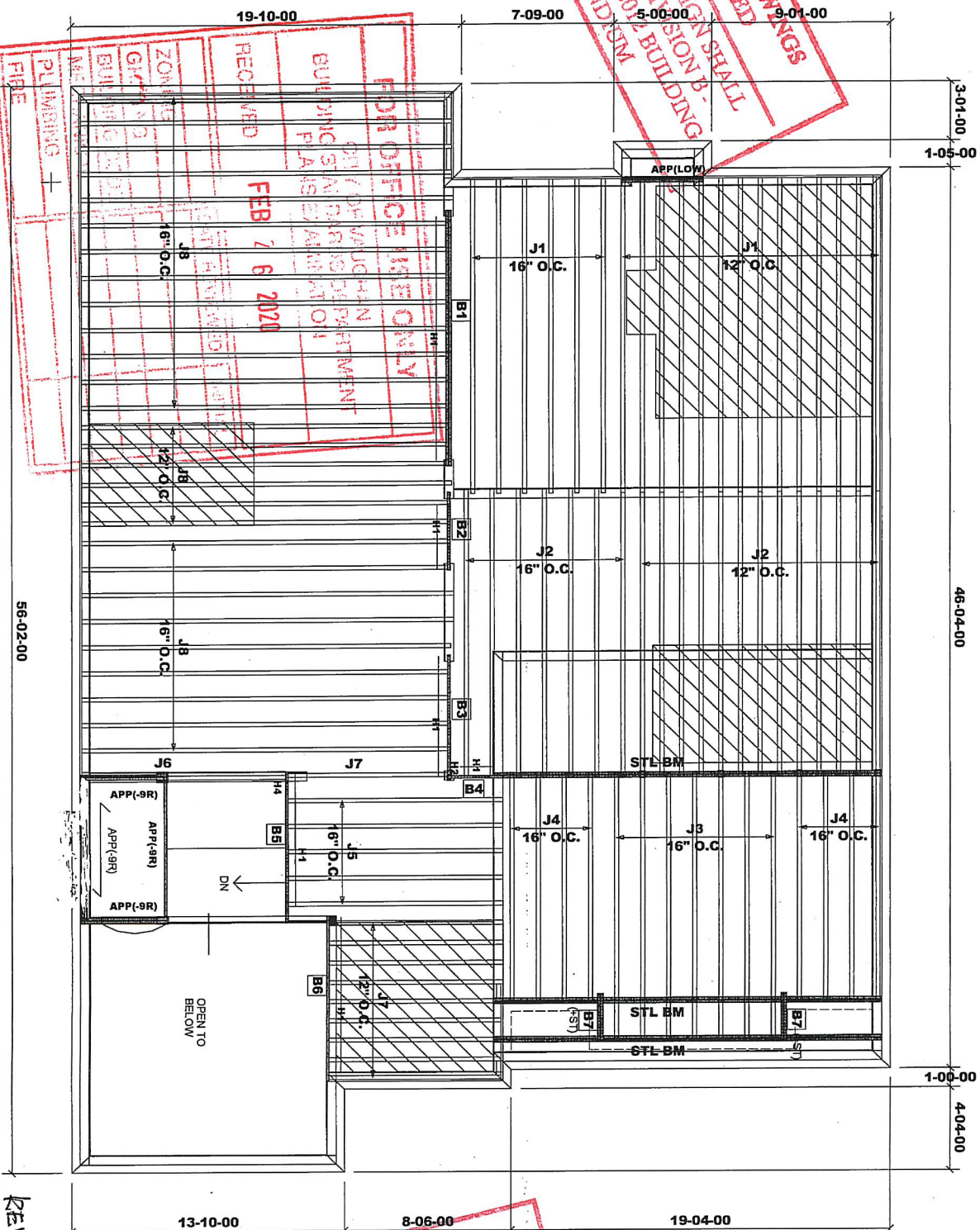


STRUCTURAL DRAWINGS
NOT REVIEWED
STRUCTURAL DESIGN SHALL
COMPLY WITH DIVISION B -
PART 4 OF THE 2012 BUILDING
CODE COMPENDIUM



ProductID	Length	Product	Piles	Net Qty
J1	17'-00-00	11 7/8\" NI-20	1	20
J2	15'-00-00	11 7/8\" NI-20	1	20
J3	14'-00-00	11 7/8\" NI-20	1	7
J4	12'-00-00	11 7/8\" NI-20	1	8
J5	11'-00-00	11 7/8\" NI-20	1	5
J6	11'-00-00	11 7/8\" NI-20	2	2
J7	9'-00-00	11 7/8\" NI-20	1	10
J8	19'-00-00	11 7/8\" NI-40x	1	28
B1	14'-00-00	VERSALAM-12 2.0E	2	2
B6	9'-00-00	VERSALAM-12 2.0E	1	1
B5	8'-00-00	VERSALAM-12 2.0E	1	1
B3	7'-00-00	VERSALAM-12 2.0E	1	1
B2	4'-00-00	VERSALAM-12 2.0E	1	1
B4	3'-00-00	VERSALAM-12 2.0E	1	1
B7	3'-00-00	VERSALAM-12 2.0E	2	4

VAUGHAN
CITY OF VAUGHAN
BUILDING PERMIT DEPARTMENT
CONSTRUCTION
ALL CONSTRUCTION
MUST COMPLY WITH THE
REQUIREMENTS 332/12 (AS
AMENDED) OF THE
REGULATIONS 332/12
UNDER THE BUILDING
ACT, 1992

HANGER SCHEDULE
H1..... L 12x1188 (TM)
H2..... HUS1 81/10(FW)
H4..... M13 11.88-2(TM)
NOTE: 1. TOP MOUNT HANGERS
FM..... FACE MOUNT HANGERS

REMARKS:
1. 1-1/8\" X 11 7/8\" OSB
SHEATHING 3/4\" NAILER & GLUED
APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6
1-2X6 SP#2 Squash Block req'd on one side of each
joist under interior load bearing wall. Multiple Squash
Blocks are req'd under concentrated loads.

Second Floor Framing
Do not scale - refer to architectural plans for dimensions
MODEL: UNIT 5001 - ELA
+ OPT. LOGGIA

REV: July 3, 2018

98839 July 3, 2018
90975 Jan. 2, 2018

S.152597-S.152616

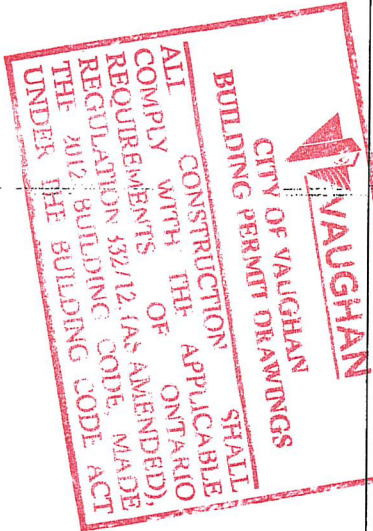
JT/PL: 45147/94992
Builder: Gold Park
Location: Vaughan
Designer: NL
Alpa Roof Trusses Inc.
Maple, Ontario
Salesperson: Derek
Home Lumber

LI(290681)
309729
12006-00-01

Project: Pine Valley

Date: November 23, 2017

Sheet: 1 of 6



JT/PL: 45147/98839
L: 299730(290682)

