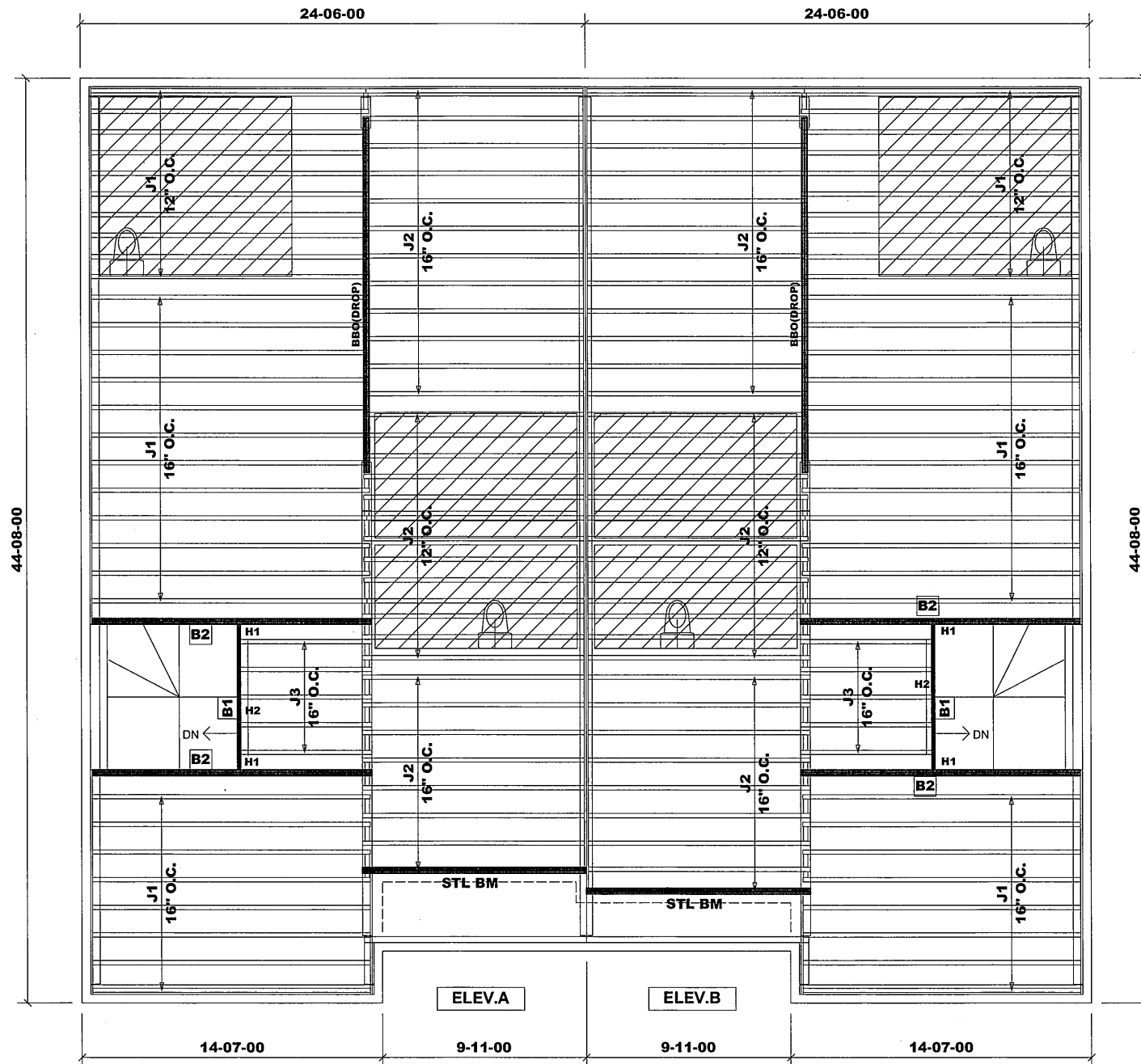




SE00472B - SE004739

Products				
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-20	1	60
J2	11-00-00	9 1/2" NI-20	1	67
J3	7-00-00	9 1/2" NI-20	1	10
B2	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	8
B1	7-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
Ca1	258-00-00	1 1/8" x 9 1/2" Rim Board	1	1
Bk1	48-00-00	9 1/2" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	4		HUS1.81/10
H2	10		LT259

RIMBOARD
 1- 1/8" X 9 1/2" O.S.B.
 SUBFLOOR - 5/8" GLUE & NAILED
 APP - AS PER PLAN
 BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6
 Blocking panels are required over all interior supports
 Squash blocks are required under concentrated loads.

