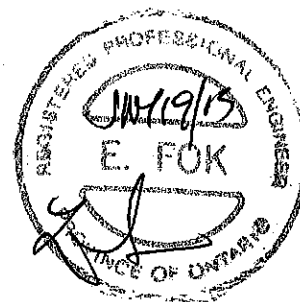
	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	7,467 ft-lbs	25,408 ft-lbs	0.29	1	05-10-00
End Shear	1,562 lbs	11,571 lbs	0.14	1	01-01-00
Total Load Defl.	L/482 (0.353")	0.71"	0.5	4	07-00-09
Live Load Defl.	L/901 (0.189")	0.474"	0.4	5	06-11-01
Max Defl.	0.353"	1"	0.35	4	07-00-09
Span / Depth	17.9	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	1,690 lbs	0.22	0.11	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	1,502 lbs	0.2	0.1	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 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

**User Notes**

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 12" O.C., STAGGERED IN TWO ROWS

BCALC® Design Report



Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

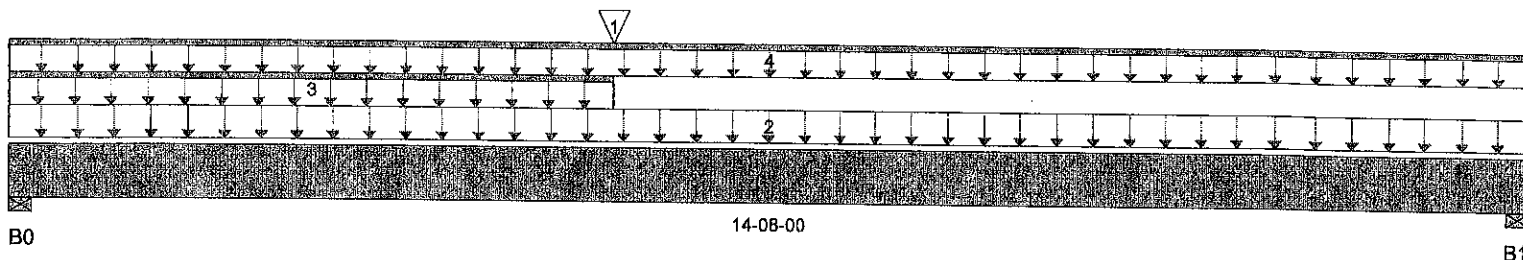
Description: Designs\03

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



Total Horizontal Product Length = 14-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,357 / 0	1,148 / 0		
B1, 3-1/2"	1,163 / 0	1,072 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Conc. Pt. (lbs)	L	05-10-00	05-10-00	455	187			n/a
2		Unf. Area (lb/ft ²)	L	00-00-00	14-08-00	40	20			03-03-00
3		Unf. Lin. (lb/ft)	L	00-00-00	05-10-00	27	10			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	14-08-00	0	60			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	12,393 ft-lbs	25,408 ft-lbs	0.49	1	06-02-06
End Shear	3,019 lbs	11,571 lbs	0.26	1	01-01-00
Total Load Defl.	L/270 (0.632")	0.71"	0.89	4	07-03-07
Live Load Defl.	L/497 (0.343")	0.474"	0.72	5	07-03-07
Max Defl.	0.632"	1"	0.63	4	07-03-07
Span / Depth	17.9	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	3,470 lbs	0.46	0.23	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	3,084 lbs	0.41	0.21	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 086.
 BCALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PM TO ANOTHER WITH 3/4" SQUARE NAILS
 @ 12" O.C., STRUTTED IN 2 ROWS



BC CALC® Design Report



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

May-04-15

Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

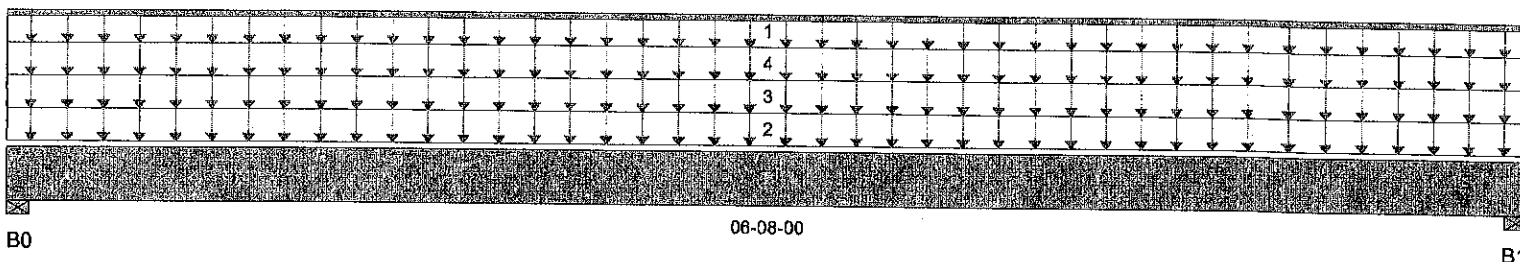
Description: Designs\04

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



B0

06-08-00

B1

Total Horizontal Product Length = 06-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	933 / 0	949 / 0	866 / 0	
B1, 3-1/2"	933 / 0	949 / 0	866 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1	Unf. Lin. (lb/ft)	L	00-00-00	06-08-00	0	100				n/a
2	Unf. Area (lb/ft^2)	L	00-00-00	06-08-00	11	10		21		10-00-00
3	Unf. Area (lb/ft^2)	L	00-00-00	06-08-00	11	10		21		02-04-08
4	Unf. Area (lb/ft^2)	L	00-00-00	06-08-00	40	15				03-09-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	4,364 ft-lbs	12,704 ft-lbs	0.34	1	03-04-00
End Shear	2,038 lbs	5,785 lbs	0.35	1	01-01-00
Total Load Defl.	L/999 (0.091")	n/a	n/a	11	03-04-00
Live Load Defl.	L/999 (0.053")	n/a	n/a	15	03-04-00
Max Defl.	0.091"	n/a	n/a	11	03-04-00
Span / Depth	7.8	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	3,020 lbs	0.8	0.4	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	3,020 lbs	0.8	0.4	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 086.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4
Deflections less than 1/8" were ignored in the results.



User Notes

BC CALC® Design Report



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

May-04-15

Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

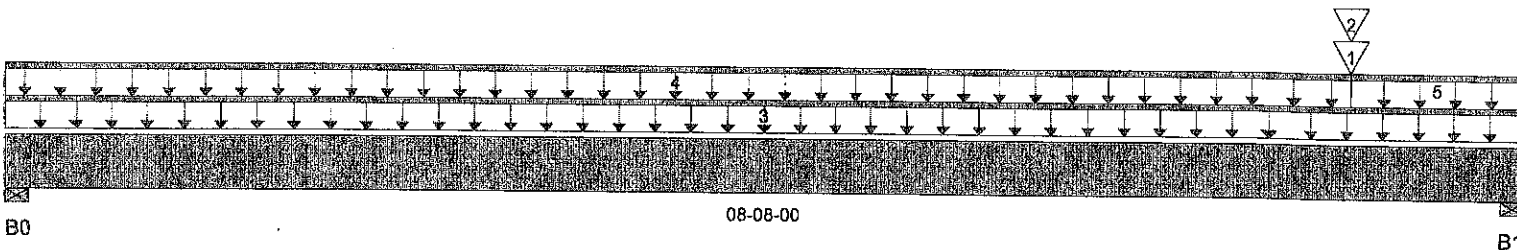
Description: Designs\05

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



Total Horizontal Product Length = 08-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	395 / 0	292 / 0	231 / 0	
B1, 3-1/2"	1,776 / 0	1,764 / 0	2,230 / 0	

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Conc. Pt. (lbs)	L	07-08-00	07-08-00	933	949	866		n/a
2		Conc. Pt. (lbs)	L	07-08-00	07-08-00	797	760	1,595		n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	08-08-00	27	10			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	07-08-00	27	10			n/a
5		Unf. Lin. (lb/ft)	L	07-08-00	08-08-00	0	100			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	4,884 ft-lbs	25,408 ft-lbs	0.19	5	07-08-00
End Shear	5,655 lbs	11,571 lbs	0.49	5	07-07-00
Total Load Defl.	L/999 (0.069")	n/a	n/a	11	04-08-14
Live Load Defl.	L/999 (0.043")	n/a	n/a	15	04-08-14
Max Defl.	0.069"	n/a	n/a	11	04-08-14
Span / Depth	10.4	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	1,074 lbs	0.14	0.07	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	6,437 lbs	0.85	0.43	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 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes NAIL ONE PLATE TO ANOTHER WITH 2x4 SPRUCE PINE FIR
 @ 12" O.C., STRUTTED IN 2 ROWS