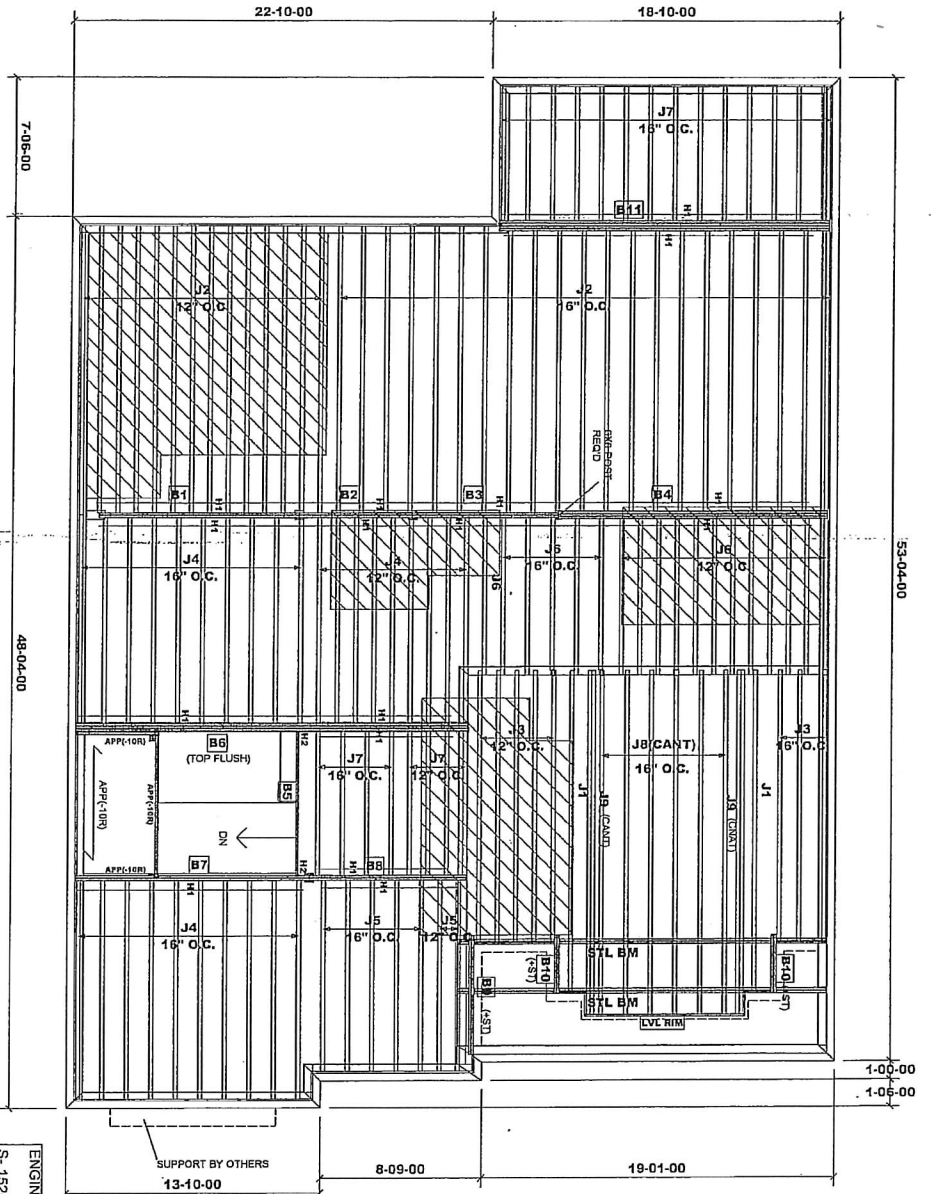
Builder: Gold Park
Project: Pine Valley

Location: Vaughan
Date: November 24, 2017

Designer: NL
Sheet: 1 of 8

Alpha Roof Trusses Inc.
Maple, Ontario

Salesperson: Derek
Home Lumber



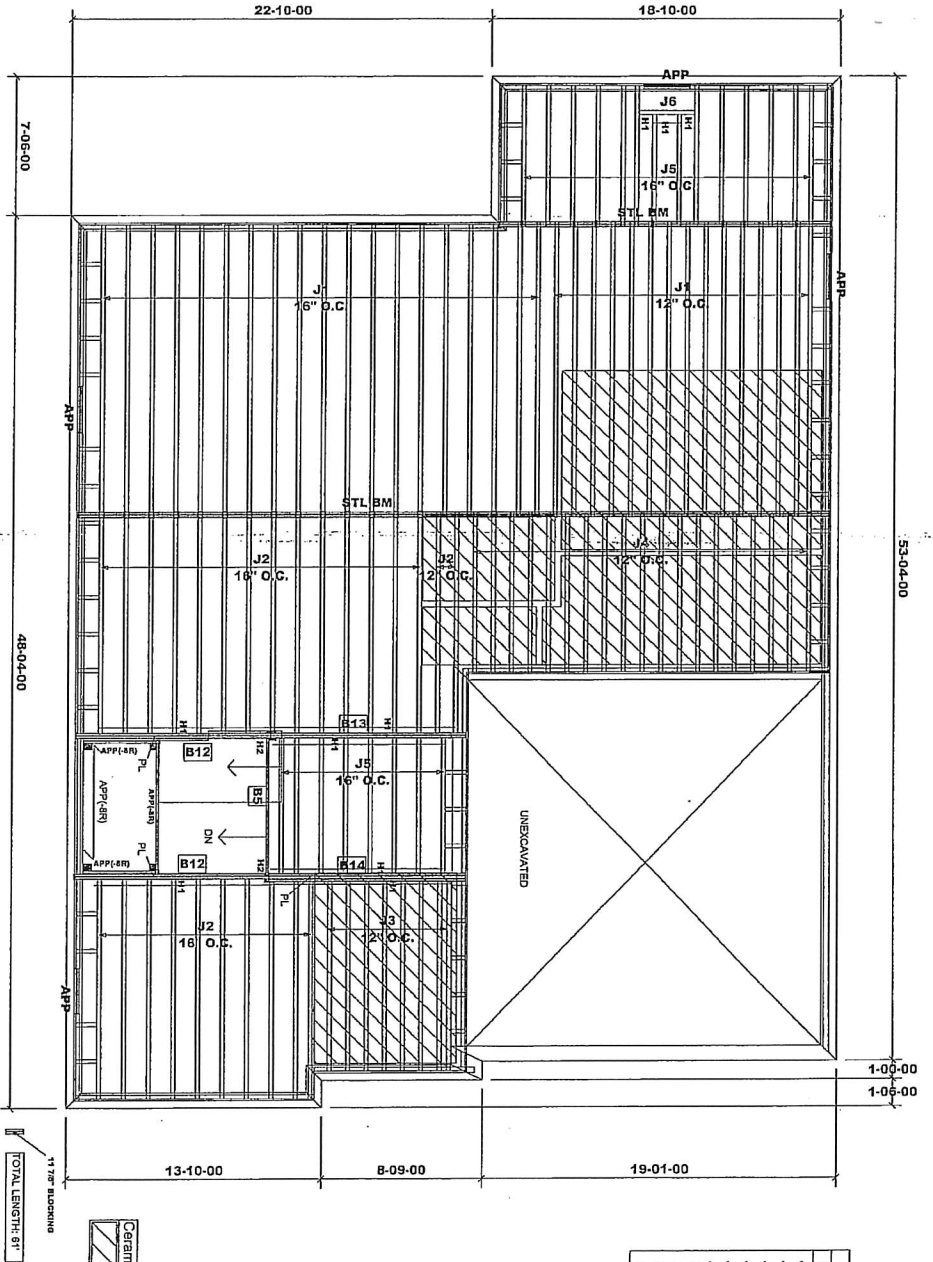
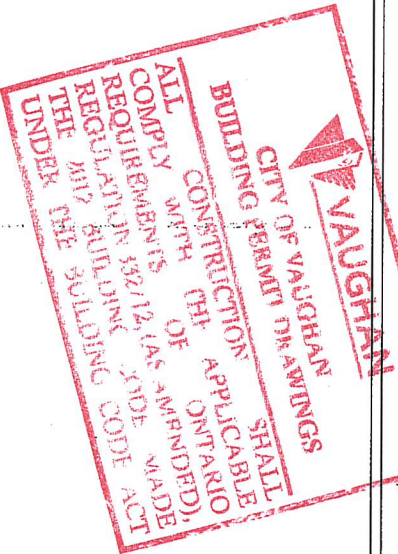
ENGINEERING FILE NO.
S-152578 - 152596
S-157256

Second Floor Framing
Do not scale - refer to architectural plans for dimensions
MODEL: UNIT 5002 - E.L.A.
+ OPT. LOGGIA
REVISION: July 3, 2018

Ceramic tile application as per O.B.C. 9.30.6
Provide 1-joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.
1-2X6 SRF#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

RIMBOARD		HANGER SCHEDULE	
1- 1/8" X 11 7/8" O.S.B.		H1- L7251189 (TM)	
SUP-FLOOR - 3/4" NAILED & GLUED		H2- HUS1.81/10(PM)	
APP - AS PER PLAN		NOTE: TOP MOUNT HANGERS	
BBO - BEAM BY OTHERS		FM - FACE MOUNT HANGERS	

ProdID	Length	Product	Piles	Net Qty
J1	18'-00"-00	11 7/8" N-20	1	2
J2	16'-00"-00	11 7/8" N-20	1	35
J3	15'-00"-00	11 7/8" N-20	1	8
J4	12'-00"-00	11 7/8" N-20	1	29
J5	11'-00"-00	11 7/8" N-20	1	7
J6	9'-00"-00	11 7/8" N-20	1	18
J7	8'-00"-00	11 7/8" N-20	1	23
J8	19'-00"-00	11 7/8" N-40x	1	6
J9	19'-00"-00	VERSALAM-14.2.0E	2	4
J10	22'-00"-00	VERSALAM-12.2.0E	3	3
J11	18'-00"-00	VERSALAM-12.2.0E	4	4
J12	15'-00"-00	VERSALAM-12.2.0E	3	3
J13	13'-00"-00	VERSALAM-12.2.0E	2	2
J14	11'-00"-00	VERSALAM-12.2.0E	1	1
B1	9'-00"-00	VERSALAM-12.2.0E	1	2
B2	8'-00"-00	VERSALAM-12.2.0E	1	1
B3	8'-00"-00	VERSALAM-12.2.0E	2	2
B4	7'-00"-00	VERSALAM-12.2.0E	2	2
B5	4'-00"-00	VERSALAM-12.2.0E	2	4



ProdID	Length	Product	Piles	Net Qty
J1	16-00-00	11 7/8" NI-20	1	34
J2	12-00-00	11 7/8" NI-20	1	26
J3	11-00-00	11 7/8" NI-20	1	8
J4	9-00-00	11 7/8" NI-20	1	19
J5	8-00-00	11 7/8" NI-20	1	22
J6	3-00-00	11 7/8" NI-20	1	1
B12	11-00-00	VERSALAM-12 2.0E	2	4
B13	11-00-00	VERSALAM-12 2.0E	2	2
B14	11-00-00	VERSALAM-12 2.0E	3	3
B5	8-00-00	VERSALAM-12 2.0E	1	1

HANGER SCHEDULE
H1—175(118) TM
H2—HUS187(106) FM
NOTE: TOP MOUNT HANGERS
FM—FACE MOUNT HANGERS

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

Ceramic tile application as per O.B.C. 9.20.6
1-2X6 SPF#2 Squash Block req'd on one side of each
joist under interior load bearing wall. Multiple Squash
Blocks are req'd under concentrated loads.

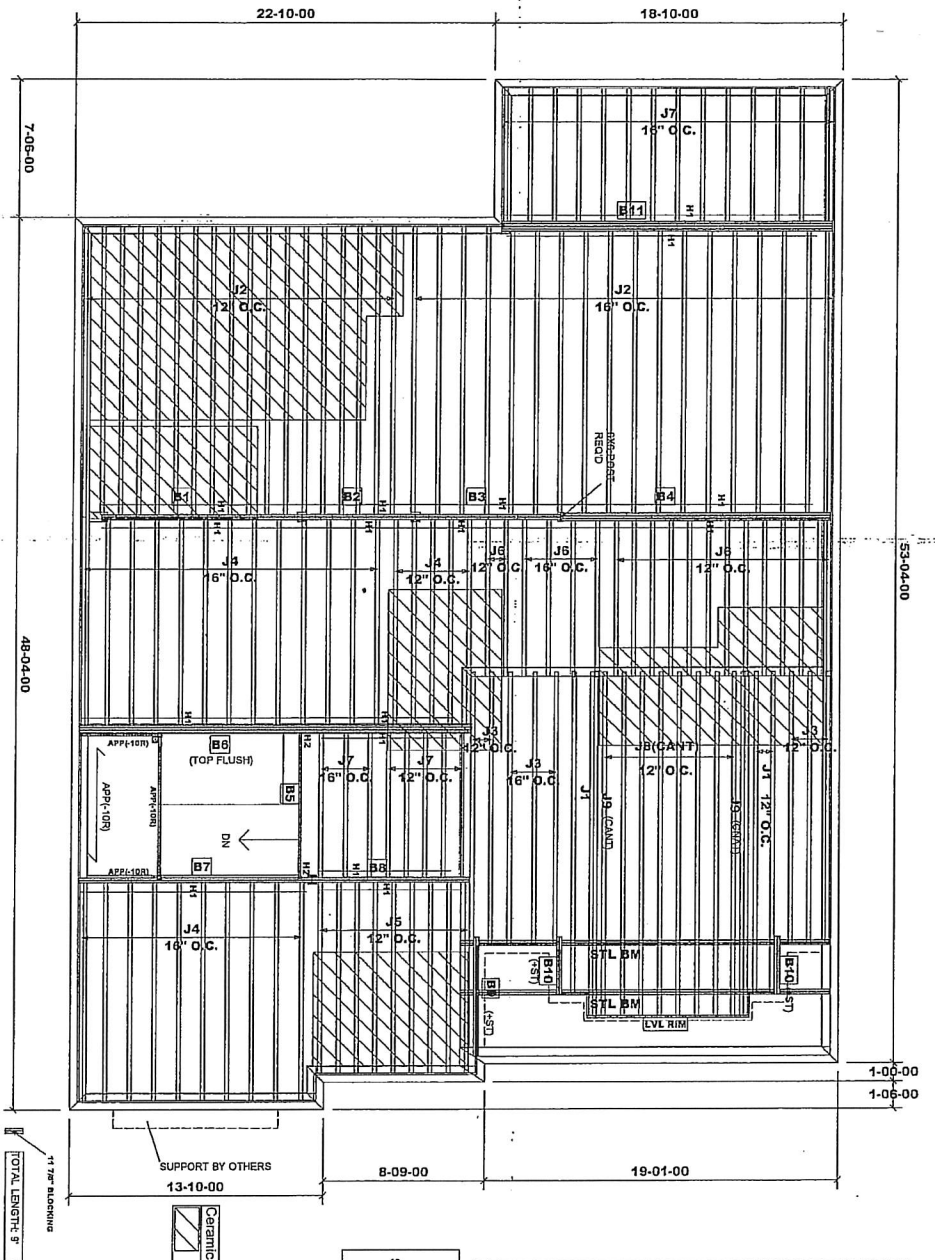


First Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: UNT 5002 - EL.A
+ OPT. LOGIA

JT/PL: 45147/94992 Builder: Gold Park Location: Vaughan Designer: NL Alpa Roof Trusses Inc. Salesperson: Derek
LI: (290682) Project: Pine Valley Date: November 24, 2017 Sheet: 2 of 8 Maple, Ontario Home Lumber



Product	Length	Product	Pieces	Net Qty
J1	18'-00-00	11 7/8\" N1-20	1	3
J2	16'-00-00	11 7/8\" N1-20	1	36
J3	15'-00-00	11 7/8\" N1-20	1	8
J4	12'-00-00	11 7/8\" N1-20	1	28
J5	11'-00-00	11 7/8\" N1-20	1	9
J6	9'-00-00	11 7/8\" N1-20	1	19
J7	8'-00-00	11 7/8\" N1-20	1	23
J8	19'-00-00	11 7/8\" N1-40x	1	8
J9	19'-00-00	11 7/8\" N1-40x	2	4
J10	22'-00-00	VERSALAM-12 2.0E	3	3
B1	18'-00-00	VERSALAM-12 2.0E	4	4
B2	15'-00-00	VERSALAM-12 2.0E	2	2
B3	13'-00-00	VERSALAM-12 2.0E	2	2
B4	11'-00-00	VERSALAM-12 2.0E	2	2
B5	9'-00-00	VERSALAM-12 2.0E	2	2
B6	8'-00-00	VERSALAM-12 2.0E	1	1
B7	8'-00-00	VERSALAM-12 2.0E	2	2
B8	7'-00-00	VERSALAM-12 2.0E	2	2
B9	4'-00-00	VERSALAM-12 2.0E	2	2
B10	4'-00-00	VERSALAM-12 2.0E	2	4

Product	Length	Product	Pieces	Net Qty
RIMBOARD	1'-10\" X 11 7/8\" O.S.B.	H1	1	1
SUBFLOOR	3/4\" NAILED & GLUED	H2	1	1
APP - AS PER PLAN		H3	1	1
BBO - BEAM BY OTHERS		H4	1	1

Ceramic Tile

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

Provide 1-joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.