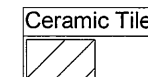
FIRM BCIN 113884
 DESIGNER BCIN 25593

DL

Second Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: SD-9(GERSHWIN)



JT/PL: 39002/104573

LI: 314129

Builder: Gold Park

Project: Encore 2

Location: Brampton

Date: October 27, 2019

Designer: NL

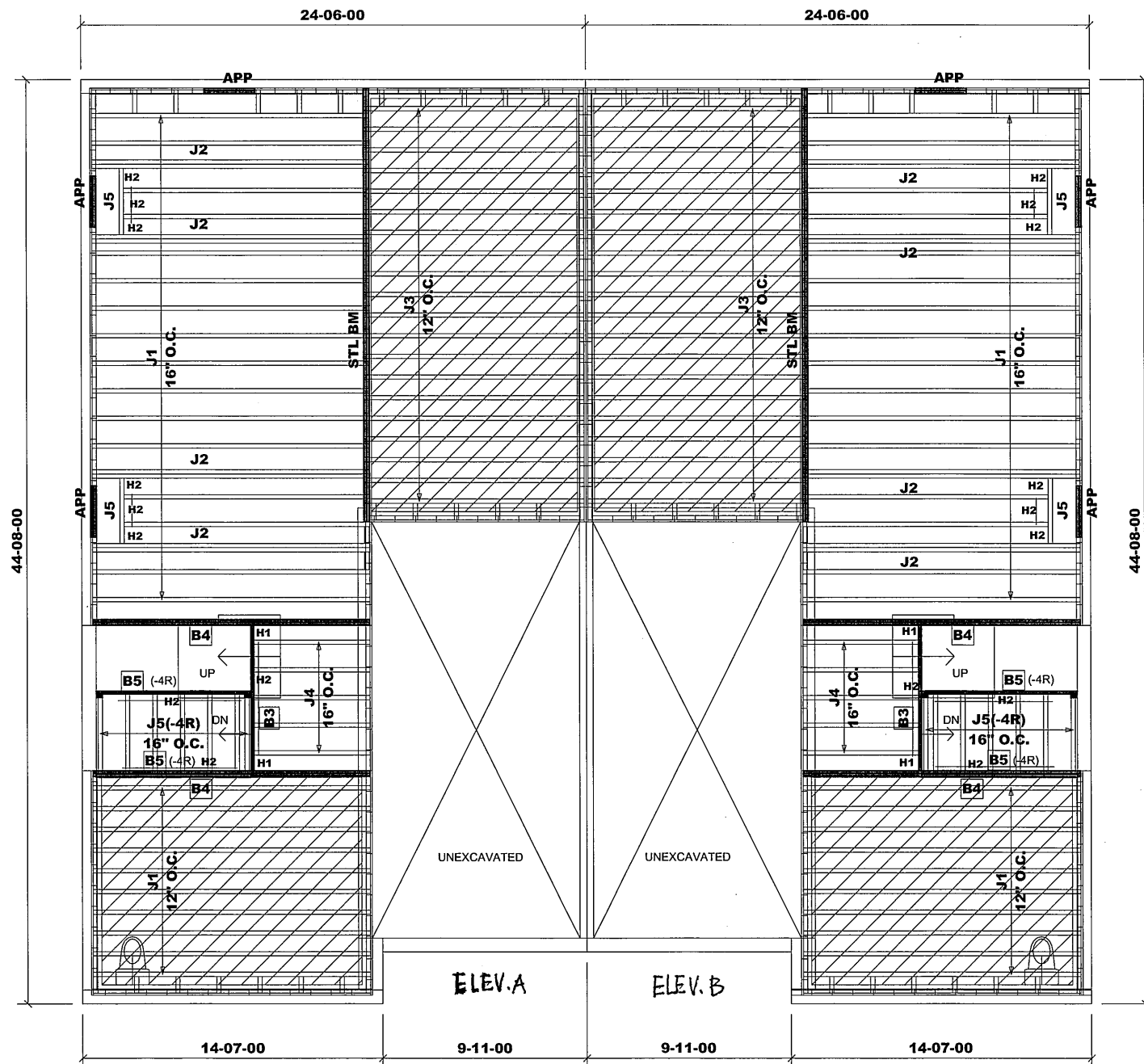
Sheet: 1 of 8

Alpa Roof Trusses Inc.

Maple, Ontario

Salesperson: Derek

Home Lumber



Products				
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-20	1	52
J2	14-00-00	9 1/2" NI-20	2	16
J3	11-00-00	9 1/2" NI-20	1	40
J4	6-00-00	9 1/2" NI-20	1	10
J5	4-00-00	9 1/2" NI-20	1	18
B4	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	8
B5	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	4
B3	7-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
Ca1	274-00-00	1 1/8" x 9 1/2" Rim Board	1	1
Bk1	76-00-00	9 1/2" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	4		HUS1.81/10
H2	46		LT259

RIMBOARD
1- 1/8" X 9 1/2" O.S.B.
SUBFLOOR - 5/8" GLUE & NAILED
APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6
Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.

FIRM BCIN 113884
DESIGNER BCIN 25593

First Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: SD-9(GERSHWIN)