S-129683

BC CALC® Design Report



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

May-04-15

Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

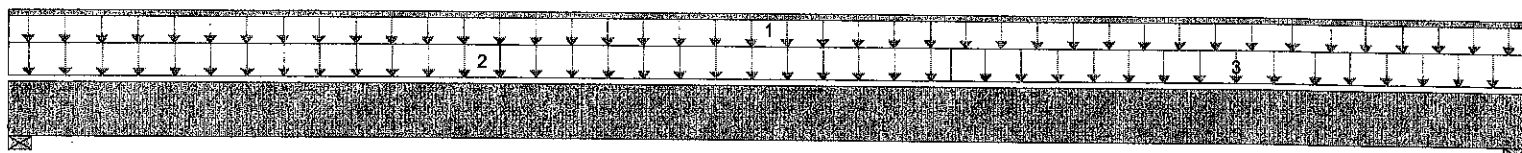
Description: Designs\06

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



B0

14-06-00

B1

Total Horizontal Product Length = 14-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,887 / 0	840 / 0		
B1, 3-1/2"	1,887 / 0	943 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Unf. Lin. (lb/ft)	L	00-00-00	14-06-00	27	10			n/a
2		Unf. Area (lb/ft^2)	L	00-00-00	09-00-00	40	15			05-10-00
3		Unf. Area (lb/ft^2)	L	09-00-00	14-06-00	40	20			05-10-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	13,327 ft-lbs	39,636 ft-lbs	0.34	1	07-03-03
End Shear	3,396 lbs	17,356 lbs	0.2	1	13-05-00
Total Load Defl.	L/379 (0.444")	0.702"	0.63	4	07-03-03
Live Load Defl.	L/555 (0.304")	0.468"	0.65	5	07-03-03
Max Defl.	0.444"	1"	0.44	4	07-03-03
Span / Depth	17.7	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	3-1/2" x 5-1/4"	3,882 lbs	0.34	0.17	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 5-1/4"	4,010 lbs	0.35	0.18	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 086.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4
Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
@ 10" O.C., STAGGERED IN TWO ROWS





BC CALC® Design Report



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

May-04-15

Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

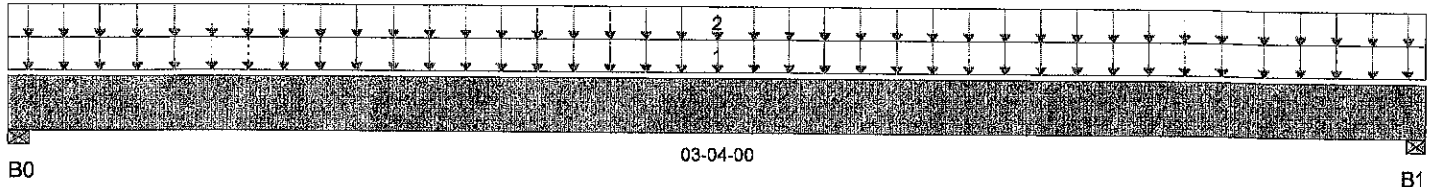
Description: Designs\07

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



Total Horizontal Product Length = 03-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	361 / 0	177 / 0		
B1, 3-1/2"	361 / 0	177 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Unf. Area (lb/ft ²)	L	00-00-00	03-04-00	40	20			04-00-00
2		Unf. Area (lb/ft ²)	L	00-00-00	03-04-00	40	15			01-05-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	473 ft-lbs	12,704 ft-lbs	0.04	1	01-08-00
End Shear	267 lbs	5,785 lbs	0.05	1	01-01-00
Total Load Defl.	L/999 (0.002")	n/a	n/a	4	01-08-00
Live Load Defl.	L/999 (0.001")	n/a	n/a	5	01-08-00
Max Defl.	0.002"	n/a	n/a	4	01-08-00
Span / Depth	3.6	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	763 lbs	0.2	0.1	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	763 lbs	0.2	0.1	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 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ / O.C., STAGGERED IN TWO ROWS

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation. \n\nBC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.



BC CALC® Design Report



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

May-04-15

Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

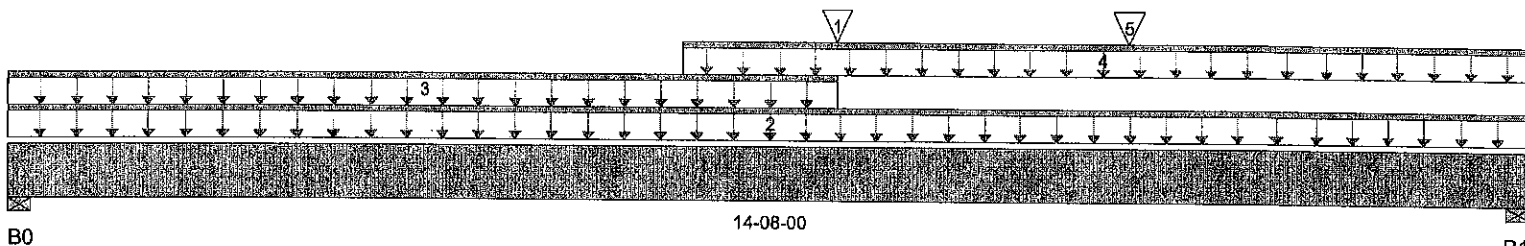
Description: Designs\08

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



Total Horizontal Product Length = 14-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	627 / 0	472 / 0		
B1, 3-1/2"	874 / 0	782 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Conc. Pt. (lbs)	L	08-00-00	08-00-00	361	177			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	14-08-00	27	10			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	08-00-00	20	10			n/a
4		Unf. Lin. (lb/ft)	L	06-06-00	14-08-00	0	60			n/a
5		Conc. Pt. (lbs)	L	10-10-00	10-10-00	584	219			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	8,369 ft-lbs	25,408 ft-lbs	0.33	1	08-00-00
End Shear	2,137 lbs	11,571 lbs	0.18	1	13-07-00
Total Load Defl.	L/417 (0.408")	0.71"	0.57	4	07-07-08
Live Load Defl.	L/746 (0.229")	0.474"	0.48	5	07-07-08
Max Defl.	0.408"	1"	0.41	4	07-07-08
Span / Depth	17.9	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	1,530 lbs	0.2	0.1	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	2,289 lbs	0.3	0.15	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 086.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4
Deflections less than 1/8" were ignored in the results.



User Notes: NAIL ONE PUT TO ANOTHER WITH 3/2" SPIRAL NAILS @ 12" O.C.,
STAGGERED IN 2 ROWS

BC CALC® Design Report



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

May-04-15

Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

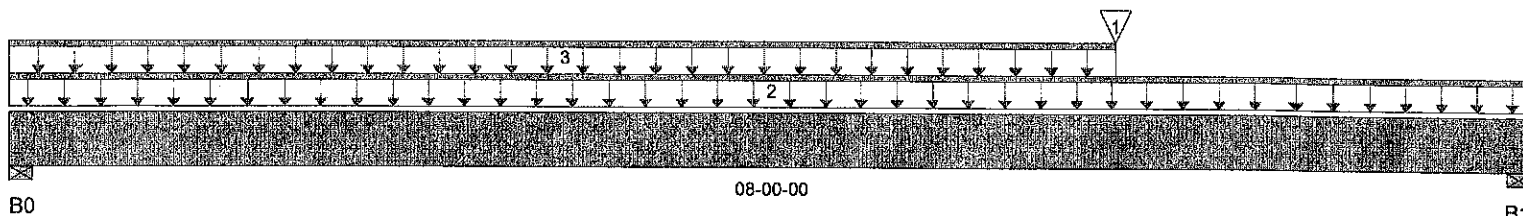
Description: Designs\09

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



Total Horizontal Product Length = 08-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	248 / 0	142 / 0		
B1, 3-1/2"	390 / 0	212 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Conc. Pt. (lbs)	L	05-10-00	05-10-00	361	177			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	08-00-00	20	10			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	05-10-00	20	10			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,533 ft-lbs	12,704 ft-lbs	0.12	1	05-10-00
End Shear	797 lbs	5,785 lbs	0.14	1	06-11-00
Total Load Defl.	L/999 (0.041")	n/a	n/a	4	04-02-06
Live Load Defl.	L/999 (0.027")	n/a	n/a	5	04-03-05
Max Defl.	0.041"	n/a	n/a	4	04-02-06
Span / Depth	9.5	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	549 lbs	0.15	0.07	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	849 lbs	0.23	0.11	Spruce Pine Fir

Notes

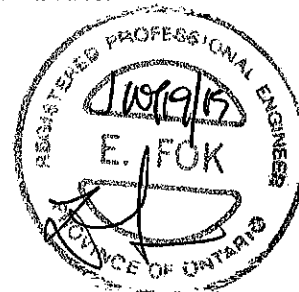
Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation. \n\nBC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.





Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

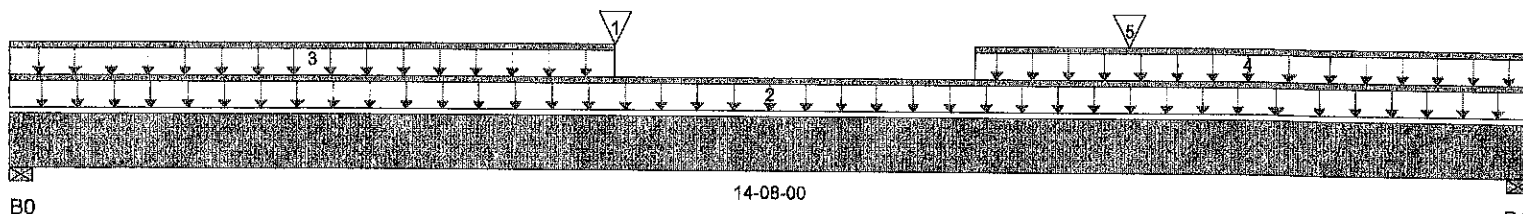
Description: Designs\10

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



Total Horizontal Product Length = 14-08-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	608 / 0	409 / 0		
B1, 3-1/2"	747 / 0	653 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Conc. Pt. (lbs)	L	05-10-00	05-10-00	361	177			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	14-08-00	20	10			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	05-10-00	20	10			n/a
4		Unf. Lin. (lb/ft)	L	09-04-00	14-08-00	0	60			n/a
5		Conc. Pt. (lbs)	L	10-10-00	10-10-00	584	219			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	6,409 ft-lbs	25,408 ft-lbs	0.25	1	07-07-00
End Shear	1,797 lbs	11,571 lbs	0.16	1	13-07-00
Total Load Defl.	L/499 (0.342")	0.71"	0.48	4	07-05-11
Live Load Defl.	L/841 (0.203")	0.474"	0.43	5	07-05-11
Max Defl.	0.342"	1"	0.34	4	07-05-11
Span / Depth	17.9	n/a	n/a		00-00-00

Bearing Supports

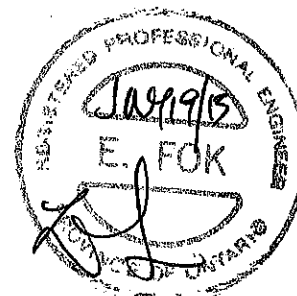
	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	1,423 lbs	0.19	0.1	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	1,937 lbs	0.26	0.13	Spruce Pine Fir

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 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE ROW TO ANOTHER WITH 3/2" SPIRAL NAILS
 @ 12" O.C., STRAPPED IN 2 ROWS





Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

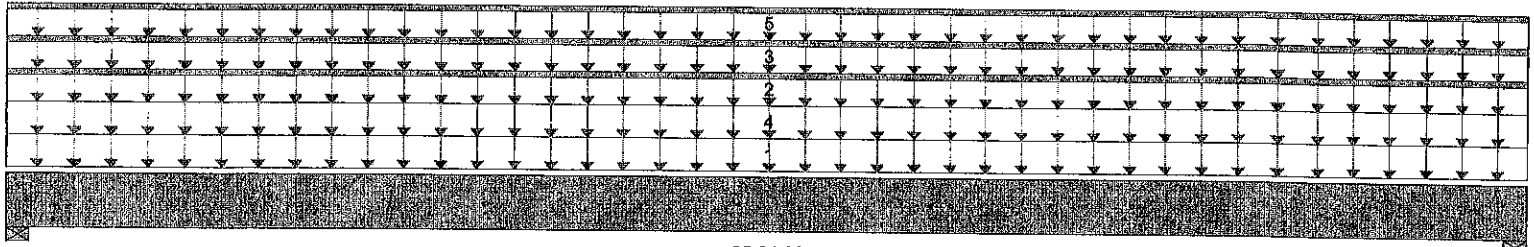
Description: Designs\11

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



B0

05-04-00

B1

Total Horizontal Product Length = 05-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,619 / 0	786 / 0		
B1, 3-1/2"	1,619 / 0	786 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Unf. Area (lb/ft^2)	L	00-00-00	05-04-00	40	15			07-00-00
2		Unf. Lin. (lb/ft)	L	00-00-00	05-04-00	20	10			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	05-04-00	27	10			n/a
4		Unf. Area (lb/ft^2)	L	00-00-00	05-04-00	40	15			07-00-00
5		Unf. Lin. (lb/ft)	L	00-00-00	05-04-00	0	60			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	3,800 ft-lbs	12,704 ft-lbs	0.3	1	02-08-00
End Shear	2,025 lbs	5,785 lbs	0.35	1	01-01-00
Total Load Defl.	L/999 (0.046")	n/a	n/a	4	02-08-00
Live Load Defl.	L/999 (0.031")	n/a	n/a	5	02-08-00
Max Defl.	0.046"	n/a	n/a	4	02-08-00
Span / Depth	6.2	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	3,411 lbs	0.91	0.46	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	3,411 lbs	0.91	0.46	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 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes



S.129689

BC CALC® Design Report



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

May-04-15

Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

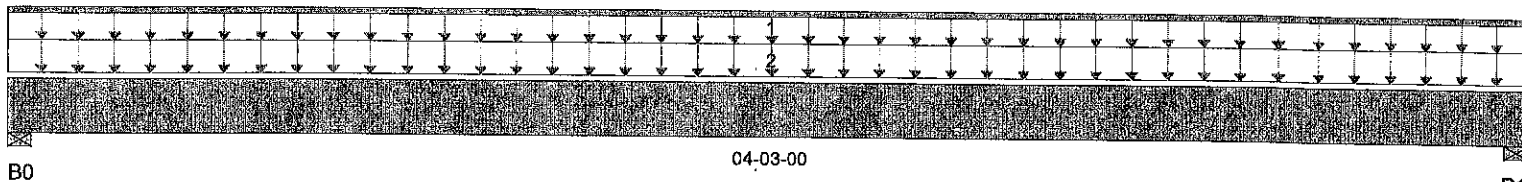
Description: Designs\12

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



B0

04-03-00

B1

Total Horizontal Product Length = 04-03-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	610 / 0	239 / 0		
B1, 3-1/2"	610 / 0	239 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Unf. Lin. (lb/ft)	L	00-00-00	04-03-00	27	10			n/a
2		Unf. Area (lb/ft^2)	L	00-00-00	04-03-00	40	15			06-06-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	1,026 ft-lbs	12,704 ft-lbs	0.08	1	02-01-08
End Shear	595 lbs	5,785 lbs	0.1	1	01-01-00
Total Load Defl.	L/999 (0.007")	n/a	n/a	4	02-01-08
Live Load Defl.	L/999 (0.005")	n/a	n/a	5	02-01-08
Max Defl.	0.007"	n/a	n/a	4	02-01-08
Span / Depth	4.8	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand / Resistance Support	Demand / Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	1,213 lbs	0.32	0.16	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	1,213 lbs	0.32	0.16	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 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS

Disclosure

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Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

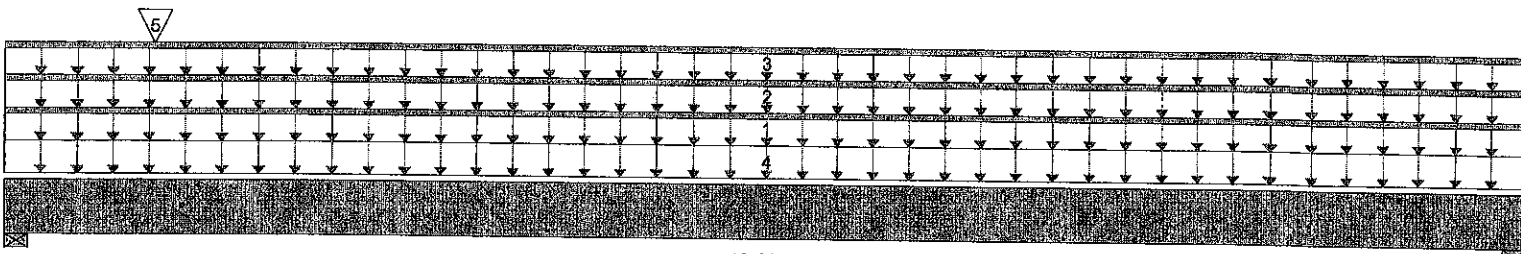
Description: Designs\13

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



B0

13-06-00

B1

Total Horizontal Product Length = 13-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	2,554 / 0	1,458 / 0		
B1, 3-1/2"	2,203 / 0	1,326 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Unf. Lin. (lb/ft)	L	00-00-00	13-06-00	54	20			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	13-06-00	0	60			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	13-06-00	27	10			n/a
4		Unf. Area (lb/ft^2)	L	00-00-00	13-06-00	40	15			06-00-00
5		Conc. Pt. (lbs)	L	01-04-00	01-04-00	423	159			n/a

Controls Summary

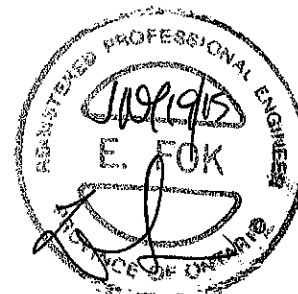
	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	15,868 ft-lbs	39,636 ft-lbs	0.4	1	06-08-07
End Shear	4,868 lbs	17,356 lbs	0.28	1	01-01-00
Total Load Defl.	L/338 (0.463")	0.652"	0.71	4	06-08-07
Live Load Defl.	L/540 (0.29")	0.435"	0.67	5	06-08-07
Max Defl.	0.463"	1"	0.46	4	06-08-07
Span / Depth	16.5	n/a	n/a		00-00-00

Bearing Supports

		Dim. (L x W)	Demand	Support	Member	Material
B0	Wall/Plate	3-1/2" x 5-1/4"	5,653 lbs	0.5	0.25	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 5-1/4"	4,961 lbs	0.44	0.22	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 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.