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

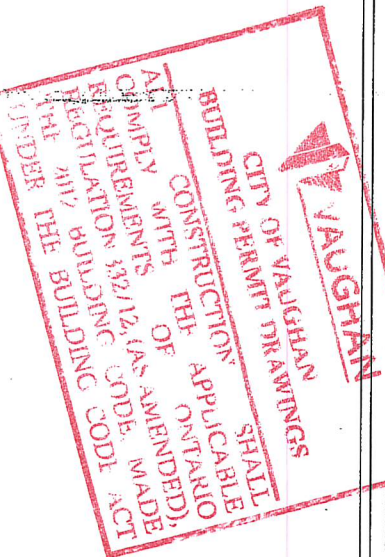
Second Floor Framing

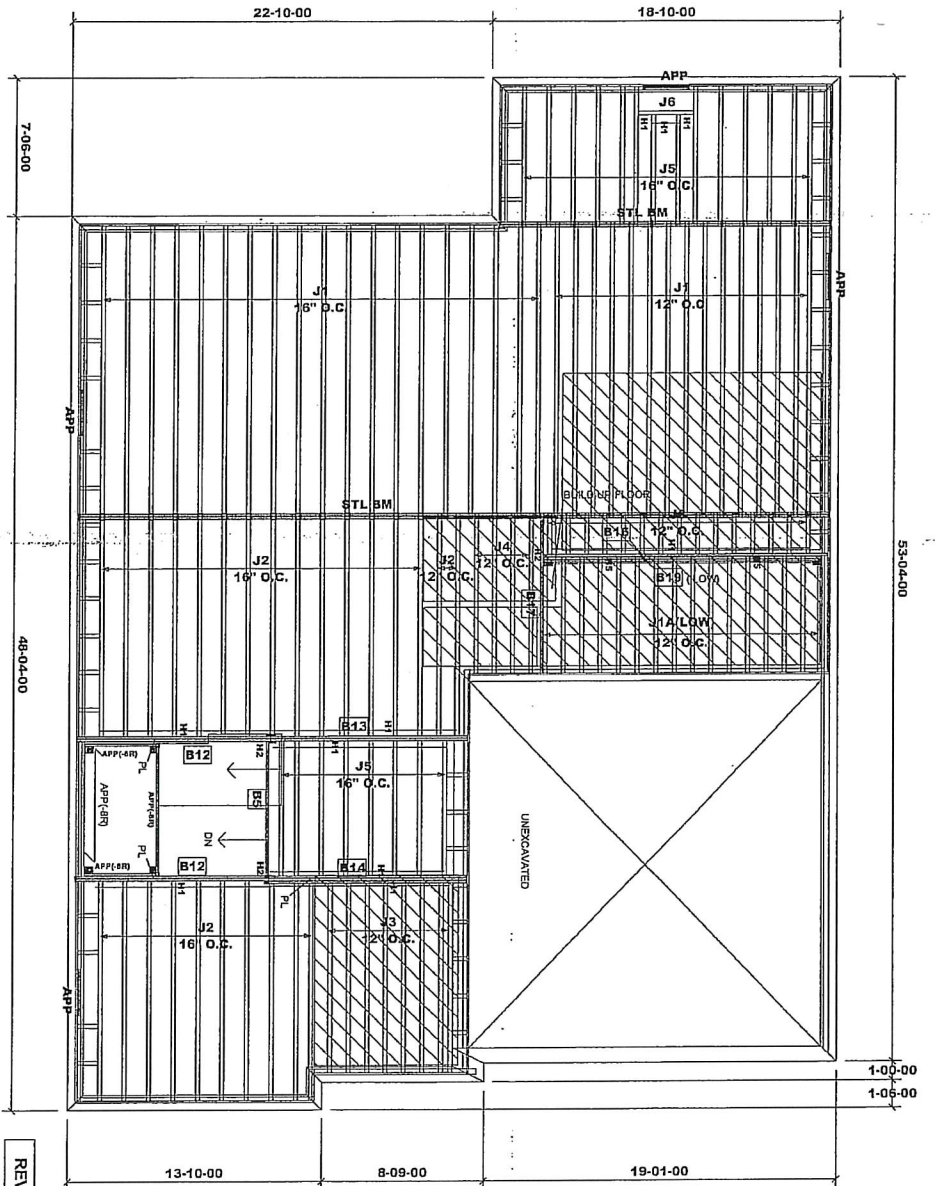
Do not scale - refer to architectural plans for dimensions

MODEL: UNIT 5002 - ELA
+ OPT. LOGGIA/OPT. 2ND FL.

REVISION: July 3, 2018

Builder: Gold Park
Project: Pine Valley
Location: Vaughan
Date: November 24, 2017
Designer: NL
Sheet: 3 of 8
Alpa Roof Trusses Inc.
Maple, Ontario
Salesperson: Derek
Home Lumber





Product	Length	Product	Pieces	Net Qty
J1A	7'-00-00	9 1/2\" N1-20	1	16
J1	16'-00-00	11 7/8\" N1-20	1	34
J2	12'-00-00	11 7/8\" N1-20	1	26
J3	11'-00-00	11 7/8\" N1-20	1	8
J4	9'-00-00	11 7/8\" N1-20	1	4
J5	8'-00-00	11 7/8\" N1-20	1	22
J6	3'-00-00	11 7/8\" N1-20	1	16
B16	16'-00-00	VERSALAM-12.2 OE	1	1
B19	16'-00-00	VERSALAM-10.2 OE	2	2
B12	11'-00-00	VERSALAM-12.2 OE	2	2
B13	11'-00-00	VERSALAM-12.2 OE	2	2
B14	11'-00-00	VERSALAM-12.2 OE	3	3
B17	9'-00-00	VERSALAM-12.2 OE	1	1
B5	8'-00-00	VERSALAM-12.2 OE	1	1

HANGER SCHEDULE
H1 - LT251188 (TM)
H2 - HUS18110(FM)
H3 - LT259(TM)
NOTE:
TM - TOP MOUNT HANGERS
FM - FACE MOUNT HANGERS

RIMBOARD
1- 11/8\" X 9 1/2\" O.S.B.
1- 11/8\" X 11 7/8\" O.S.B.
SUBFLOOR - 3/4\" NALIED & GUBED
APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6
1-2X6 SPP#2 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

First Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: UNIT 5002 - ELA
+ OPT. LOGGIA(SUNKEN)

REVISION: July 3, 2018

JT/PL: 45147/98839
LI: 299730(290682)

Builder: Gold Park
Project: Pine Valley

Location: Vaughan
Date: November 24, 2017

Designer: NL
Sheet: 4 of 8

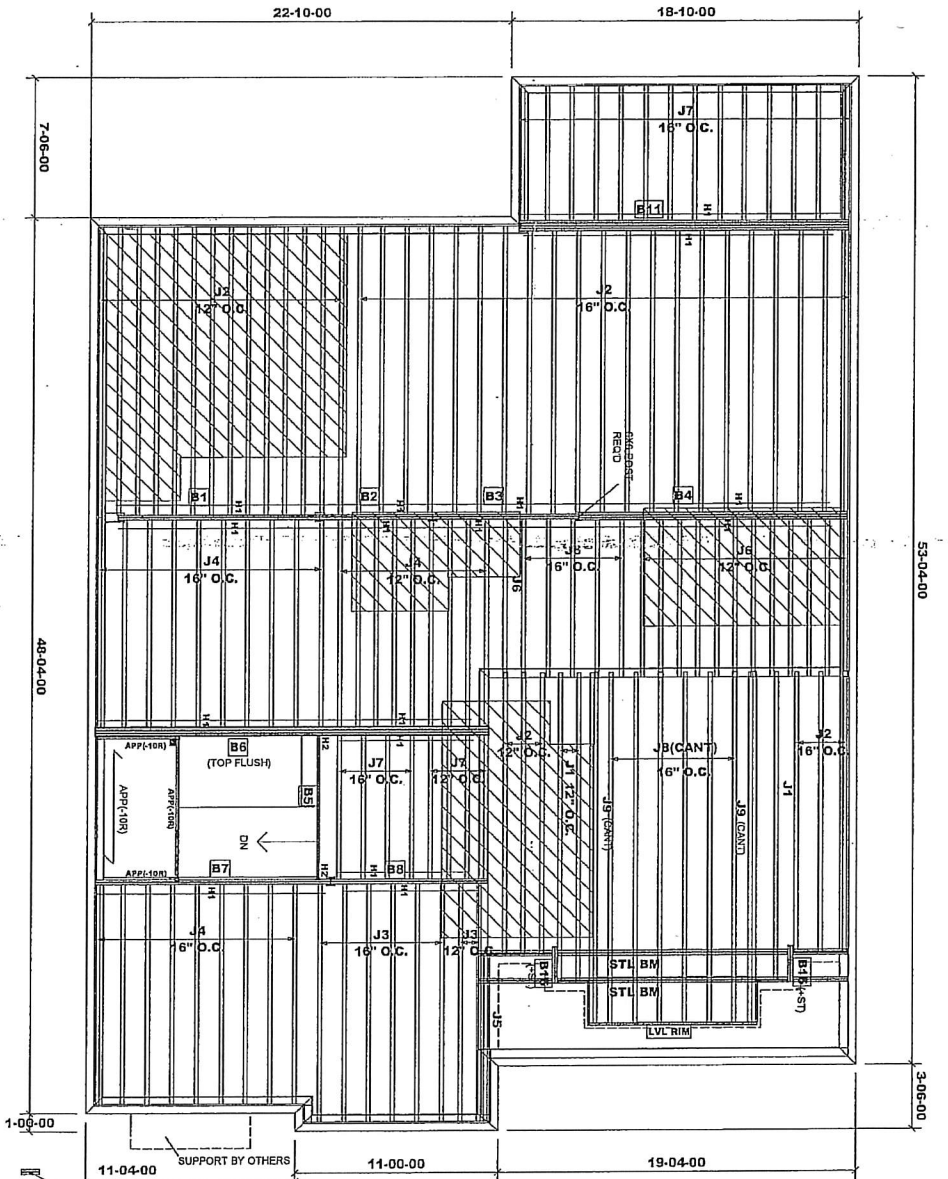
Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Derek
Home Lumber

VAUGHAN
CITY OF VAUGHAN
BUILDING PERMIT DRAWINGS
ALL CONSTRUCTION SHALL
COMPLY WITH THE APPLICABLE
REQUIREMENTS OF THE
REGULATION 32/12 (AS AMENDED),
THE 2012 BUILDING CODE ACT
UNDER THE BUILDING CODE ACT

53-04-00

3-06-00



Product	Length	Product	Piles	Net Qty
J1	17'-00-00	11 7/8" N1-20	1	3
J2	16'-00-00	11 7/8" N1-20	1	41
J3	13'-00-00	11 7/8" N1-20	1	8
J4	12'-00-00	11 7/8" N1-20	1	28
J5	10'-00-00	11 7/8" N1-20	1	1
J6	9'-00-00	11 7/8" N1-20	1	18
J7	8'-00-00	11 7/8" N1-20	1	23
J8	19'-00-00	11 7/8" N1-40x	1	6
J9	19'-00-00	11 7/8" N1-40x	2	4
J10	22'-00-00	VERSALAM-14 2.0E	3	3
J11	18'-00-00	VERSALAM-12 2.0E	4	4
J12	15'-00-00	VERSALAM-12 2.0E	3	3
J13	13'-00-00	VERSALAM-12 2.0E	2	2
J14	11'-00-00	VERSALAM-12 2.0E	2	2
J15	10'-00-00	VERSALAM-12 2.0E	1	1
B1	10'-00-00	VERSALAM-12 2.0E	2	2
B2	8'-00-00	VERSALAM-12 2.0E	2	2
B3	8'-00-00	VERSALAM-12 2.0E	2	2
B4	7'-00-00	VERSALAM-12 2.0E	2	2
B5	2'-00-00	VERSALAM-12 2.0E	2	2
B6	2'-00-00	VERSALAM-12 2.0E	2	2
B7	2'-00-00	VERSALAM-12 2.0E	2	2
B8	2'-00-00	VERSALAM-12 2.0E	2	2
B9	2'-00-00	VERSALAM-12 2.0E	2	2
B10	2'-00-00	VERSALAM-12 2.0E	2	2
B11	2'-00-00	VERSALAM-12 2.0E	2	2
B12	2'-00-00	VERSALAM-12 2.0E	2	2
B13	2'-00-00	VERSALAM-12 2.0E	2	2
B14	2'-00-00	VERSALAM-12 2.0E	2	2
B15	2'-00-00	VERSALAM-12 2.0E	2	2

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

HANGER SCHEDULE
H1 - T251188 (TN)
H2 - HUS118100 (FM)
NOTE: TOP MOUNT HANGERS
FM - FACE MOUNT HANGERS

Ceramic tile application as per O.B.C. 9.30.6
Provide 1-joist blocking between cantilevered joists (along bearing) and rimboard closure at ends.
1-2X6 SP-F#42 Squash Block req'd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

Second Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: UNIT 5002 - E.L.B
+ OPT. LOGGIA

REVISION: July 3, 2018

11 7/8" BLOCKING
TOTAL LENGTH: 10'

JT/PL: 45147/98839
Lr: 299730(290682)