JT/PL: 39002/104573

Builder: Gold Park

Location: Brampton

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: 314129

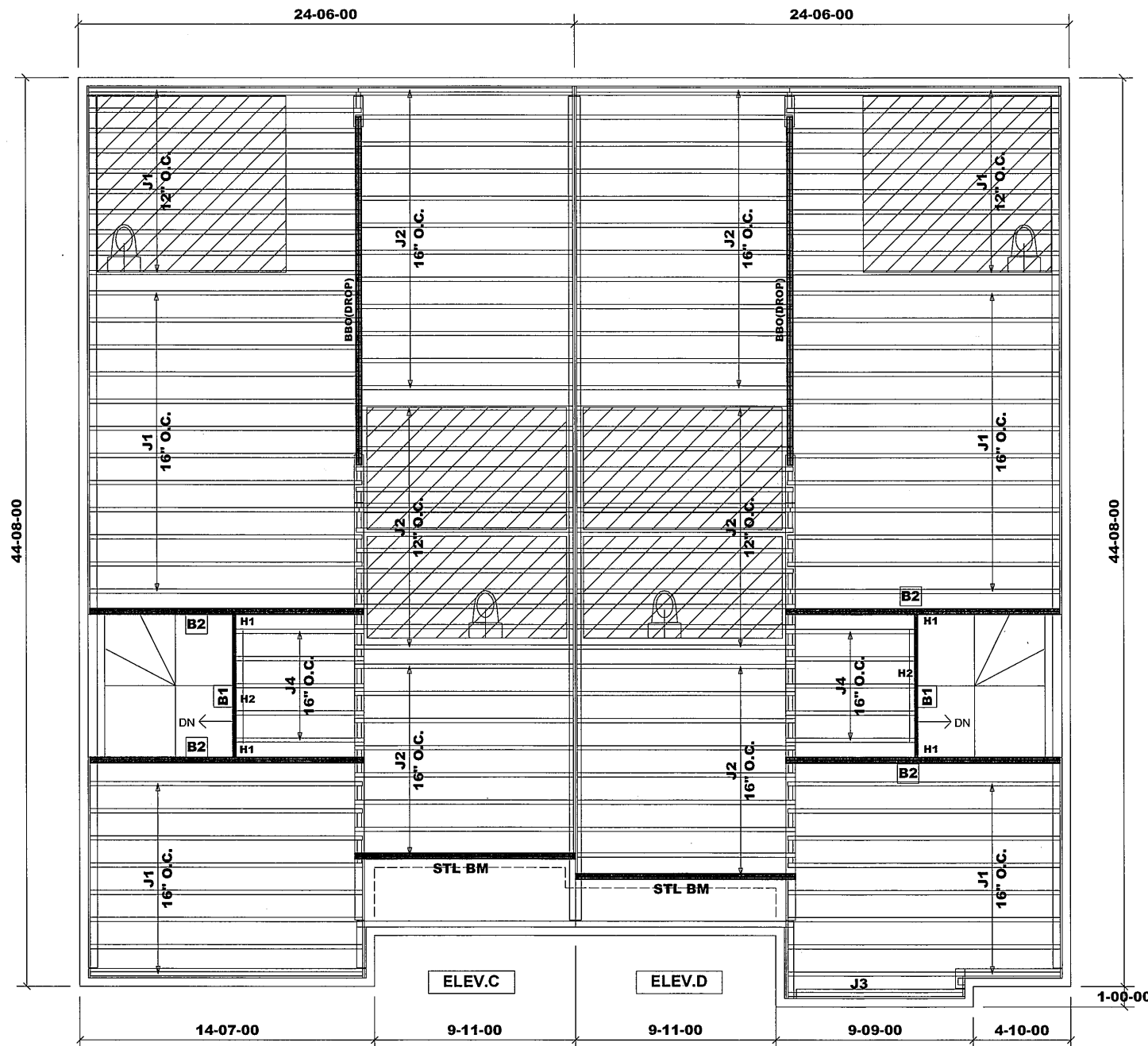
Project: Encore 2

Date: October 27, 2019

Sheet: 2 of 8

Maple, Ontario

Home Lumber



Products				
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-20	1	60
J2	11-00-00	9 1/2" NI-20	1	67
J3	9-00-00	9 1/2" NI-20	1	1
J4	7-00-00	9 1/2" NI-20	1	10
B2	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	8
B1	7-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
Ca1	260-00-00	1 1/8" x 9 1/2" Rim Board	1	1
Bk1	48-00-00	9 1/2" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	4		HUS1.81/10
H2	10		LT259

RIMBOARD
 1- 1/8" X 9 1/2" O.S.B.
 SUBFLOOR - 5/8" GLUE & NAILED
 APP - AS PER PLAN
 BBO - BEAM BY OTHERS

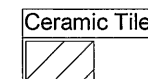
Ceramic tile application as per O.B.C. 9.30.6
 Blocking panels are required over all interior supports
 Squash blocks are required under concentrated loads.