User Notes

NAIL ONE ROW TO ANOTHER WITH 3/2" SPIRAL NAILS @ 12" o.c.,
 STABILIZED IN 2 ROWS



Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

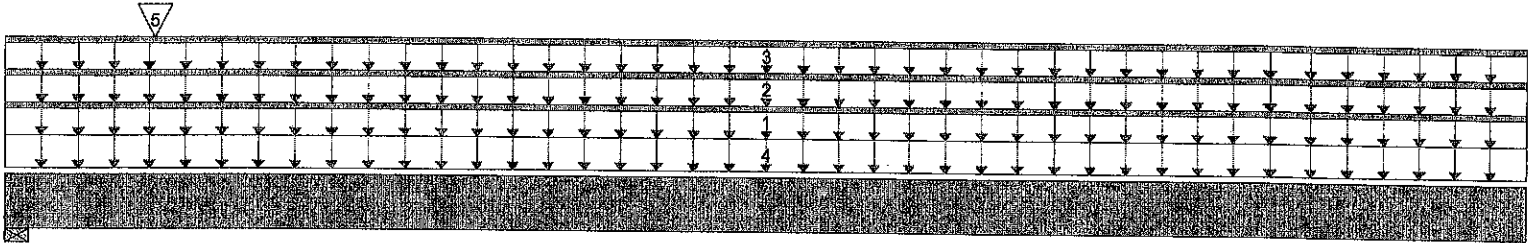
Description: Designs\13

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



B0

13-06-00

B1

Total Horizontal Product Length = 13-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	2,554 / 0	1,458 / 0		
B1, 3-1/2"	2,203 / 0	1,326 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Unf. Lin. (lb/ft)	L	00-00-00	13-06-00	54	20			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	13-06-00	0	60			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	13-06-00	27	10			n/a
4		Unf. Area (lb/ft^2)	L	00-00-00	13-06-00	40	15			06-00-00
5		Conc. Pt. (lbs)	L	01-04-00	01-04-00	423	159			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	15,868 ft-lbs	39,636 ft-lbs	0.4	1	06-08-07
End Shear	4,868 lbs	17,356 lbs	0.28	1	01-01-00
Total Load Defl.	L/338 (0.463")	0.652"	0.71	4	06-08-07
Live Load Defl.	L/540 (0.29")	0.435"	0.67	5	06-08-07
Max Defl.	0.463"	1"	0.46	4	06-08-07
Span / Depth	16.5	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B0 Wall/Plate	3-1/2" x 5-1/4"	5,653 lbs	0.5	0.25	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 5-1/4"	4,961 lbs	0.44	0.22	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 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.



User Notes NAIL ONE ROW TO ANOTHER WITH 3/2" SPIRAL NAILS @ 12" O.C.,
 STAGGERED IN 2 ROWS

BC CALC® Design Report


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

May-04-15

Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

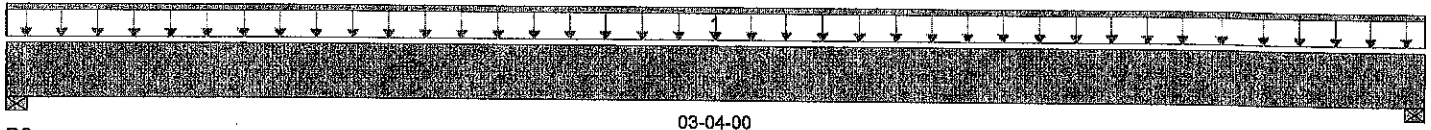
Description: Designs\14

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



03-04-00

Total Horizontal Product Length = 03-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	45 / 0	125 / 0		
B1, 3-1/2"	45 / 0	125 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1		Unf. Lin. (lb/ft)	L	00-00-00	03-04-00	27	70	1.00	1.15	n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	108 ft-lbs	8,258 ft-lbs	0.01	0	01-08-00
End Shear	61 lbs	3,761 lbs	0.02	0	01-01-00
Total Load Defl.	L/999 (0.001")	n/a	n/a	4	01-08-00
Live Load Defl.	L/999 (0")	n/a	n/a	5	01-08-00
Max Defl.	0.001"	n/a	n/a	4	01-08-00
Span / Depth	3.6	n/a	n/a		00-00-00

Bearing Supports

		Dim. (L x W)	Demand	Support	Member	Material
B0	Wall/Plate	3-1/2" x 1-3/4"	175 lbs	0.07	0.04	Spruce Pine Fir
B1	Wall/Plate	3-1/2" x 1-3/4"	175 lbs	0.07	0.04	Spruce Pine Fir

Notes

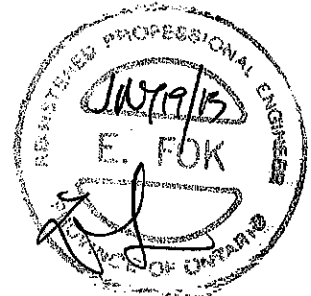
Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum total load deflection criteria.
 Calculations assume Member is Fully Braced.
 Resistance Factor phi has been applied to all presented results per CSA 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS

Disclosure

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





Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

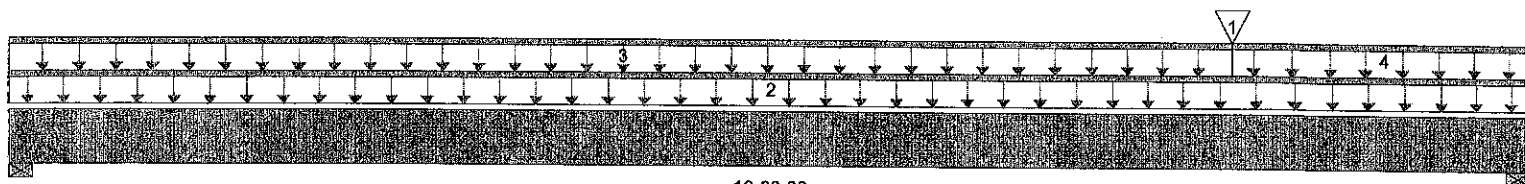
Description: Designs\15

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



B0

12-00-00

B1

Total Horizontal Product Length = 12-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	327 / 0	181 / 0		
B1, 3-1/2"	303 / 0	358 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Conc. Pt. (lbs)	L	09-08-00	09-08-00	45	125			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	12-00-00	27	10			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	09-08-00	27	10			n/a
4		Unf. Lin. (lb/ft)	L	09-08-00	12-00-00	0	60			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	2,134 ft-lbs	12,704 ft-lbs	0.17	1	06-05-06
End Shear	757 lbs	5,785 lbs	0.13	1	10-11-00
Total Load Defl.	L/933 (0.148")	0.577"	0.26	4	06-02-02
Live Load Defl.	L/999 (0.088")	n/a	n/a	5	06-00-09
Max Defl.	0.148"	1"	0.15	4	06-02-02
Span / Depth	14.6	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	717 lbs	0.19	0.1	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	902 lbs	0.24	0.12	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 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ O.C., STAGGERED IN TWO ROWS

Disclosure

Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of BOISE engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call 1-800-964-6999 before installation. \n\nBC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM PLUS®, VERSA-RIM®, VERSA-STRAND®, VERSA-STUD® are trademarks of Boise Cascade Wood Products L.L.C.