Builder: Gold Park
Project: Pine Valley

Location: Vaughan
Date: November 24, 2017

Designer: NL
Sheet: 5 of 8

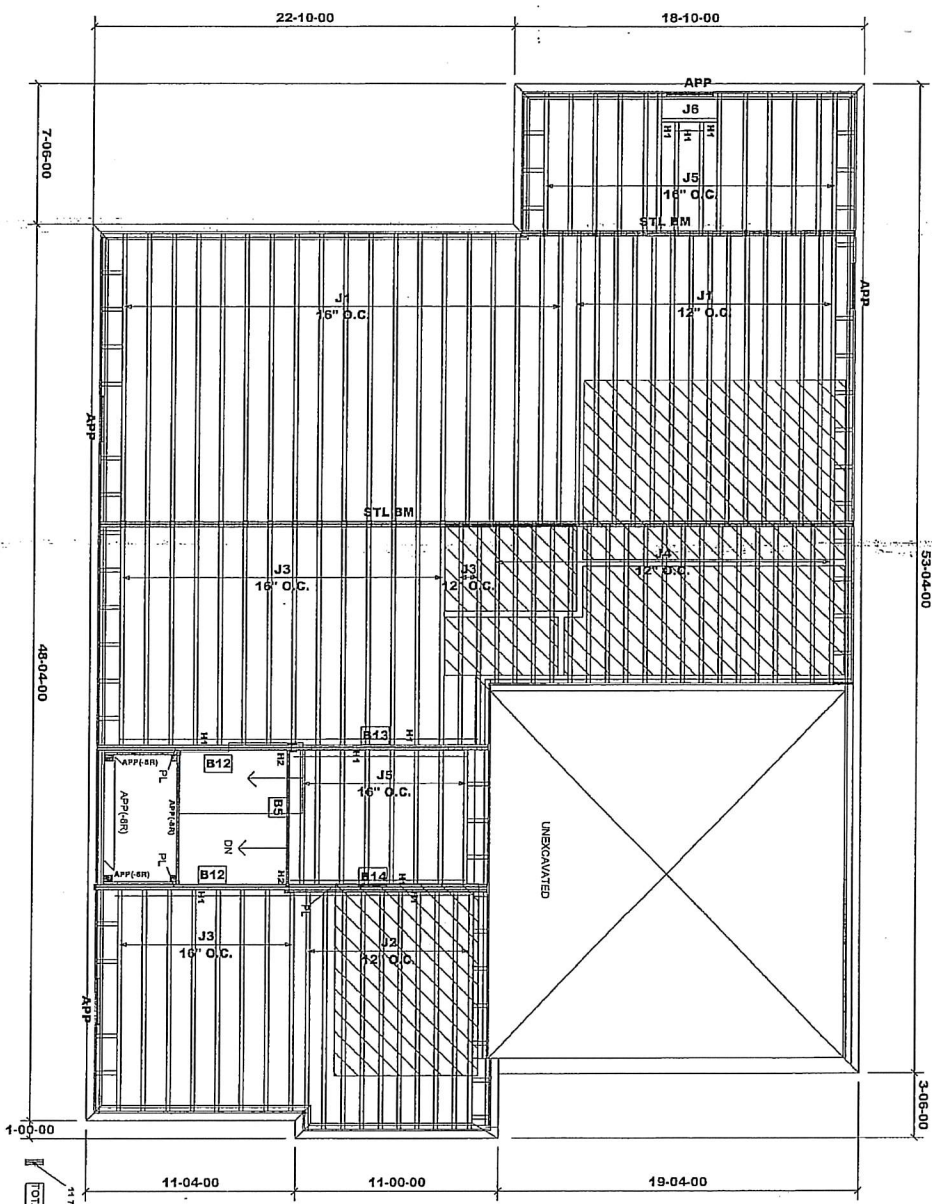
Alpa Roof Trusses Inc.
Maple, Ontario

Salesperson: Derek
Home Lumber

VAUGHAN
CITY OF VAUGHAN
BUILDING PERMIT DRAWINGS
ALL CONSTRUCTION SHALL
COMPLY WITH THE APPLICABLE
REQUIREMENTS OF THE
REGULATIONS 332/12, AS AMENDED,
THE 2012 BUILDING CODE MADE
UNDER THE BUILDING CODE ACT

53-04-00

3-06-00



ProdID	Length	Product	Piles	Qty
J1	16-00-00	11 7/8" N1-20	1	34
J2	13-00-00	11 7/8" N1-20	1	10
J3	12-00-00	11 7/8" N1-20	1	24
J4	9-00-00	11 7/8" N1-20	1	19
J5	8-00-00	11 7/8" N1-20	1	22
J6	3-00-00	11 7/8" N1-20	1	1
B12	11-00-00	VERSALAM-12 2.0E	2	4
B13	11-00-00	VERSALAM-12 2.0E	2	2
B14	11-00-00	VERSALAM-12 2.0E	3	3
B5	8-00-00	VERSALAM-12 2.0E	1	1

HANGER SCHEDULE
H1 - L751188 (TM)
H2 - HUST187101 (TM)
NOTE:
TM - TOP MOUNT HANGERS
FM - FACE MOUNT HANGERS

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

Ceramic tile application as per O.B.C. 9.30.6
1-2X6 SPP#2 Squash Block rtd on one side of each joist under interior load bearing wall. Multiple Squash Blocks are req'd under concentrated loads.

First Floor Framing

Do not scale - refer to architectural plans for dimensions
MODEL: UNIT 5002 - EL.B
+ OPT. LOGGIA

11\"/>



98839
93915

JT/PL: 45147/94992
LI:(290682)
299730

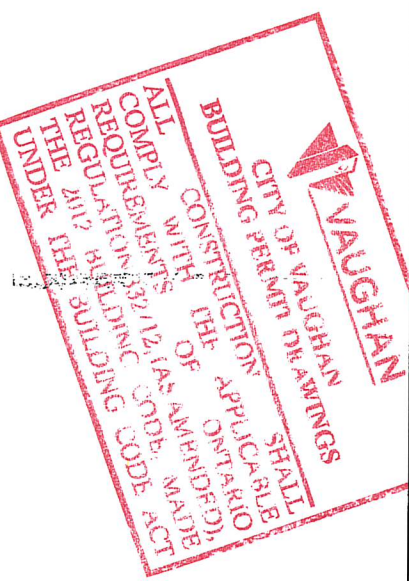
Builder: Gold Park
Project: Pine Valley

Location: Vaughan
Date: November 24, 2017

Designer: NL
Sheet: 6 of 8

Maple, Ontario

Salesperson: Derek
Home Lumber





Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: Second Floor Framing
Specifier: NL
Designer: NL
Company: Alpa Roof Trusses
Misc:

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

November 23, 2017 14:39:32

Floor Beam\B02 Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

B0		04-00-00		Total Horizontal Product Length = 04-00-00	
B1		04-00-00			

Reaction Summary (Down / Uplift) (lbs)		Dead		Snow	
Bearing		Live		Wind	
B0, 3-1/2"		813 / 0		539 / 0	
B1, 3-1/2"		813 / 0		539 / 0	

Load Summary		Load Type		Ref. Start	
Tag Description		End		1.00	
1		Unt. Area (lb/ft²)		04-00-00	
2		Unt. Lin. (lb/ft)		04-00-00	

Controls Summary		Factored Demand		Resistance	
Pos. Moment		1,484 ft-lbs		17,696 ft-lbs	

End Shear		680 lbs		7,232 lbs	
Total Load Defl.		L/999 (0.005")		n/a	
Live Load Defl.		L/999 (0.003")		n/a	
Max Defl.		0.005"		n/a	
Span / Depth		3.6		n/a	
Squash Blocks		Valid		n/a	

Bearing Supports		Dim. (L x W)		Demand	
B0 Wall/Plate		3-1/2" x 1-3/4"		1,893 lbs	
B1 Wall/Plate		3-1/2" x 1-3/4"		1,893 lbs	

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

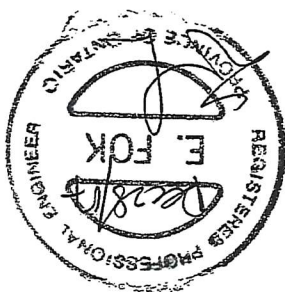
Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALCO analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 4



Products L.L.C.
trademarks of Boise Cascade Wood
VERSA-STANDARD®, VERSA-STUD® are
PLUS®, VERSA-RIM®,
SYSTEM®, VERSA-LAM®, VERSA-RIM
BOISE GLULAM™, SIMPLE FRAMING
ALLJOIST®, BC RIM BOARD™, BCIO,
BC CALCO®, BC FRAMER®, AJS™,
1-800-964-6999 before installation.

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

Disclosure

10-02-00 20 60 n/a

Dead

Live

Wind

04-00-00

File Name: 290681.bcc
Description: Second Floor Framing
Specifier: NL
Designer: NL
Company: Alpa Roof Trusses
Misc:

November 23, 2017 14:39:32

Floor Beam\B02 Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP



Build 6080
 Job Name: 45147 (5001)
 Address: Pine Valley
 City, Province, Postal Code: Vaughan, ON
 Customer: Gold Park
 Code reports: CCMC 12472-R
 File Name: 290681.bcc
 Description: Second Floor Framing
 Specifier: NL
 Designer: NL
 Company: Alpa Roof Trusses
 Misc:

Dry | 1 span | No cantilevers | 0/12 slope (deg) November 23, 2017 16:16:54

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Floor Beam\B03

B0		06-08-00		Total Horizontal Product Length = 06-08-00	
B1		06-08-00			

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	1,356 / 0	898 / 0		
B1, 3-1/2"	1,356 / 0	898 / 0		

Load Summary

Tag Description	Load Type	Ref.	Start	End	Live	Dead	Snow	Wind	Trib.
1	Upl. Area (lb/ft²)	L	00-00-00	06-08-00	40	20			10-02-00
2	Upl. Lin. (lb/ft)	L	00-00-00	06-08-00	60				n/a

Controls Summary

Pos. Moment	End Shear	Total Load Defl.	Live Load Defl.	Max Defl.	Span / Depth	Squash Blocks
4,561 ft-lbs	1,943 lbs	L/999 (0.046")	L/999 (0.028")	0.046"	6.3	Valid
17,696 ft-lbs	7,232 lbs	n/a	n/a	n/a	n/a	
25.8%	26.9%	n/a	n/a	n/a	n/a	
1	1	4	5	4	4	
03-04-00	01-03-06	03-04-00	03-04-00	03-04-00	03-04-00	

Disclosure

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

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

Notes

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





Calculations assume member is fully braced.
Resistance Factor ϕ has been applied to all presented results per CSA 086.
BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA 086.

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 cr

BC CALCO, BC FRAMER®, ASTM,
ALLOJIST®, BC RIM BOARDTM, BCIO,
BOISE GLULAMTM, SIMPLE FRAMING
SYSTEM®, VERSA-LAM®, VERSA-RIM-
PLUS®, VERSA-RIM®,
VERSA-STAND®, VERSA-STUD® are
Trademarks of Boise Cascade Wood
Products L.L.C.

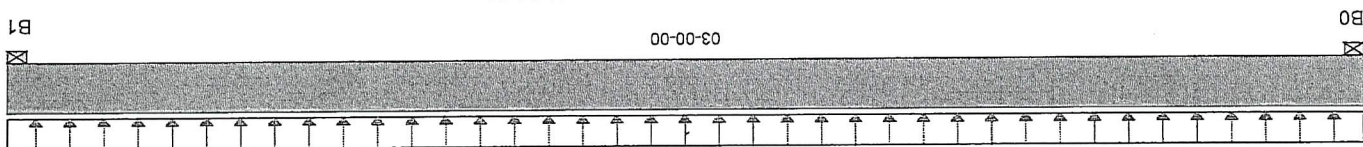
Load Summary					
Tag Description	Load Type	Ref. Start	End	Live	Dead
1	Unf. Area (lb/ft²)	L 00-00-00	03-00-00	40	15
Disclosure					
Completeness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods.					
Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain installation Guide or ask questions, please call 1-800-964-6999 before installation.					
BC CALCO®, BC FRAMER®, AUS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-RIM® PLUS®					
Controls Summary					
Pos. Moment	Factored Demand	Factored Resistance	Demand / Resistance	Load Case	Location
525 ft-lbs	17,696 ft-lbs	3%	1	01-06-00	1
End Shear	142 lbs	7,232 lbs	2%	01-03-06	1
Total Load Defl.	L/999 (0.001")	n/a	n/a	01-06-00	4
Live Load Defl.	L/999 (0.001")	n/a	n/a	01-06-00	5
Max Defl.	0.001"	n/a	n/a	01-06-00	4
Span / Depth	2.6	n/a	n/a	01-06-00	00-00-00
Squash Blocks	Valid				
Bearing Supports					
B0 Wall/Plate	Dim. (L x W)	Demand	Resistance Support	Member Resistance	Material
B1 Wall/Plate	3-1/2" x 1-3/4"	976 lbs	25.9%	13.1%	Spruce Pine Fir
B1 Wall/Plate	3-1/2" x 1-3/4"	976 lbs	25.9%	13.1%	Spruce Pine Fir

Controls Summary

Reaction Summary (Down / Uplift) (lbs)					
Bearing	Live	Dead	Snow	Wind	
B0, 3-1/2"	490 / 0	193 / 0			
B1, 3-1/2"	490 / 0	193 / 0			
Load Summary	Load Type	Ref. Start	End	Live	Dead
Tag Description	Unit Area (lb/ft²)	L 00-00-00	03-00-00	40	15
				1.00	0.65
				Snow	Wind
				1.00	1.15
					Trib.
					08-02-00

Reaction Summary (Down / Uplift) (lbs)

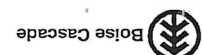
Total Horizontal Product Length = 03-00-00



Built	6080
Job Name:	45147 (5001)
Address:	Pine Valley
City, Province, Postal Code:	Vaughan, ON
Customer:	Gold Park
Code reports:	CCTV 12472-R
Misc:	
File Name:	290681.bcc
Description:	Second Floor Framing
Specifier:	
Designer:	NL
Company:	Alpa Roof Trusses