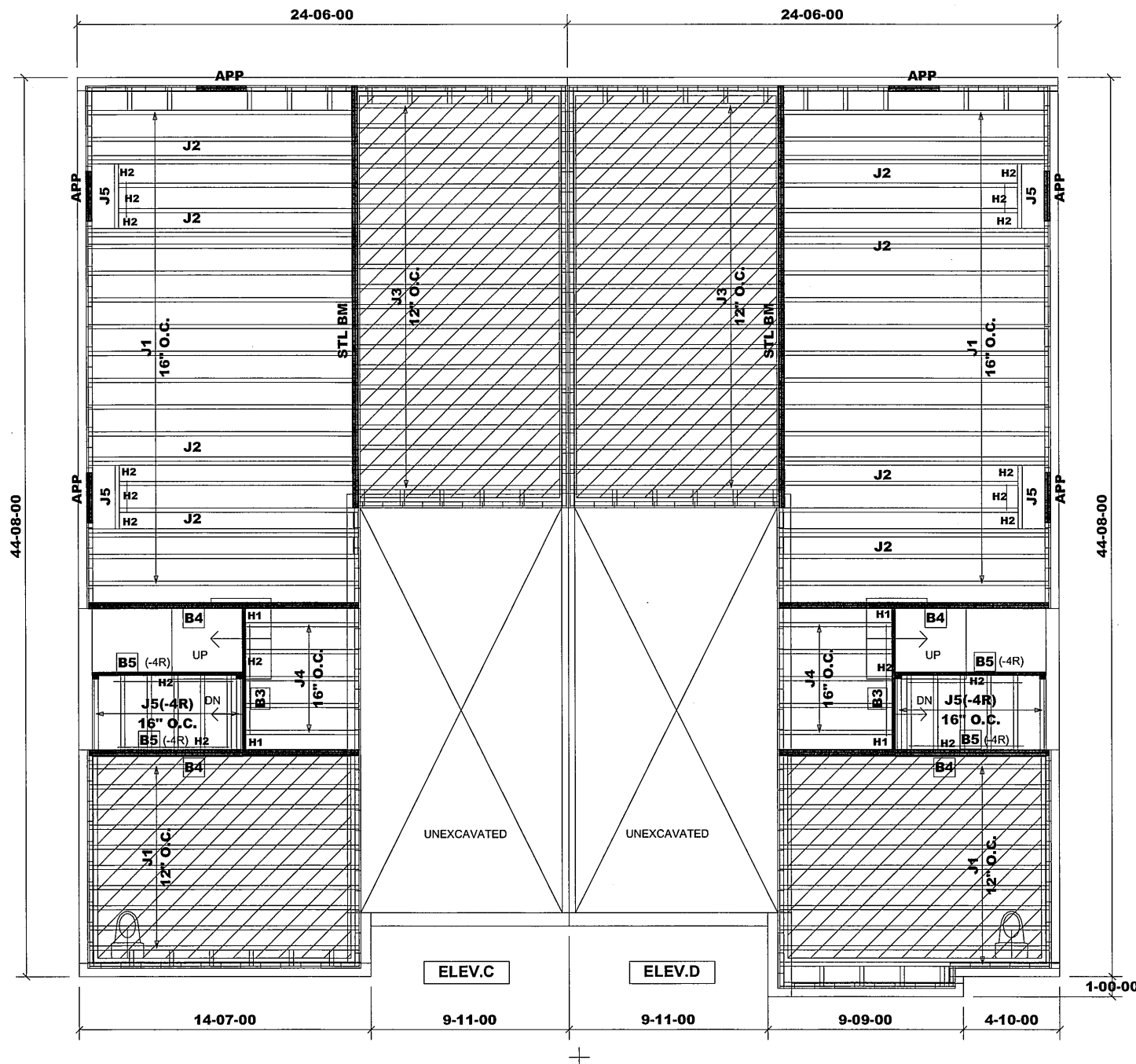
FIRM BCIN 113884
 DESIGNER BCIN 25593

Second Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: SD-9(GERSHWIN)





Products				
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-20	1	53
J2	14-00-00	9 1/2" NI-20	2	16
J3	11-00-00	9 1/2" NI-20	1	40
J4	6-00-00	9 1/2" NI-20	1	10
J5	4-00-00	9 1/2" NI-20	1	18
B4	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	8
B5	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	4
B3	7-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
Ca1	276-00-00	1 1/8" x 9 1/2" Rim Board	1	1
Bk1	76-00-00	9 1/2" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	4		HUS1.81/10
H2	46		LT259

RIMBOARD

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

SUBFLOOR - 5/8" GLUE & NAILED

APP - AS PER PLAN
BBO - BEAM BY OTHERS

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

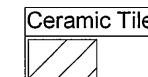
Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.