BC CALC® Design Report



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

May-04-15

Build 3272

Job Name:

40297

Address:

Huntington & Nashville

City, Province, Postal Code: Kleinburg, ON

Customer:

Gold Park

Code reports:

CCMC 12472-R

File Name: 253785.bcc

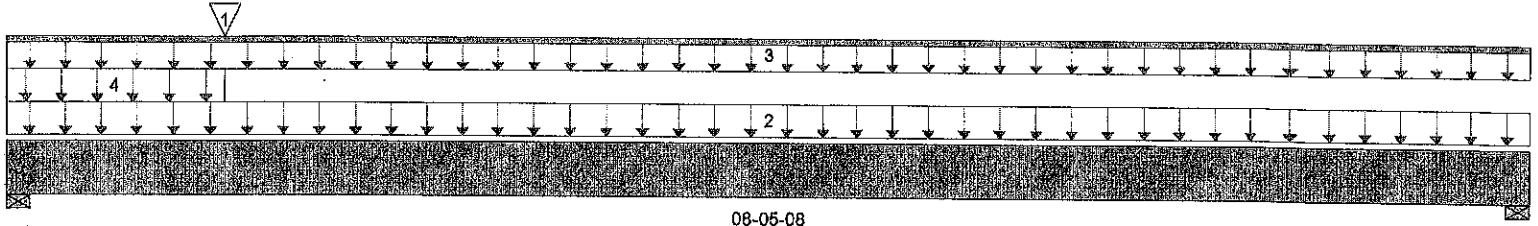
Description: Designs\16

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



B0

08-05-08

B1

Total Horizontal Product Length = 08-05-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,032 / 0	756 / 0		
B1, 3-1/2"	926 / 0	635 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Conc. Pt. (lbs)	L	01-02-08	01-02-08	45	125			n/a
2		Unf. Area (lb/ft^2)	L	00-00-00	08-05-08	40	15			05-05-00
3		Unf. Lin. (lb/ft)	L	00-00-00	08-05-08	0	60			n/a
4		Unf. Area (lb/ft^2)	L	00-00-00	01-02-08	40	15			01-08-00

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	4,202 ft-lbs	12,704 ft-lbs	0.33	1	04-02-06
End Shear	1,802 lbs	5,785 lbs	0.31	1	01-01-00
Total Load Defl.	L/689 (0.139")	0.4"	0.35	4	04-02-06
Live Load Defl.	L/999 (0.082")	n/a	n/a	5	04-02-06
Max Defl.	0.139"	1"	0.14	4	04-02-06
Span / Depth	10.1	n/a	n/a		00-00-00

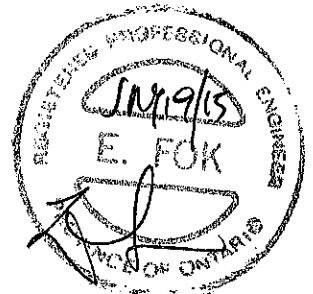
Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 1-3/4"	2,494 lbs	0.66	0.33	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	2,182 lbs	0.58	0.29	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 086.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4
Deflections less than 1/8" were ignored in the results.

User Notes



BC CALC® Design Report



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

May-04-15

Build 3272

Job Name:

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Address:

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City, Province, Postal Code: Kleinburg, ON

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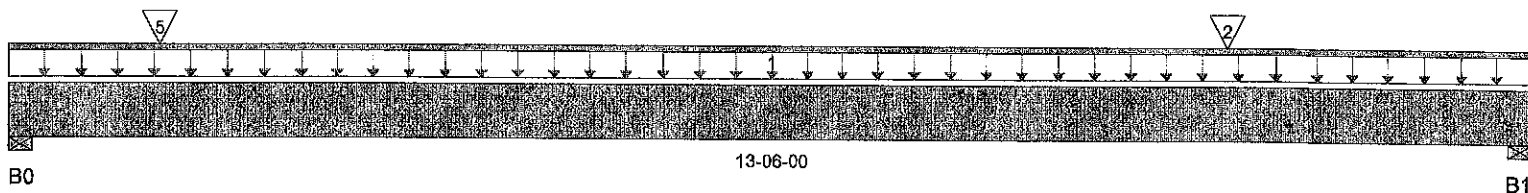
Description: Designs\17

Specifier: 42-3

Designer: LA

Company: ALPA ROOF TRUSSES INC

Misc:



Total Horizontal Product Length = 13-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	945 / 0	487 / 0		
B1, 3-1/2"	1,239 / 0	828 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Trib.
1		Unf. Lin. (lb/ft)	L	00-00-00	13-06-00	54	20			n/a
2		Conc. Pt. (lbs)	L	10-10-00	10-10-00	1,032	756			n/a
5		Conc. Pt. (lbs)	L	01-04-00	01-04-00	423	159			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
Pos. Moment	6,671 ft-lbs	25,408 ft-lbs	0.26	1	10-01-01
End Shear	2,766 lbs	11,571 lbs	0.24	1	12-05-00
Total Load Defl.	L/547 (0.286")	0.652"	0.44	4	07-01-07
Live Load Defl.	L/889 (0.176")	0.435"	0.4	5	07-01-07
Max Defl.	0.286"	1"	0.29	4	07-01-07
Span / Depth	16.5	n/a	n/a		00-00-00

Bearing Supports

	Dim. (L x W)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B0 Wall/Plate	3-1/2" x 3-1/2"	2,025 lbs	0.27	0.14	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 3-1/2"	2,894 lbs	0.38	0.19	Spruce Pine Fir

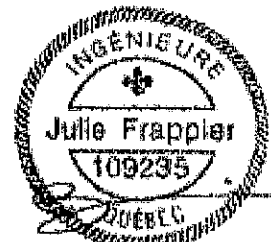
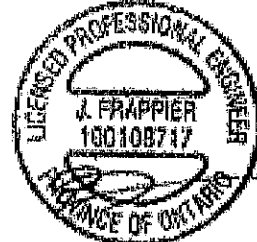
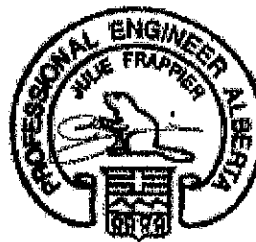
Notes

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 086.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC and CSA 086.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 4
 Deflections less than 1/8" were ignored in the results.

User Notes

NAIL ONE PLY TO ANOTHER WITH 3 1/2" SPIRAL NAILS
 @ 12" O.C., STAGGERED IN TWO ROWS



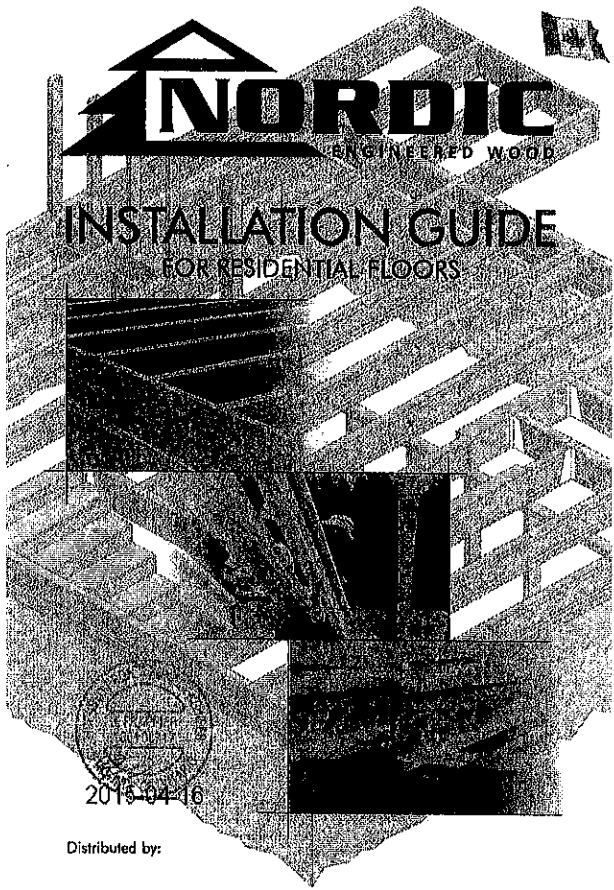


Maximum Floor Spans

Live Load = 40 psf, Dead Load = 15 psf
Simple Spans, L/360 Deflection Limit
5/8" OSB G&N Sheathing

Depth	Series	Bare				1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-2"	13'-9"	N/A	15'-7"	14'-8"	14'-2"	N/A
	NI-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	N/A
	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A
	NI-80	17'-3"	16'-3"	15'-8"	N/A	17'-8"	16'-7"	16'-0"	N/A
11-7/8"	NI-20	16'-11"	16'-0"	15'-5"	N/A	17'-6"	16'-6"	16'-0"	N/A
	NI-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A
	NI-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
	NI-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18'-7"	17'-9"	N/A
	NI-80	19'-9"	18'-3"	17'-6"	N/A	20'-4"	18'-10"	17'-11"	N/A
14"	NI-90x	20'-4"	18'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A
	NI-40x	20'-1"	18'-7"	17'-10"	N/A	20'-10"	19'-4"	18'-6"	N/A
	NI-60	20'-5"	18'-11"	18'-1"	N/A	21'-2"	19'-7"	18'-9"	N/A
	NI-70	21'-7"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A
	NI-80	21'-11"	20'-3"	19'-4"	N/A	22'-7"	20'-11"	20'-0"	N/A
16"	NI-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
	NI-80	23'-11"	22'-1"	21'-1"	N/A	24'-8"	22'-10"	21'-9"	N/A
	NI-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A
Depth	Series	Mid-Span Blocking				Mid-Span Blocking and 1/2" Gypsum Ceiling			
		On Centre Spacing				On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-10"	15'-5"	14'-6"	N/A	17'-1"	15'-5"	14'-6"	N/A
	NI-40x	17'-11"	16'-11"	16'-4"	N/A	18'-5"	17'-4"	16'-7"	N/A
	NI-60	18'-2"	17'-1"	16'-6"	N/A	18'-7"	17'-6"	16'-10"	N/A
	NI-70	19'-2"	17'-10"	17'-2"	N/A	19'-7"	18'-3"	17'-7"	N/A
	NI-80	19'-5"	18'-0"	17'-4"	N/A	19'-10"	18'-5"	17'-8"	N/A
11-7/8"	NI-20	19'-6"	18'-1"	17'-5"	N/A	20'-2"	18'-8"	17'-6"	N/A
	NI-40x	21'-0"	19'-6"	18'-8"	N/A	21'-7"	20'-2"	19'-3"	N/A
	NI-60	21'-4"	19'-9"	18'-11"	N/A	21'-11"	20'-4"	19'-6"	N/A
	NI-70	22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-5"	20'-5"	N/A
	NI-80	22'-9"	21'-1"	20'-1"	N/A	23'-3"	21'-7"	20'-8"	N/A
14"	NI-90x	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
	NI-40x	23'-7"	21'-11"	20'-11"	N/A	24'-3"	22'-7"	21'-7"	N/A
	NI-60	24'-0"	22'-3"	21'-3"	N/A	24'-8"	22'-11"	21'-11"	N/A
	NI-70	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-11"	N/A
	NI-80	25'-7"	23'-8"	22'-7"	N/A	26'-2"	24'-4"	23'-2"	N/A
16"	NI-90x	26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
	NI-60	26'-5"	24'-6"	23'-4"	N/A	27'-2"	25'-3"	24'-2"	N/A
	NI-70	27'-9"	25'-8"	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
	NI-80	28'-2"	26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A
	NI-90x	29'-0"	26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-2"	N/A