BC CALC® Design Report



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

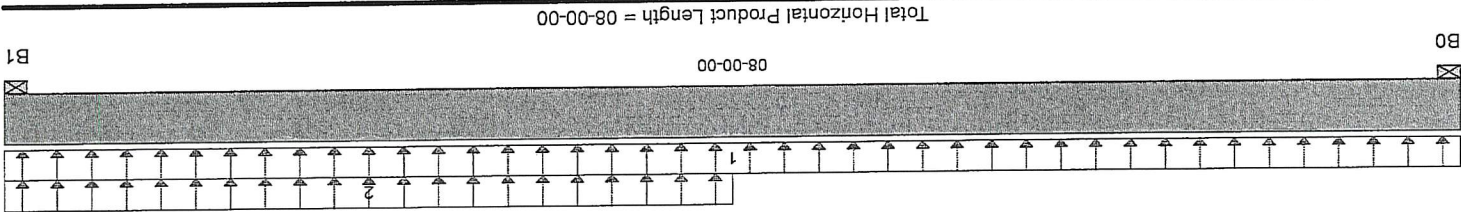
Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP
Floor Beam\B04



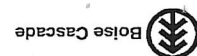
Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: Second Floor Framing
Designer: NL
Company: Alpa Roof Trusses
Misc:

Dry | 1 span | No cantilevers | 0/12 slope (deg)
November 23, 2017 15:05:25

Floor Beam\B05 Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP



Reaction Summary (Down / Uplift) (lbs)									
Bearing		Live		Dead		Snow		Wind	
B0, 3-1/2"		1,031 / 0		411 / 0					
B1, 3-1/2"		1,369 / 0		538 / 0					
Load Summary									
Tag Description		Load Type		Ref. Start		End			
1		Unf. Area (lb/ft²)		L 00-00-00		08-00-00		40	
2		Unf. Area (lb/ft²)		L 04-00-00		08-00-00		40	
05-06-00								15	
04-00-00								15	
Trib.								1.00	
								1.15	
								1.00	
								Snow	
								Wind	



BC CALCO® Design Report



Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: Second Floor Framing
Specifier: NL
Designer: Alpa Roof Trusses
Company: Misc:

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

November 23, 2017 16:09:48

Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Floor Beam\B07

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B0, 3-1/2"	40 / 0	313 / 0	236 / 0	
B1, 3-1/2"	41 / 0	313 / 0	236 / 0	

Load Summary

Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1	Upl. Lin. (lb/ft)	L	00-00-00	03-00-00	27	114		n/a
2	Upl. Area (lb/ft ²)	L	00-00-00	03-00-00	11	21		07-06-00

Controls Summary

Pos. Moment	412 ft-lbs	35,392 ft-lbs	1.2%	5	01-06-00
End Shear	112 lbs	14,464 lbs	0.8%	5	01-03-06
Total Load Defl.	L/999 (0")	n/a	n/a	13	01-06-00
Live Load Defl.	L/999 (0")	n/a	n/a	17	01-06-00
Max Defl.	0"	n/a	n/a	13	01-06-00
Span / Depth	2.6	n/a	n/a		00-00-00
Squash Blocks	Valid				

Notes

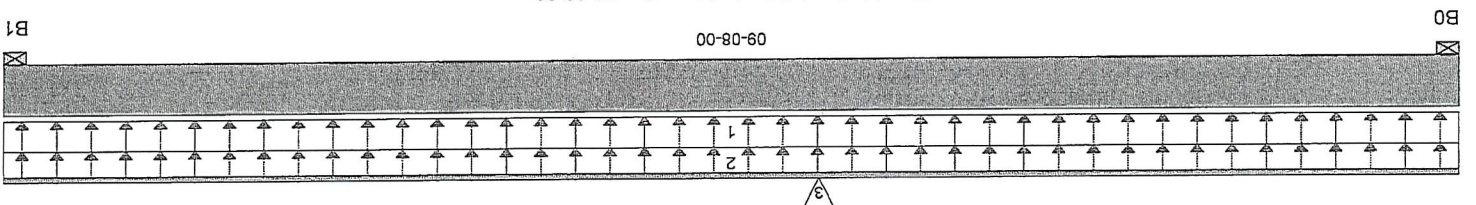
Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified (1") Maximum Total load deflection criteria.
Calculations assume member is fully braced.
Resistance Factor phi has been applied to all presented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



S/52603



Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: First Floor Framing
Designer: NL
Company: Alpa Roof Trusses
Misc:



Reaction Summary (Down / Uplift) (lbs)

Reaction	Dead	Snow	Wind
B0, 3-1/2"	1,175 / 0	760 / 0	712 / 0
B1, 3-1/2"	1,049 / 0		

Load Summary

Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1	Upl. Area (lb/ft²)	L	00-00-00	09-08-00	40	15		03-02-00
2	Upl. Lin. (lb/ft)	L	00-00-00	09-08-00	60			n/a
3	Conc. Pt. (lbs)	L	04-03-00	04-03-00	1,000	375		n/a

Controls Summary

Pos. Moment	End Shear	Total Load Defl.	Live Load Defl.	Max Defl.	Span / Depth	Squash Blocks
7,921 ft-lbs	2,288 lbs	L/704 (0.157")	L/999 (0.098")	0.157"	9.3	Valid
17,696 ft-lbs	7,232 lbs	0.46"	n/a	1"	n/a	n/a
44.8%	31.6%	34.1%	n/a	15.7%	n/a	n/a
4	1	4	5	4	4	4
04-03-00	01-03-06	04-09-03	04-08-07	04-09-03	04-09-03	00-00-00

Disclosure

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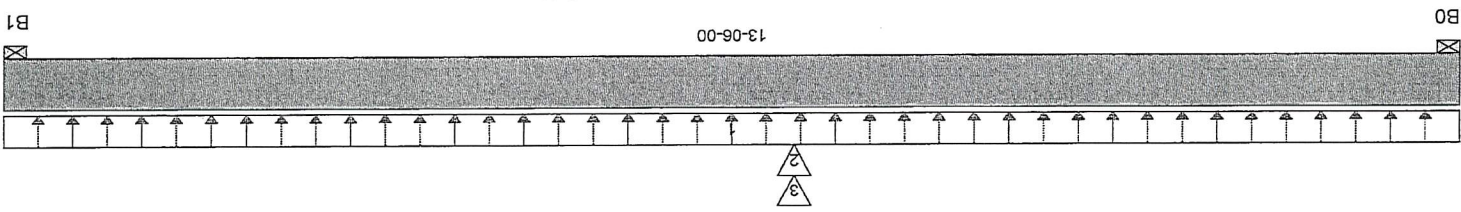
Notes

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





Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: First Floor Framing
Specifier: NL
Company: Alpha Roof Trusses
Misc:



Reaction Summary (Down / Uplift) (lbs)

Beam	Live	Dead	Snow	Wind
B0, 3-1/2"	922 / 0	612 / 0		
B1, 3-1/2"	829 / 0	547 / 0		

Load Summary

Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1	Upl. Area (lb/ft²)	L	00-00-00	13-06-00	40	15		01-04-00
2	Conc. Ft. (lbs)	L	06-02-00	06-02-00	1,031	411		n/a
3	Conc. Ft. (lbs)	L	06-02-00	06-02-00		315		n/a

Controls Summary

Pos. Moment	End Shear	Total Load Defl.	Live Load Defl.	Max Defl.	Span / Depth	Squash Blocks
10,470 ft-lbs	1,993 lbs	L/787 (0.199")	L/999 (0.119")	0.199"	13.2	Valid
35,392 ft-lbs	14,464 lbs	0.652"	n/a	1"	n/a	
29.6%	13.8%	30.5%	n/a	19.9%	n/a	
1	1	4	5	4	4	
06-02-00	01-03-06	06-06-09	06-06-09	06-06-09	00-00-00	

Bearing Supports

Dim. (L x W)	Demand	Resistance	Demand / Resistance	Member	Material
3-1/2" x 3-1/2"	2,147 lbs	28.5%	14.4%		Spruce Pine Fir
3-1/2" x 3-1/2"	1,928 lbs	25.6%	12.9%		Spruce Pine Fir

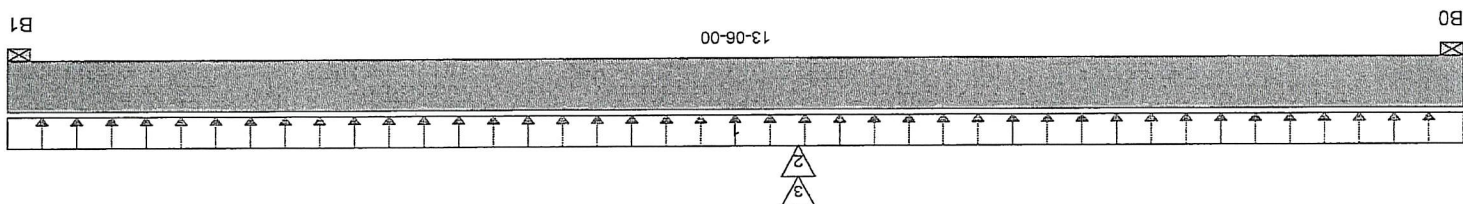
Notes

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





Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: First Floor Framing
Specifier: NL
Company: Alpa Roof Trusses
Misc:



Reaction Summary (Down / Uplift) (lbs)

Beam	Dead	Snow	Wind
B0, 3-1/2"	810 / 0		
B1, 3-1/2"	713 / 0		

Load Summary

Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1	Upl. Area (lb/ft²)	L	00-00-00	13-06-00	40			01-04-00
2	Conc. Pt. (lbs)	L	06-02-00	06-02-00	1,356			n/a
3	Conc. Pt. (lbs)	L	06-02-00	06-02-00	490			n/a

Controls Summary

Pos. Moment	15,900 ft-lbs	35,392 ft-lbs	44.9%	1	06-02-00
End Shear	2,907 lbs	14,464 lbs	20.1%	1	01-03-06
Total Load Defl.	L/532 (0.294")	0.652"	45.1%	4	06-06-09
Live Load Defl.	L/847 (0.185")	0.435"	42.5%	5	06-06-09
Max Defl.	0.294"	1"	29.4%	4	06-06-09
Span / Depth	13.2	n/a	n/a		00-00-00
Squash Blocks	Valid				

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



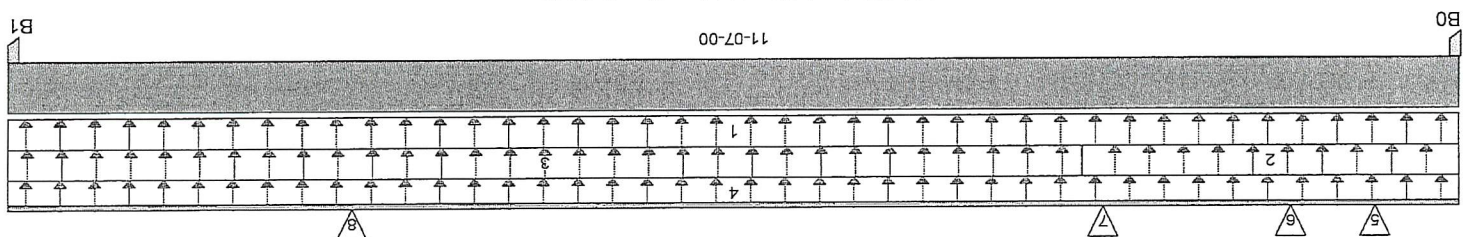


Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B12

Dry | 1 span | No cantilevers | 0/12 slope (deg) December 28, 2017 13:23:24

Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
Misc: File Name: 290681.bcc
Description: First Floor Framing
Specifier: NL
Designer: NL
Company: Alpa Roof Trusses



Reaction Summary (Down / Uplift) (lbs)

Beam	Live	Dead	Snow	Wind
B0, 3"	4,994 / 0	3,366 / 0	783 / 0	
B1, 3-1/2"	3,784 / 0	2,385 / 0	243 / 0	

Load Summary

Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1	Unf. Area (lb/ft²)	L	00-00-00	11-07-00	40	15		06-09-00
2	Unf. Area (lb/ft²)	L	00-00-00	03-00-00	40	15		06-06-00
3	Unf. Area (lb/ft²)	L	03-00-00	11-07-00	40	20		04-02-00
4	Unf. Lin. (lb/ft)	L	00-00-00	11-07-00	60			n/a
5	Conc. Pt. (lbs)	L	00-08-00	00-08-00	829	547		n/a
6	Conc. Pt. (lbs)	L	01-04-00	01-04-00	645	275		n/a
7	Conc. Pt. (lbs)	L	02-10-00	02-10-00	765	1,201	1,026	n/a
8	Conc. Pt. (lbs)	L	08-10-00	08-10-00	1,201	713		n/a

Controls Summary

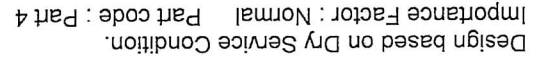
Pos. Moment	24,396 ft-lbs	35,392 ft-lbs	68.9%	1	05-04-07
End Shear	9,570 lbs	14,464 lbs	66.2%	1	01-02-14
Total Load Defl.	L/318 (0.421")	0.558"	75.5%	11	05-08-13
Live Load Defl.	L/521 (0.257")	0.372"	69.1%	15	05-08-13
Max Defl.	0.421"	1"	42.1%	11	05-08-13
Span / Depth	11.3	n/a	n/a		00-00-00
Squash Blocks	Valid				

Notes

Bearing Supports	Dim. (L x W)	Demand	Resistance	Demand/Resistance	Material
B0 Post	3" x 3-1/2"	12,091 lbs	66.4%	94.4%	Spruce Pine Fir
B1 Post	3-1/2" x 3-1/2"	8,778 lbs	41.3%	58.7%	Spruce Pine Fir

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





Calculations assume member is fully braced.
Resistance Factor ϕ has been applied to all presented results per CSA O86.
BC CALCE® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA O86.
Design based on Dry Service Condition.

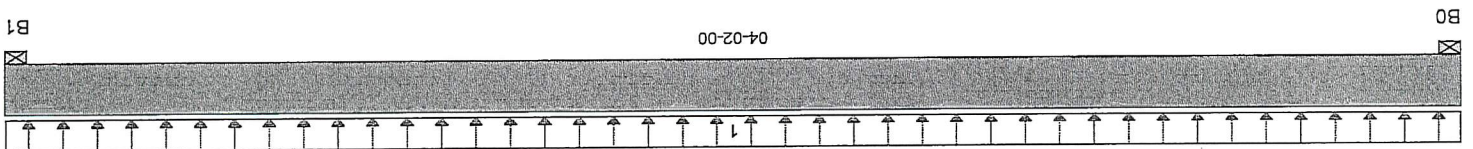
Design meets Code minimum (L/240) Total load deflection criteria.
Design meets Code minimum (L/360) Live load deflection criteria.
Design meets User specified ("") Maximum Total load deflection criteria.

BC CALCO, BC FRAMER®, AJS™
ALLJOIST®, BC RIM BOARD™, BCIO,
SYSTEM® , VERSA-LAM®, VERSA-RIM
PLUS®, VERSA-RIM®,
VERSASTRAND®, VERSA-STUD® are
trademarks of Boise Cascade Wood
Products L.L.C.

Controls Summary											
Pos. Moment		1,231 ft-lbs		17,696 ft-lbs		7%		02-01-00		Comprehensiveness and accuracy of input must be verified by anyone who would rely on output as evidence of suitability for particular application. Output here based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain installation Guide or ask questions, please call 1-800-964-6999 before installation.	
Factored Demand	Resistance	Factored Demand	Resistance	Demand / Resistance	Load Case	Location	Disclosure				
Squash Blocks	Valid			n/a	n/a	4	02-01-00	BC CAL@_BC FRAMER@_AJS™, ALLJOIST®, BC RIM BOARD™, BC@_BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-PINE®			
Span / Depth	3.7	n/a	n/a	n/a			02-01-00	BC CAL@_BC FRAMER@_AJS™, ALLJOIST®, BC RIM BOARD™, BC@_BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-PINE®			
Max Defl.	0.004"	n/a	n/a	n/a		5	02-01-00	BC CAL@_BC FRAMER@_AJS™, ALLJOIST®, BC RIM BOARD™, BC@_BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-PINE®			
Live Load Defl.	L/999 (0.003")	n/a	n/a	n/a		4	02-01-00	BC CAL@_BC FRAMER@_AJS™, ALLJOIST®, BC RIM BOARD™, BC@_BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-PINE®			
Total Load Defl.	L/999 (0.004")	n/a	n/a	n/a		1	01-03-06	BC CAL@_BC FRAMER@_AJS™, ALLJOIST®, BC RIM BOARD™, BC@_BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-PINE®			
End Shear	575 lbs	7,232 lbs	7.9%				02-01-00	BC CAL@_BC FRAMER@_AJS™, ALLJOIST®, BC RIM BOARD™, BC@_BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-PINE®			
Bearing Supports		Dim. (L x W)		Demand		Resistance		Demand/Resistance		Material	
B0 Wall/Plate	3-1/2" x 1-3/4"	1,492 lbs	39.6%	20%	Spruce Pine Fir	BC CAL@_BC FRAMER@_AJS™, ALLJOIST®, BC RIM BOARD™, BC@_BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-PINE®					
B1 Wall/Plate	3-1/2" x 1-3/4"	1,492 lbs	39.6%	20%	Spruce Pine Fir	BC CAL@_BC FRAMER@_AJS™, ALLJOIST®, BC RIM BOARD™, BC@_BOISE GLULAM™, SIMPLE FRAMING SYSTEM®, VERSA-LAM®, VERSA-PINE®					

Reaction Summary (Down / Uplift) (lbs)		Bearing		Load Type		Ref. Start		End		Live		Dead		Snow		Wind		Trib.	
B0, 3-1/2"	750 / 0	294 / 0	Dead	Snow	Wind														
B1, 3-1/2"	750 / 0	294 / 0	Dead	Snow	Wind														
Tag Description		Load Type		Ref. Start		End		Live		Dead		Snow		Wind		Trib.			
1		Unit Area (lb/ft ²)		L		00-00-00		04-02-00		40		15		09-00-00					

Total Horizontal Product Length = 04-02-00



Build 6080	Job Name:	45147 (5001)
	Address:	Pine Valley
	City, Province, Postal Code:	Vaughan, ON
	Customer:	Gold Park
	Code reports:	CCMC 12472-R
File Name:	290681.bcc	
Description:	First Floor Framing	
Specifier:		
Designer:	NL	
Company:	Alpa Roof Trusses	
Misc:		

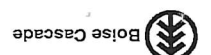


BC CALC® Design Report

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

Floor Beam\B13

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

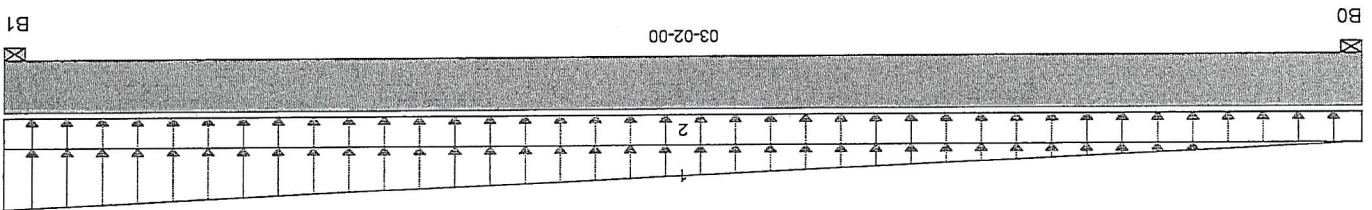




Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: Second Floor Framing
Designer: NL
Company: Alpha Roof Trusses
Misc:

Dry | 1 span | No cantilevers | 0/12 slope (deg) November 24, 2017 09:29:07

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Floor Beam\B14



Reaction Summary (Down / Uplift) (lbs)

Beam	Dead	Snow	Wind
B0, 3-1/2"	88 / 0	43 / 0	54 / 0
B1, 3-1/2"	118 / 0		

Load Summary

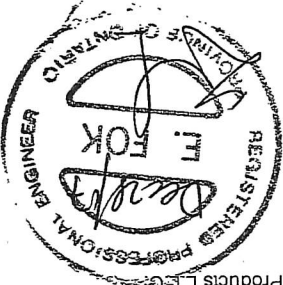
Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1 Trapezoidal (lb/ft)	L	00-00-00	03-02-00	50	19	0		n/a
2 Unit Area (lb/ft²)	L	00-00-00	03-02-00	40	15			01-00-00

Controls Summary

Pos. Moment	125 ft-lbs	17,696 ft-lbs	0.7%	1	01-07-14
End Shear	106 lbs	7,232 lbs	1.5%	1	01-10-10
Total Load Defl.	L/999 (0")	n/a	n/a	4	01-07-04
Live Load Defl.	L/999 (0")	n/a	n/a	5	01-07-04
Max Defl.	0"	n/a	n/a	4	01-07-04
Span / Depth	2.7	n/a	n/a		00-00-00
Squash Blocks	Valid				

Notes

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



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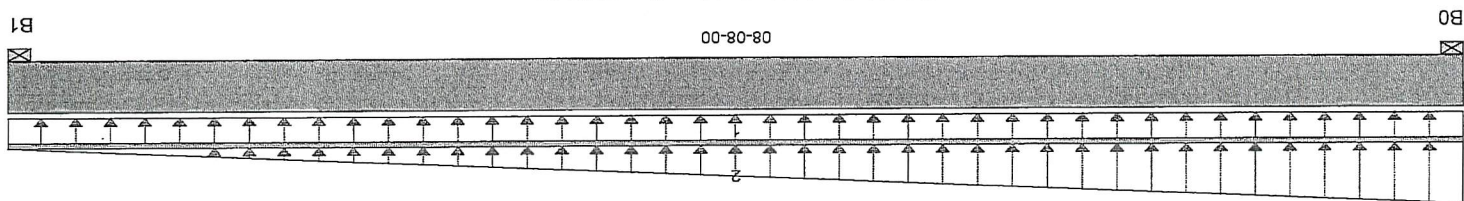
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Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: Second Floor Framing
Specifier: NL
Company: Alpha Roof Trusses
Misc:

Dry | 1 span | No cantilevers | 0/12 slope (deg) November 24, 2017 09:29:28

Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP Floor Beam\B15



Reaction Summary (Down / Uplift) (lbs)

Beam	Dead	Snow	Wind
B0, 3-1/2"	263 / 0	142 / 0	113 / 0
B1, 3-1/2"	187 / 0		

Load Summary

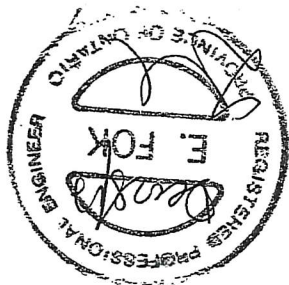
Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1	Upl. Lin. (lb/ft)	L 00-00-00	08-08-00	27	14	0.65	1.00	1.15
2	Trapezoidal (lb/ft)	L 00-00-00	08-08-00	50	19	0		n/a

Controls Summary

Pos. Moment	972 ft-lbs	Factored Demand	Resistance	Demand / Resistance	Load Case	Location
End Shear	461 lbs	7,232 lbs	6.4%	1	04-00-09	
Total Load Defl.	L/999 (0.017")	n/a	n/a	4	04-02-14	
Live Load Defl.	L/999 (0.011")	n/a	n/a	5	04-02-14	
Max Defl.	0.017"	n/a	n/a	4	04-02-14	
Span / Depth	8.3	n/a	n/a		00-00-00	
Squash Blocks	Valid					

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 CALCO analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA 086.
Importance Factor : Normal Part code : Part 4

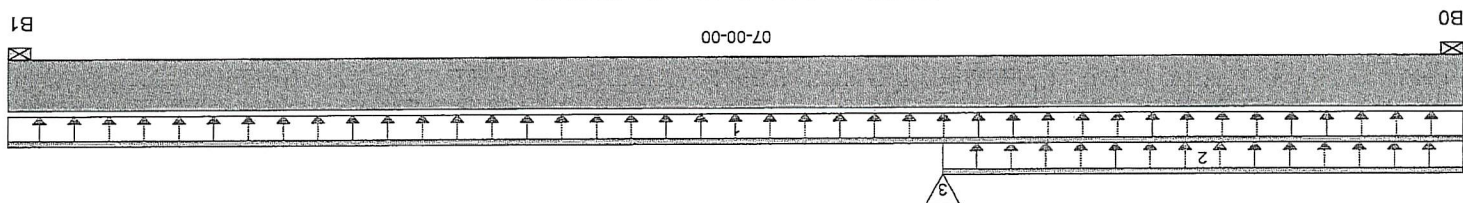


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Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: Second Floor Framing
Designer: NL
Company: Alpha Roof Trusses
Misc:



Reaction Summary (Down / Uplift) (lbs)

Beam	Live	Dead	Snow	Wind
B0, 3-1/2"	228 / 0	345 / 0		
B1, 3-1/2"	146 / 0	304 / 0		

Load Summary

Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1	Upl. Lin. (lb/ft)	L	00-00-00	07-00-00	27	74		n/a
2	Upl. Lin. (lb/ft)	L	00-00-00	02-06-00	27	14		n/a
3	Conc. Pl. (lbs)	L	02-06-00	02-06-00	118	54		n/a

Controls Summary

Controls Summary						
Pos. Moment	1,145 ft-lbs	17,696 ft-lbs	Resistance	Demand / Resistance	Load Case	Location
End Shear	519 lbs	7,232 lbs	7.2%	1	1	02-09-00
Total Load Defl.	L/999 (0.013")	n/a	n/a	4	4	03-04-14
Live Load Defl.	L/999 (0.005")	n/a	n/a	5	5	03-03-11
Max Defl.	0.013"	n/a	n/a	4	4	03-04-14
Span / Depth	6.6	n/a	n/a			00-00-00
Squash Blocks	Valid					

building codes. To obtain installation Guide

current Installation Guide and applicable

wood products must be in accordance with

Installation of Boise Cascade engineered

properties and analysis methods.