- 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 5/8 inch for a joist spacing of 19.2 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, and NBC 2010.
- 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.



Distributed by:



SAFETY AND CONSTRUCTION PRECAUTIONS

WARNING

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



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



Never stack building materials over unbraced I-joists. Once sheathed, do not over-stress I-joist with concentrated loads from building materials.

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 at the interior support.
2. 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 center, 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. Top 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-joists at the end of the bay.
3. For cantilevered I-joists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-bridging.
4. 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.
5. 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.

STORAGE AND HANDLING GUIDELINES

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

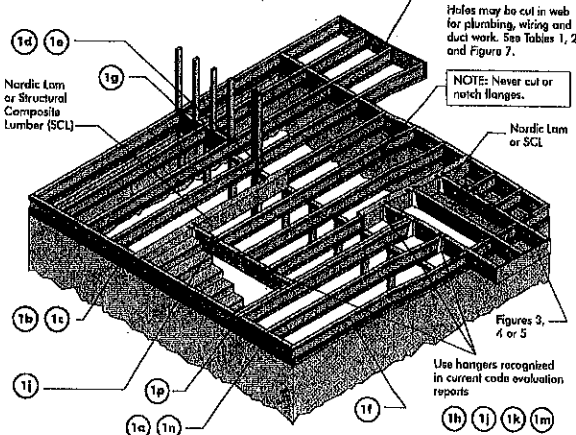


INSTALLING NORDIC I-JOISTS

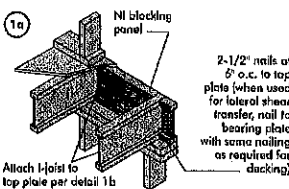
1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not, contact your supplier.
2. Except for cutting to length, I-joist flanges should **never** be cut, drilled, or notched.
3. Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment.
4. I-joists must be anchored securely to supports before floor sheathing is attached, and supports for multiple span joists must be level.
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 end and a header.
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 fixtures, audio equipment and security cameras. Never suspend unusual or heavy loads from the I-joist's bottom flange. Whenever possible, suspend all 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 joists 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 on edge 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 selected.
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 struts 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: Space nails installed to the flange's top face in accordance with the applicable building code requirements or approved building plans.

FIGURE 1
TYPICAL NORDIC I-JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS

Some framing requirements such as straction bracing and blocking panels have been omitted for clarity.

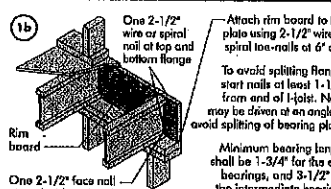


All nails shown in the above details are assumed to be common wire nails unless otherwise noted. 3" (0.122" dia.) common spiral nails may be substituted for 2-1/2" (0.128" dia.) common wire nails. Framing lumber assumed to be Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for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



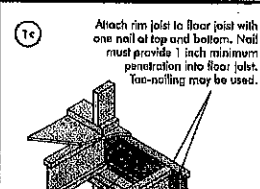
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (psf)
Ni Joist	3,300

*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.



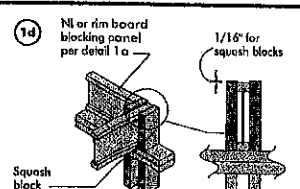
Blocking Panel	Maximum Factored Uniform Vertical Load* (psf)
1-1/8" Rim Board Plus	8,090

*The uniform vertical load is limited to a rim board 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.



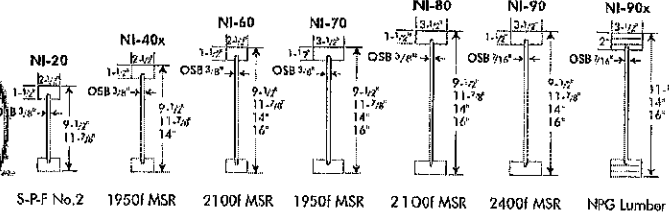
Pair of Squash Blocks	Maximum Factored Uniform Vertical Load* (psf)
2x Lumber	5,500
1-1/8" Rim Board Plus	4,300

*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.



Pair of Squash Blocks	Maximum Factored Uniform Vertical Load* (psf)
2x Lumber	5,500
1-1/8" Rim Board Plus	4,300

*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.



Furthermore, Chantiers Chibouganau 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.

1a

Blocking 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.

Attach I-joist to top plate per detail 1b

2-1/2" nails at 6" o.c. to top plate (when used for lateral shear transfer, nail to bearing plate with same nailing as required for decking)

1b

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 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.

To avoid splitting flange, start nails at least 1-1/2" from end of I-joist. 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.

1d

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

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

1e

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

NI blocking panel per detail 1a

1h

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 webs and filler block where the backer block will fit. Clinch. Install backer tight to top flange. Use twelve 3" nails, clinched when possible. Maximum factored resistance for hanger for this detail = 1,620 lbs.

BACKER BLOCKS (Blocks must be long enough to permit required nailing without splitting)

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-PF No. 2 or better for solid sawn lumber and wood structural panels conforming to CAN/CSA-O325 or CAN/CSA-O437 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".

1i

Top- or face-mount hanger installed per manufacturer's recommendations

NOTE: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

1k

Top-mount hanger installed per manufacturer's recommendations

1m

1n

NOTE: Blocking required at bearing for lateral support, not shown for clarity.

1r

OPTIONAL: Minimum 1x4 inch strap applied to underside of joist at blocking line or 1/2 inch minimum gypsum ceiling attached to underside of joists.

1p

FILLER BLOCK REQUIREMENTS FOR DOUBLE I-JOIST CONSTRUCTION

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 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-joist. 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-joist capacity.

1s

NOTES:

- In some local codes, blocking is prescriptively required in the first joist space (for first and second joist space) next to the starter joist. Where required, see local code requirements for spacing of the blocking.
- All nails are common spiral in this detail.

WEB STIFFENERS

RECOMMENDATIONS:

- A **bearing stiffener** is required in all engineered applications with factored reactions greater than shown in the I-joist properties table found in the I-joist Construction Guide (C101). 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 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.

FIGURE 2

WEB STIFFENER INSTALLATION DETAILS

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

4a

Method 1 — SHEATHING REINFORCEMENT ONE SIDE

Method 2 — SHEATHING REINFORCEMENT TWO SIDES

Use same installation as Method 1 but reinforce both sides of I-joist with sheathing.

RIM BOARD INSTALLATION DETAILS

8a

ATTACHMENT DETAILS WHERE RIM BOARDS ABUT

Rim Board Joint Between Floor Joists

WEB HOLES

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

1. 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.
2. I-joint top and bottom flanges must NEVER be cut, notched, or otherwise modified.
3. Whenever possible, field-cut holes should be centred on the middle of the web.
4. The maximum size hole or the maximum depth of a duct chase opening that can be cut into an I-joint web shall equal the clear distance between the flanges of the I-joint 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-joint flange.
5. The sides of square holes or longest sides of rectangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole (or twice the length of the longest side of the longest rectangular hole or duct chase opening) and each hole and duct chase opening shall be sized and located in compliance with the requirements of Tables 1 and 2, respectively.
7. A knockout is not considered a hole, may be utilized anywhere it occurs, and may be ignored for purposes of calculating minimum distances between holes and/or duct chase openings.
8. Holes measuring 1-1/2 inches or smaller shall be permitted anywhere in a continuous section of a joist. Holes of greater size may be permitted subject to verification.
9. A 1-1/2 inch hole or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above.
10. All holes and duct chase openings shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in Figure 7.
11. Limit three maximum size holes per span, of which one may be a duct chase opening.
12. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

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)																				Span adjustment Factor																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		2'	3'	4'	5'	6'	6-1/4'	7'	8'	8-5/8'	9'	10'	10-3/4'	11'	12'	12-3/4'																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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1. Above table may be used for I-joint 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.