on building code-accepted design

particular application. Output here based

output as evidence of suitability for

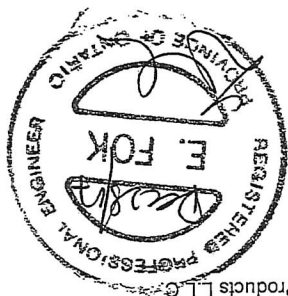
be verified by anyone who would rely on

Completeness and accuracy of input must

Disclosure

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 (") 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 CALCO analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA 086.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4

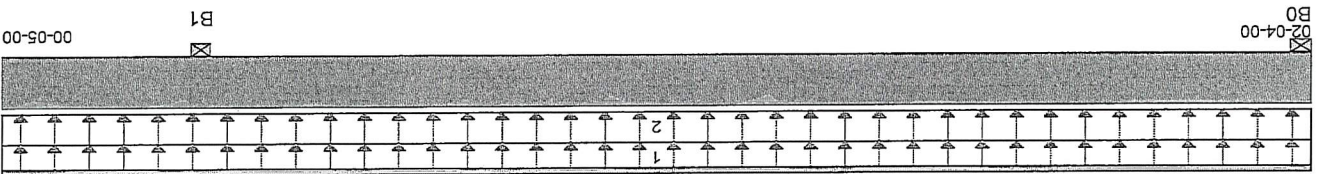


BC CALCO, BC FRAMER®, AJST®,
BOISE GLULAM™, SIMPLE FRAMING
SYSTEM®, VERSA-LAM®, VERSA-RIM
PLUS®, VERSA-RIM®,
VERSA-STRAND®, VERSA-STUD® are
Products L.L.C.
Trademarks of Boise Cascade Wood

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



Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: Second Floor Framing
Designer: NL
Company: Alpa Roof Trusses
Misc:



Reaction Summary (Down / Uplift) (lbs)

Beam	Live	Dead	Snow	Wind
B0, 3-1/2"	35 / 1	231 / 0	146 / 0	
B1, 3-1/2"	41 / 0	282 / 0	174 / 0	

Load Summary

Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1	Upl. Lin. (lb/ft)	L 00-00-00	02-09-00	27	114			n/a
2	Upl. Area (lb/ft²)	L 00-00-00	02-09-00	11	21			05-06-00

Controls Summary

Controls Summary										
Pos. Moment	219 ft-lbs	35,392 ft-lbs	Resistance	Factor	Demand /	Load	Case	Location		
01-02-14	26	0.6%								
02-04-00	31	0.1%								
01-03-06	0	0.1%								
02-05-12	30	0.8%								
01-03-02	66	n/a								
01-03-06	90	n/a								
02-09-00	66	n/a								
01-03-02	66	n/a								
02-09-00	66	n/a								
01-03-02	66	n/a								
02-09-00	66	n/a								
Span / Depth	2.1	n/a								
Squash Blocks	Valid									



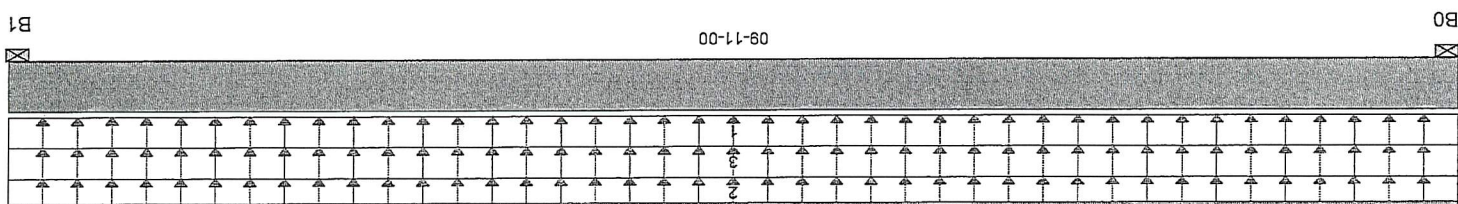
Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP

Floor Beam\B18

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

November 24, 2017 09:45:32

Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: First Floor Framing
Specifier: NL
Company: Alpa Roof Trusses
Misc:



Reaction Summary (Down / Uplift) (lbs)

Reaction	Live	Dead	Snow	Wind
B0, 3-1/2"	2,369 / 0	1,633 / 0		
B1, 3"	2,201 / 0	1,564 / 0		

Load Summary

Tag Description	Load Type	Ref. Start	End	Live	Dead	Snow	Wind	Trib.
1	Upl. Area (lb/ft ²)	L	00-00-00	09-11-00	40	15		05-06-00
2	Upl. Lin. (lb/ft)	L	00-00-00	09-11-00	120			n/a
3	Upl. Area (lb/ft ²)	L	00-00-00	09-11-00	40	20		03-06-00
4	Conc. Pt. (lbs)	L	04-03-00	04-03-00	1,000	375		n/a

Controls Summary

Pos. Moment	End Shear	Total Load Defl.	Live Load Defl.	Max Defl.	Span / Depth	Squash Blocks
14,432 ft-lbs	4,447 lbs	L/700 (0.163")	L/999 (0.098")	0.163"	9.6	Valid
35,392 ft-lbs	14,464 lbs	0.475"	n/a	1"	n/a	
40.8%	30.7%	34.3%	n/a	16.3%	n/a	
1	1	4	5	4	00-00-00	

Notes

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



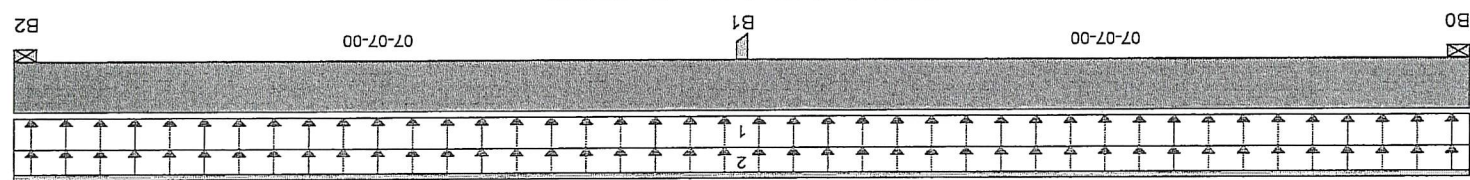
5152614



Build 6080
Job Name: 45147 (5001)
Address: Pine Valley
City, Province, Postal Code: Vaughan, ON
Customer: Gold Park
Code reports: CCMC 12472-R
File Name: 290681.bcc
Description: First Floor Framing
Specifier: NL
Company: Alpa Roof Trusses
Misc:

Dry | 2 spans | No cantilevers | 0/12 slope (deg)
November 24, 2017 09:53:39

Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP
Floor Beam\B19



Reaction Summary (Down / Uplift) (lbs)			
Live		Dead	
Snow		Wind	
B0, 3-1/2"	586 / 78	447 / 0	
B1, 3-1/2"	1,563 / 0	447 / 0	
B2, 3-1/2"	586 / 78	447 / 0	

Load Summary			
Tag Description		Load Type	
1		Upl. Area (lb/ft²)	
2		Upl. Lin. (lb/ft)	
04-03-00	20	L 00-00-00	15-02-00
n/a	60	L 00-00-00	15-02-00

Controls Summary			
Factored Demand		Factored Resistance	
Pos. Moment		Demand / Resistance	
2,021 ft-lbs	11,610 ft-lbs	17.4%	2
-2,990 ft-lbs	-11,610 ft-lbs	25.8%	1
End Shear	959 lbs	16.6%	2
Cont. Shear	1,618 lbs	28%	1
Total Load Defl.	L/999 (0.048")	n/a	9
Live Load Defl.	L/999 (0.031")	n/a	12
Total Neg. Defl.	L/999 (-0.005")	n/a	9
Max Defl.	0.048"	n/a	9
Span / Depth	9.3	n/a	00-00-00
Squash Blocks	Valid	n/a	00-00-00

Bearing Supports			
Dim. (L x W)		Demand	
3-1/2" x 1-3/4"		Support	
3-1/2" x 1-3/4"		Resistance	
3-1/2" x 1-3/4"		Member	
B0 Wall/Plate	1,438 lbs	38.2%	19.2%
B1 Post	4,066 lbs	38.3%	54.4%
B2 Wall/Plate	1,438 lbs	38.2%	19.2%

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 CALCO® analysis is based on Canadian Limit States Design, as per NBCC 2010 and CSA 086.
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 4



S-152615

Design Notes:

Additional Data:

Limit States Design using CSA 086-14 and Vibration Criterion:

Nordic 11-7/8" NI-20 2-ply Floor Joist @ 12" o.c.

Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.

Unfactored:	227		
Dead	519		
Factored:	1063		
Bearing:			
Resistance	3930		3930
Support	5595		5595
Des ratio	0.27		0.23
Joints	0.19		0.23
Load case	#2		#2
Support	1-3/4		1-3/4
Length	1-3/4		1-3/4
Mln reg'd	No		No
Stiffener	1.00		1.00
Kd	769		769
Kp support	1.03		1.03
Kp sup			

Maximum Reactions (lbs), Bearing Resistances (lbs) and Bearing Lengths (in) :

Load	Type	Distribution	Sev-Location	Start	End	Magitude	Unit
Load1	Dead	Full Area		15.00			
Load2	Live	Partial Area		40.00			
Load3	Live	Partial UDL		180.0			
Load4	Dead	Partial UDL		6.33	9.83		
Self-Weight		Full UDL		4.8			

Loads:

Design Check Calculation Sheet
Nordic Sizer – Canada 6.4

NORDIC
STRUCTURES

COMPANY
PROJECT
45147(5001)
Gold Park
Pine Valley, Vaughan
2-NI-20-14(1ST FL., under stair),www



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

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

1. 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.

2. Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 3/4 inch for a joist spacing of 24 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.

3. Minimum bearing length shall be 1-3/4 inches for the end bearings.

4. Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.

5. This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required based on the use of the design properties. Tables are based on Limit States Design per CSA O86-09, NBC 2010, and OBC 2012.

6. 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-1274C.

新



3

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

1. The sides to square holes or rectangular holes should not exceed 3/4" or 1 1/2" in length.
2. The diameter of the maximum round hole permitted at that location.
3. Where more than one hole is necessary, the distance between adjacent hole edges should exceed twice the diameter of the largest round hole or twice the size of the largest square hole (twice the length of the longest side of the longest rectangular hole or twice the longest side of the longest square opening).
4. All holes and square openings should be sized and located in compliance with the requirements of Tables 1 and 2, respectively.
5. A knockout is not considered a hole, may be utilized where it occurs, and may be ignored for purposes of calculating minimum distances between holes and/or duct chase openings.
6. Holes measuring 1-1/2 inches or smaller are permitted anywhere in a concealed space of a joist. Holes of greater size may be permitted subject to verification.

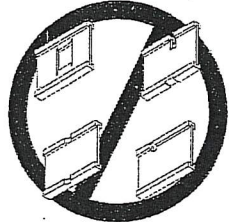
simple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 psf

LOCATION OF CIRCULAR HOLES IN JOIST WEBS

Simple Span Only

Jost Depth	Jost Series	Minimum Distances from Inside Face of Any Support to Centre of Hole (ft - in.)															
		12	12-3/4	12	11	10-3/4	10	9	8	8-5/8	7	6-1/4	6	5	4	3	2
9'-1/2"	N1-20	0-7/8	1-5/8	2-1/8	3-5/8	4-7/8	5-7/8	6-0	6-1/4	6-3/4	6-7/8	7-0	7-1/4	7-5/8	8-0	8-1/4	8-3/4
	N1-40X	0-7/8	1-5/8	2-3/8	3-0	4-4	5-0	5-5	6-0	6-5	7-0	7-5	8-0	8-5	9-0	9-5	10-0
	N1-70	1-3/8	2-6	4-0	5-4	6-3	7-0	7-5	8-0	8-5	9-0	9-5	10-0	10-5	11-0	11-5	12-0
	N1-80	2-0	3-4	4-9	6-3	8-0	9-0	9-5	10-0	10-5	11-0	11-5	12-0	12-5	13-0	13-5	14-0
11'-7/8"	N1-20	0-8	1-0	1-2	1-5	1-7	1-9	2-0	2-1	2-2	2-3	2-4	2-5	2-6	2-7	2-8	2-9
	N1-40X	0-8	1-3	2-0	2-8	3-5	4-0	4-5	5-0	5-5	6-0	6-5	7-0	7-5	8-0	8-5	9-0
	N1-60	1-5	2-5	4-0	5-0	6-0	6-5	7-0	7-5	8-0	8-5	9-0	9-5	10-0	10-5	11-0	11-5
	N1-80	2-0	3-0	4-2	5-6	6-6	7-5	8-5	9-5	10-5	11-5	12-5	13-5	14-5	15-5	16-5	17-5
1'-4"	N1-90X	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-20	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-40	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-60	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
1'-6"	N1-90X	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-20	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-40	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-60	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
1'-8"	N1-90X	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-20	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-40	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-60	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
1'-10"	N1-90X	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-20	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/8	6-7/8	6-9/8	6-11/8	6-13/8	6-15/8	6-17/8	6-19/8
	N1-40	0-7/8	1-5/8	2-1/8	3-1/8	4-1/8	5-1/8	6-1/8	6-3/8	6-5/							

FIELD-CUT HOLE LOCATOR



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

SAFETY AND CONSTRUCTION PRECAUTIONS

1. Brace and nail each joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bracing at joist ends. When joists are applied continuously over interior supports and a lead-beeting 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 joists. Until this sheathing is applied, temporary bracing, often called struts, or temporary bracing must be applied to prevent joist rollover.

3. Temporary bracing or struts must be 1 1/2 inch minimum, or less B feet long and spaced no more than B feet on center, and must be secured with a minimum of two 2-1/2" metal fasteners to the top surface of each joist. Nail the bracing to the lateral restraint at the end of each box. Top ends of adjoining bracing cover at least two joists.

4. Or, sheathing (temporary or permanent) may be nailed to the top flange of the first 4 feet of joists at the end of the box.

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

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

5. Never install a damaged joist.

4. To follow applicable building codes, failure to follow applicable building codes, failure to use web stiffeners when required can result in serious accidents.

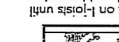
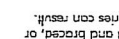
3. Failure to follow applicable building codes, failure to use web stiffeners when required can result in serious accidents.

2. Failure to follow applicable building codes, failure to use web stiffeners when required can result in serious accidents.

1. Failure to follow applicable building codes, failure to use web stiffeners when required can result in serious accidents.

Never stack building materials over unbraced joists. Once joists with concentrated loads from building materials are installed, do not over-stress joists with concentrated loads from building materials.

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



Furthermore, Chantiers Organismes warns that our production will meet or exceed our specifications for the lifetime of the structure.

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

Method 1 — SHEATHING REINFORCEMENT ONE SIDE

[illegible]

FIGURE 5 (continued)

5c SETBACK CONNECTION

Vertical stiffen web blocks
 using 2-1/2" bolts
 through joint web and web of girder
 (2x5-8 F82, or better) milled
 Alternate for opposite side.
 Notes:
 Verify girder joint capacity if the block span
 exceeds the joint spacing.
 - Attach double 1/4" bolt per detail 7p, if required.

Flange may be
 used in lieu of
 bottom flanges.
 Bolt joint using 3"
 nuts, 10-10 and 10-10

DEPTH (in.)	CROSS SPAN	JOIST SPACING (in.)
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[illegible][illegible]



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

Maximum test score (%)	Maximum raw score (n)	Command rule type or mode	Number of statements	Maximum number of parameters
16	5/6	1-3/4	2	6
20	5/6	1-3/4	2	6
24	3/4	2	2	6

10. **Completed all cutting of each panel before glue sets.** Check the manufacturer's recommendations for the maximum glue application rate for the glue you are using. Do not apply glue in excess. If the glue is too thick, it will not spread properly and may cause the panels to delaminate. If the glue is too thin, it will not spread properly and may cause the panels to delaminate. If the glue is too thick, it will not spread properly and may cause the panels to delaminate. If the glue is too thin, it will not spread properly and may cause the panels to delaminate.
11. **Spread any extra glue, water, or other material from the panels before glue sets.** If the glue is too thick, it will not spread properly and may cause the panels to delaminate. If the glue is too thin, it will not spread properly and may cause the panels to delaminate. If the glue is too thick, it will not spread properly and may cause the panels to delaminate. If the glue is too thin, it will not spread properly and may cause the panels to delaminate.
12. **Wipe any dirt, dust, water, or other material from the panels before glue sets.** If the glue is too thick, it will not spread properly and may cause the panels to delaminate. If the glue is too thin, it will not spread properly and may cause the panels to delaminate. If the glue is too thick, it will not spread properly and may cause the panels to delaminate. If the glue is too thin, it will not spread properly and may cause the panels to delaminate.

(a) ATTACHMENT DETAILS WHERE RIM BOARDS ABUT

Rim board joint between floor joists 2-1/2" nails at 6" o.c. (typical)

Top and bottom (typical)

(1) 2-1/2" nail

2-1/2" toe-nails at 6" o.c. (typical)

(b) TOE-NAIL CONNECTION AT RIM BOARD

Rim board

Top or sole plate

30°

4/3

(c) 2X LEDGER TO RIM BOARD ATTACHMENT DETAIL

Existing stud wall

Rim board

Floor sheathing

1-joist

2-5/8" min. 2" max.

2-5/8" min. 2" max.

disintegrating washers or thru-bolts with 2x hanger

Shogged 1/2"

Continuous flashing extending at least 3" past prior to installation

Remove siding at ledger

Exterior sheathing

Deck joist

Joint hanger

2x ledger board (pressure-treated): must be greater than or equal to the depth of the deck joist

(d) TOE-NAIL CONNECTION AT RIM BOARD

Rim board

Top or sole plate

30°

4/3

(e) 2X LEDGER TO RIM BOARD ATTACHMENT DETAIL

Existing stud wall

Rim board

Floor sheathing

1-joist

2-5/8" min. 2" max.

2-5/8" min. 2" max.

disintegrating washers or thru-bolts with 2x hanger

Shogged 1/2"

Continuous flashing extending at least 3" past prior to installation

Remove siding at ledger

Exterior sheathing

Deck joist

Joint hanger

2x ledger board (pressure-treated): must be greater than or equal to the depth of the deck joist

[illegible][illegible]

- 1) The distance between the inside edge of the support and the centerline of any hole or slot is respectively
- 2) the top and bottom flanges must NEVER be cut, notched, or otherwise modified.
- 3) Whenever possible, field-cut holes should be centered on the middle of the web.
- 4) The maximum size hole or the maximum depth of a slot does not opening that is between the top or bottom flange of the web.
- 5) The minimum of 1/8 inch opening and the adjacent 1/8 inch flange are maintained between the top or bottom flange of the web.
- 6) The side of square holes or longer slots of rectangular holes should not exceed 3/4 of the diameter of the hole or longer slot.
- 7) Where more than one hole is necessary, the distance between adjacent holes edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole for twice the length of the longer slot at the opening shall be the plate and located in compliance with the requirements of Tables 1 and 2, respectively.
- 8) 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.
- 9) Holes measuring 1-1/2 inches or smaller shall be permitted anywhere in a web.
- 10) Holes measuring 1-1/2 inches or smaller shall be permitted anywhere in a stiffener.
- 11) All holes and slots shall be cut in a workmanlike manner in accordance with the specifications listed above and as illustrated in Figure 7.
- 12) Until their maximum size holes per span, or portion, may be a cut and shear group of round holes is approximately the same location shall be permitted if the hole or slot meets the requirements for a single round concentrated load and there is no other hole or slot in the same location.

Maximum Fastened Vertical Load per Joist (lb)

1-1/8" Rim Board Plus	4,300
2x Lumber	5,500
3-1/2" Wide	5,500
4-1/2" Wide	6,500

Rule of Squash Blocks

1/16" for squash blocks

Blocking Panel

Minimum Fastened Vertical Load per Joist (lb)

3,300

Blocking Panel

Minimum Fastened Vertical Load per Joist (lb)

3,300

Blocking Panel

Minimum Fastened Vertical Load per Joist (lb)

3,300

Blocking Panel

Minimum Fastened Vertical Load per Joist (lb)

3,300

Blocking Panel

Minimum Fastened Vertical Load per Joist (lb)

3,300

FIGURE 1

TYPICAL NORDIC I-JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS

1. Before laying out floor system components, verify that I-joint flanges will match hanger widths. If not, components will not fit.
2. Except for cutting to length, I-joint flanges should never be cut, drilled, or notched.
3. Install I-joints so that top and bottom flanges are within 1/2 inch of true vertical alignment.
4. I-joints must be anchored securely to supports before floor sheathing is attached, and supports for intermediate beams must be installed.
5. Minimum blocking length: 1-3/4 inches for end beams and 2-1/2 inches for intermediate beams.
6. When using hangers, seat I-joints firmly in hanger bottoms to minimize settlement.
7. Leave a 1/16-inch gap between the I-joint end and a hanger.
8. Concentrated loads greater than those that can normally be expected in residential construction should only be applied to the top flange of the top flange. Normal concentrated loads shall be applied to the top flange. Whenever possible, suspend all concentrated loads from the top of the I-joint. Or, attach the load to blocking that has been securely fastened to the I-joint webs.
9. Never install I-joints where they will be permanently exposed to weather, or where they will remain in direct contact with concrete or masonry.
10. Restrain ends of floor joists to prevent rollover. Use rim board, rim joist or I-joint blocking panels.
11. For I-joints installed over and beneath blocking walls, use full depth blocking panels, rim board, or squash blocks (apple 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 board, and on I-joint-compatible depth selected.
13. Provide permanent lateral support of the bottom flange of all I-joints or hanger supports or multiple-span joists. Similarly, support the bottom flange of all cantilevered I-joints or the end support end to the cantilever extension. In the completed structure, the support will be provided by the wall or foundation.
14. If square-edge panels are used, edges must be supported between I-joints with 2x4 blocking. Glue panels to blocking to minimize squeak. 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 hanger's top face in accordance with the applicable building code requirements or approved building plans.

INSTALLING NORDIC I-JOISTS

STORAGE AND HANDLING GUIDELINES

1. Bundle wrap can be slippery when wet. Avoid walking on wrapped bundles.
2. Store, stock and handle I-joints vertically and level only.
3. Always stock and handle I-joints in the upright position only.
4. Do not store I-joints in direct contact with the ground and/or flammable materials.
5. Protect I-joints from weather, and use spacers to separate bundles.
6. Bundled units should be kept intact until time of installation.
7. When handling I-joints with a crane on the job site, take a few simple precautions to prevent damage to the I-joints and injury to your work crew.
8. Do not handle I-joints in a horizontal orientation.
9. NEVER USE OR TRY TO REPAIR A DAMAGED I-JOIST.

SAFETY AND CONSTRUCTION PRECAUTIONS

WARNING

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

Avoid accidents by following these important guidelines:

1. Brace and nail each I-joint as it is installed using hangers, blocking panels, rim board, and/or cross-bracing or load transfer. When I-joints are supported continuously over interior supports and a load-bearing wall is planned or 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-joints. Until this sheathing is applied, temporary blocking or struts must be used to prevent I-joint buckling or crushing.
3. Temporary blocking or struts must be used to prevent I-joint buckling or crushing.
4. In all and fully nail permanent sheathing to each I-joint before placing loads on the floor system. Then, stock building materials over beams and brace ends with diagonal panels, rim board, or cross-bracing.
5. Never install a damaged I-joint.

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

NORDIC

ENGINEERED WOOD

INSTALLATION GUIDE

FOR RESIDENTIAL FLOORS

Distributed by:

2015-04-16

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[illegible][illegible]

1. **Top Mount** - Hanger above the load. The load is suspended from the hanger by a single hook. The hanger is labeled "Top Mount".

2. **Side Mount** - Hanger to the side of the load. The load is suspended from the hanger by a single hook. The hanger is labeled "Side Mount".

3. **Bottom Mount** - Hanger below the load. The load is suspended from the hanger by a single hook. The hanger is labeled "Bottom Mount".

4. **End Mount** - Hanger at the end of the load. The load is suspended from the hanger by a single hook. The hanger is labeled "End Mount".

with conversion 1 inch = 25.4 mm.

and the flange is at the bottom.

by the cone. The top bearing is distinguished

and may be

ap and the support. These values are for

between supports, anywhere between the center

between supports, in the case of a

load, 2,970 lb. An option is the top long

A load reduction is required of applications

different and ranges in 4 in top.

support, the top flange. The gap between the

the load is supported in a hanger and the

A bearing flange is required when

the distance and the range is at the top.

the load

load requires double flange of the load

reactions greater than shown in the

required applications with increased

A bearing flange is required in all

RECOMMENDATIONS.

Diagram illustrating the flange width and gap requirements for a 4' x 8' panel. The panel is divided into three sections: a top section labeled "Flange width 2'-1/2\" or 3'-1/2\"", a middle section labeled "Flange width 3' nois required, for holes with 2'-1/2\"", and a bottom section labeled "Flange width 2'-1/2\" or 3'-1/2\"". The gaps between the sections are labeled "No Gap" and "1/8\"-1/4\" Gap".

3-1/2"	1-1/2" x 2-5/16" minimum width
2-1/2"	1" x 2-5/16" minimum width

[illegible]

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

[illegible]

Diagram illustrating the installation of a blocking panel. The panel is shown being inserted into a wall cavity. Labels indicate: "Blocking required over all interior floor joists and over continuous walls or when floor joists are not continuous", "NI blocking panel per detail 1c", and "above shall align vertically with bearing wall, and not covered by this detail."

[illegible]

capacity see hanger manufacturer's recommendations.

(c) Hangers shall be installed copiously to support concentrated loads.

DCKS (Blocks must be long enough to permit required end splicing)

Width	Material Thickness Required*	Minimum Depth**
1"	5-7/8"	7-1/2"
1-1/2"		7-1/2"

*Solid sawn lumber and wood structural panels conforming to S&C-0232 or CAN/CSCA-043 Standard

**Hangers use net post depth minus 3-1/4" for 1-1/2" thick hangers, for 2" thick hangers use net depth +1/4".

brocker board required [both sides for non-moment]