OPTIONAL:

The above table is based on the I-joints used at their maximum span. If the I-joints are placed at less than their full maximum span (see Maximum span table), the minimum distance from the centreline of the hole to the face of any support (D) as given above may be reduced as follows:

$$D_{reduced} = \frac{Actual \times D}{Full \text{ span}}$$

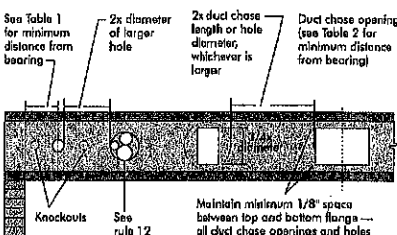
Where:

- Produced = Distance from the inside face of any support to centre of hole, reduced for less-than-maximum span applications (if the distance shall not be less than 6 inches from the face of the support to edge of the hole).
- Actual = The actual measured span distance between the inside faces of supports (ft).
- Full span = Span Adjustment Factor given in this table.
- D = The minimum distance from the inside face of any support to centre of hole from this table.

If Actual is greater than 1, use 1 in the above calculation for Actual.



FIGURE 7
FIELD-CUT HOLE LOCATOR



A knockout is NOT considered a hole, may be utilized wherever it occurs, and may be ignored for purposes of calculating minimum distances between holes.

Knockouts are predrilled 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-joint. 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-joint.

TABLE 2
DUCT CHASE OPENING SIZES AND LOCATIONS — Simple Span Only

Joist Depth	Joist Series	Minimum distance from inside face of any support to center of opening (ft-in)							
		Duct chase length (in.)							
		8	10	12	14	16	18	20	22
							</		

1. Above table may be used for I-joint 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 dead load of 15 psf, and a live load deflection limit of L/480. For other applications, contact your local distributor.

INSTALLING THE GLUED FLOOR SYSTEM

1. Wipe any mud, dirt, water, or ice from I-joint flanges before gluing.
2. Snap a chalk line across the I-joints four feet in from the wall for panel edge alignment and as a boundary for spreading glue.
3. Spread only enough glue to lay one or two panels at a time, or follow specific recommendations from the glue manufacturer.
4. Lay the first panel with tongue side to the wall, and nail in place. This protects the tongue of the next panel from damage when topped into place with a block and sledgehammer.
5. Apply a continuous line of glue (about 1/4-inch diameter) to the top flange of a single I-joint. Apply glue in a winding pattern on wide areas, such as with double I-joints.
6. Apply two lines of glue on I-joints where panel ends butt to assure proper gluing of each end.
7. After the first row of panels is in place, spread glue in the groove of one or two panels at a time before laying the next row. Glue line may be continuous or spaced, but avoid squeeze-out by applying a thinner line (1/8 inch) than used on I-joint flanges.
8. Top the second row of panels into place, using a block to protect groove edges.
9. Stagger end joints in each succeeding row of panels. A 1/8-inch space between all end joints and 1/8-inch at all edges, including T&G edges, is recommended. Use a spacer tool or an on 2-1/2" common nail to assure accurate and consistent spacing.
10. Complete all nailing of each panel before glue sets. Check the manufacturer's recommendations for cure time. (Warm weather accelerates glue setting.) Use 2" ring- or screw-shank nails for panels 3/4-inch thick or less, and 2-1/2" ring- or screw-shank nails for thicker panels. Space nails per the table below. Closer nail spacing may be required by some codes, or for diaphragm construction. The finished deck can be walked on right away and will carry construction loads without damage to the glue bond.

FASTENERS FOR SHEATHING AND SUBFLOORING(1)

Maximum Panel Thickness (in)	Minimum Panel Thickness (in)	Common Nail Size	Common Ring Shank Nail Size	Staple Size	Maximum Spacing of Fasteners (in)	Maximum Spacing of Fasteners (in)
3/4"	1/2"	2"	1-3/4"	2"	6"	12"
1"	3/4"	2"	1-3/4"	2"	6"	12"
1-1/4"	1"	2"	1-3/4"	2"	6"	12"

1. Fasteners of sheathing and subflooring shall conform to the above table.
2. Staples shall not be less than 1/16-inch in diameter or thickness, with not less than a 3/8-inch crown driven with the crown parallel to framing.
3. Flooring screws shall not be less than 1/8-inch in diameter.
4. Special conditions may impose heavy traffic and concentrated loads that require construction in excess of the minimums shown.
5. Use only adhesives conforming to CAN/CGS-71.26 Standard, Adhesives for Field-Gluing Plywood to Lumber Framing for Floor System, applied in accordance with the manufacturer's recommendations. If OSB panels with sealed surfaces and edges are to be used, use only solvent-based glues; check with panel manufacturer.

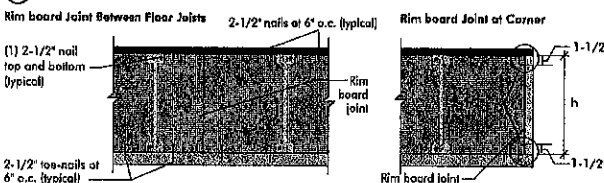
Ref.: NRC-CNRC, National Building Code of Canada 2010, Table 9.23.3.5.

IMPORTANT NOTE:

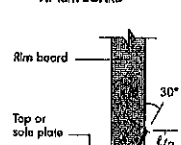
Floor sheathing must be field-glued to the I-joint flanges in order to achieve the maximum spans shown in this document. If sheathing is nailed only, I-joint spans must be verified with your local distributor.

RIM BOARD INSTALLATION DETAILS

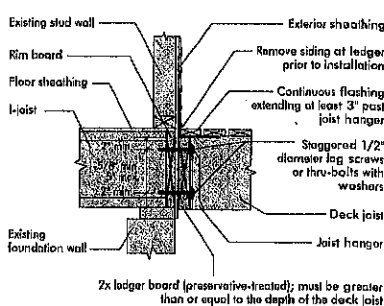
(8a) ATTACHMENT DETAILS WHERE RIM BOARDS ABUT



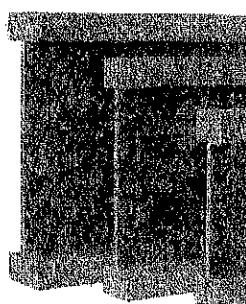
(8b) TOE-NAIL CONNECTION AT RIM BOARD



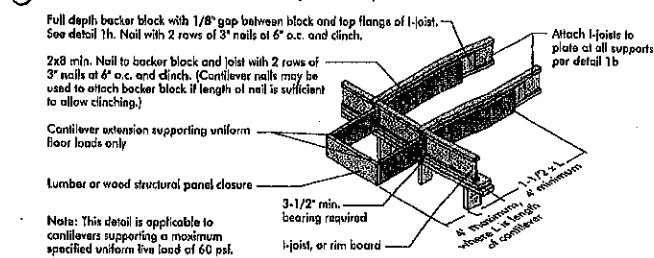
(8c) 2X LEDGER TO RIM BOARD ATTACHMENT DETAIL



2015-04-16



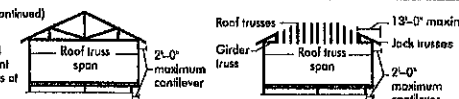
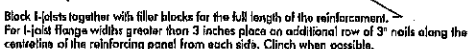
(3a) I-JOIST CANTILEVER DETAIL FOR BALCONIES (No Wall Load)



4d Method 1 — SHEATHING REINFORCEMENT ONE SIDE



- 4b) Alternate Method 2 --- DOUBLE I-JOIST**



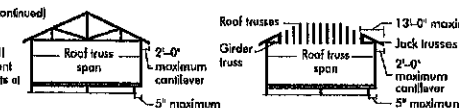
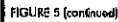
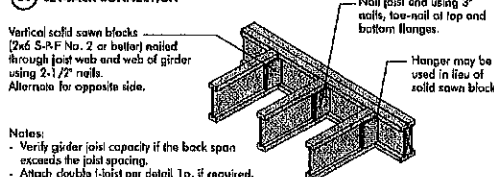
For hip roofs with the jack trusses running parallel to the cantilevered floor joists, the I-joist reinforcement requirements for a span of 26 ft. shall be permitted to be used.

CANTILEVER REINFORCEMENT METHODS ALLOWED

[illegible]

- | | | |
|--|---|---|
| <p>1. N = No reinforcement required.</p> <p>2. 1" x 4" nail with 3/4" wood structural panel on one side only.</p> <p>3. 2" x 4" nail with 3/4" wood structural panel on both sides, or double joist.</p> <p>X = 7/8" x 3" nail on cleo or spacing.</p> <p>4. 15' or greater dead load or 15 psf of dead loads, 65 psf floor load or 60 psf wall load. Wall load is least on 3'-0" maximum width window or door openings.</p> | <p>For larger openings, or multiple 3'-0" with openings greater than 6'-0" oc, additional joists between the opening's cripple may be required.</p> <p>5. Table requires 12" to 24" oc joists; meet the floor span requirements for a design live load of 40 psf and dead load of 15 psf, or a live load collection level of 120 psf. 12" oc requirements for larger spacing.</p> | <p>6. For conventional construction using a ridge truss, the Roof Truss Span is equivalent to the distance between the supporting walls and the ridge beam.</p> <p>7. When a roof truss is used, the Roof Truss Span is equivalent to the distance between the supporting walls or if a truss is used.</p> <p>8. Controversial joists supporting girder trusses or roof beams may require additional reinforcement.</p> |
|--|---|---|

5. SHEATHING REINFORCEMENT



For hip roofs with the jack trusses running parallel to the cantilevered floor joists, the I-joist reinforcement requirements for a span of 26 ft. shall be permitted to be used.

BRICK CANTILEVER REINFORCEMENT METHODS ALLOWED

[illegible]

- | | | |
|---|---|--|
| <p>N = No reinforcement required.</p> <ul style="list-style-type: none"> 1. Nt reinforced with 3/4" x 60" structural panel on one side only. 2. Nt reinforced with 3/4" x 60" structural panel on both sides. 3. X = To deeper joist or closer beam. <p>2. Minimum design load shall be: 15 psf roof dead load, 55 psf floor total load, and 80 psf live load. Roof dead load test at 2x3' minimum wind window or door opening.</p> | <p>For larger openings, or multiple 6'x6" wide openings spaced less than 6'-0", additional joists beneath the opening's cripple studs may be required.</p> <ul style="list-style-type: none"> 3. Toile to 24" or less - The floor joist requirements for a design live load of 40 psf and dead load of 15 psf, and a live load deflection limit of L/480. Use 12" o.c. requirements for lesser spacing. | <p>4. For conventional roof construction using a ridge board, the ridge board must be above & equivalent to the distance between the supporting wall and the ridge beam.</p> <p>If the roof is braced using a ridge board, the floor joist must be placed at a distance between the supporting walls as if it was a truss.</p> <p>Wherever joists supporting glider doors or beams are present, the floor joists or beams may require additional support.</p> |
|---|---|--|

MAXIMUM FLOOR SPANS

- Maximum clear spans applicable to simple-span or multiple-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 1.35L + 1.25D. 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.
- 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, or 3/4 inch for joist spacing of 24 inches. Adhesive shall meet the requirements given in CG95-71.26 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 or mid-span.
- Minimum bearing length shall be 1-3/4 inches for the end bearings, and 3-1/2 inches for the intermediate 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 uniform loads, an engineering analysis may be required based on the use of the design properties.
- Tables are based on Limit States Design per CAN/CSA O86-09 Standard, and NBC 2010.
- SI units conversion: 1 inch = 25.4 mm
1 foot = 0.305 m

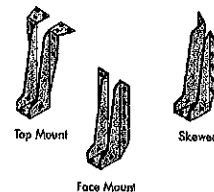
MAXIMUM FLOOR SPANS FOR NORDIC I-JOISTS SIMPLE AND MULTIPLE SPANS

Joist Depth	Joist Series	Simple spans				Multiple spans			
		On centre spacing				On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
12"	NI-20	12'	10'	8'	6'	12'	10'	8'	6'
16"	NI-40	16'	14'	11'	9'	16'	14'	11'	9'
19.2"	NI-60	19'	17'	14'	12'	19'	17'	14'	12'
24"	NI-80	24'	21'	18'	15'	24'	21'	18'	15'
30"	NI-100	30'	27'	23'	19'	30'	27'	23'	19'
36"	NI-120	36'	33'	28'	24'	36'	33'	28'	24'
42"	NI-140	42'	39'	33'	28'	42'	39'	33'	28'
48"	NI-160	48'	44'	38'	32'	48'	44'	38'	32'
54"	NI-180	54'	50'	43'	36'	54'	50'	43'	36'
60"	NI-200	60'	56'	48'	40'	60'	56'	48'	40'

CCME EVALUATION REPORT 13032-R

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.



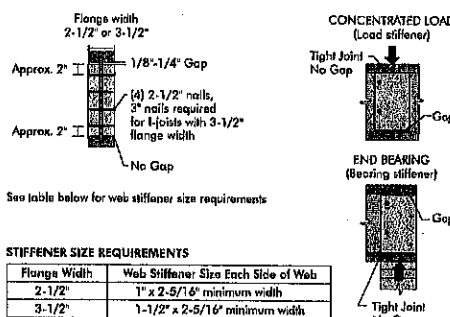
WEB STIFFENERS

RECOMMENDATIONS:

- A bearing stiffener is required in all engineered applications with factored reactions greater than shown in the I-joist properties table found in the I-joist Construction Guide (C101). 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 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.

SI units conversion: 1 inch = 25.4 mm

FIGURE 2
WEB STIFFENER INSTALLATION DETAILS



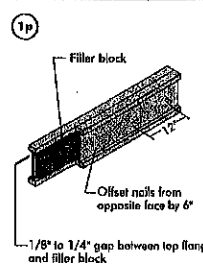
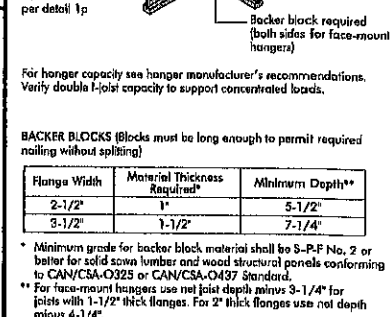
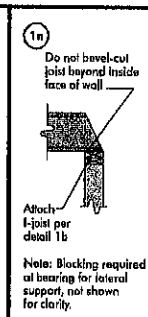
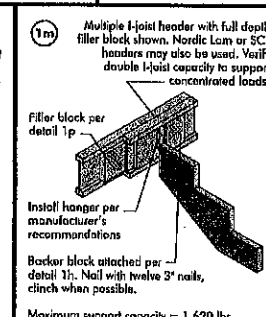
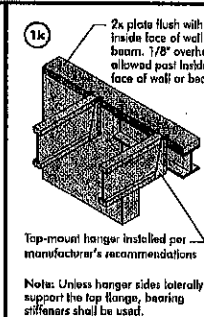
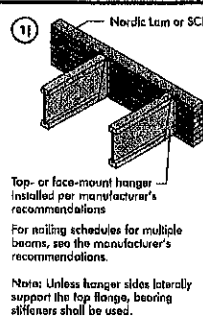
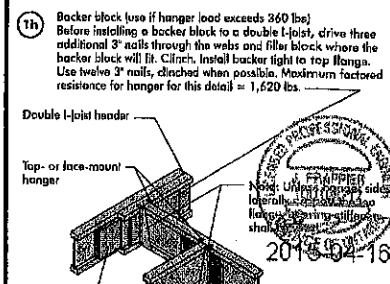
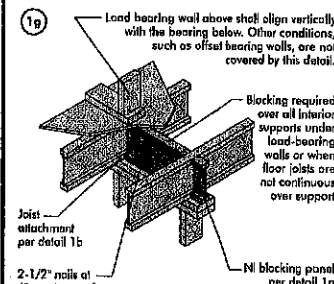
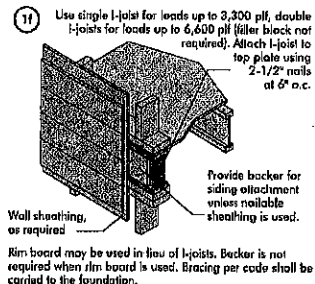
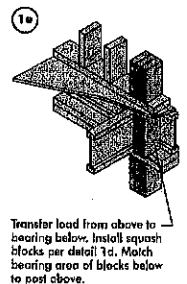
NORDIC I-JOIST SERIES

NI-20	NI-40	NI-60	NI-80	NI-100	NI-120	NI-140	NI-160	NI-180	NI-200
12"	16"	19.2"	24"	30"	36"	42"	48"	54"	60"
12'	16'	19'	24'	30'	36'	42'	48'	54'	60'
33 pieces per unit	33 pieces per unit	33 pieces per unit	33 pieces per unit	33 pieces per unit	33 pieces per unit	33 pieces per unit	33 pieces per unit	33 pieces per unit	33 pieces per unit

Chambers Chibougamau Ltd. harvests its own trees, which enables Nordic products to adhere to strict quality control procedures throughout the manufacturing process. Every phase of the operation, from log to the finished product, reflects our commitment to quality.

Nordic Engineered Wood I-joists use only finger-jointed black spruce lumber in their flanges, ensuring consistent quality, superior strength and longer span carrying capacity.

2015-04-16



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 full length of span.
- Nail joists together with two rows of 3\"/>

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