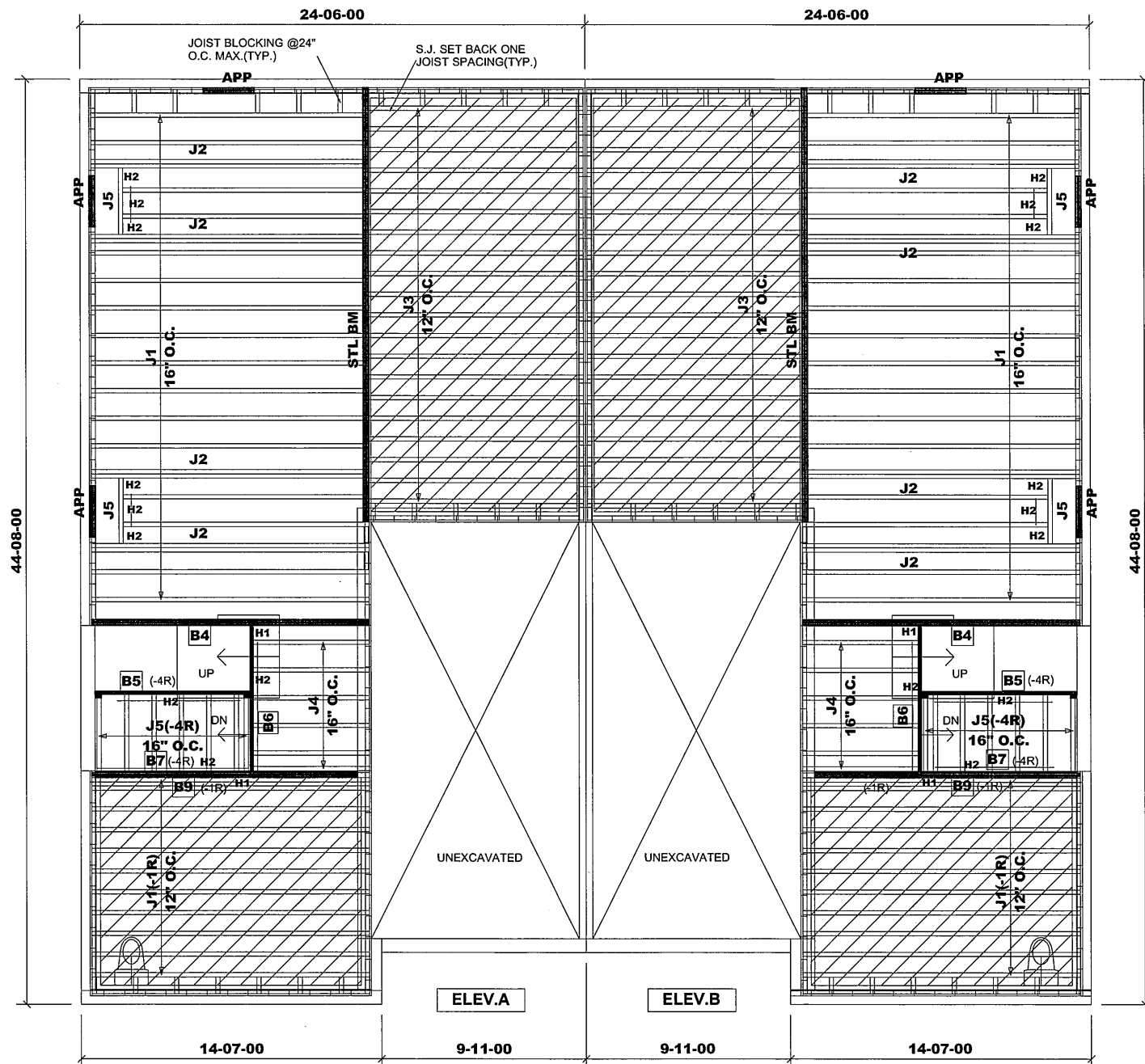
FIRM BCIN 113884
DESIGNER BCIN 25593

First Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: SD-9(GERSHWIN)





Products				
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-20	1	54
J2	14-00-00	9 1/2" NI-20	2	16
J3	11-00-00	9 1/2" NI-20	1	40
J4	6-00-00	9 1/2" NI-20	1	12
J5	4-00-00	9 1/2" NI-20	1	18
B4	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	4
B7	13-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	4
B5	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
B6	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
B9	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
Ca1	300-00-00	1 1/8" x 9 1/2" Rim Board	1	1
Bk1	76-00-00	9 1/2" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	4		HUS1.81/10
H2	52		LT259

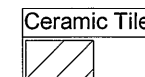
RIMBOARD
1- 1/8" X 9 1/2" O.S.B.
SUBFLOOR - 5/8" GLUE & NAILED
APP - AS PER PLAN
BBO - BEAM BY OTHERS

Ceramic tile application as per O.B.C. 9.30.6
Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.

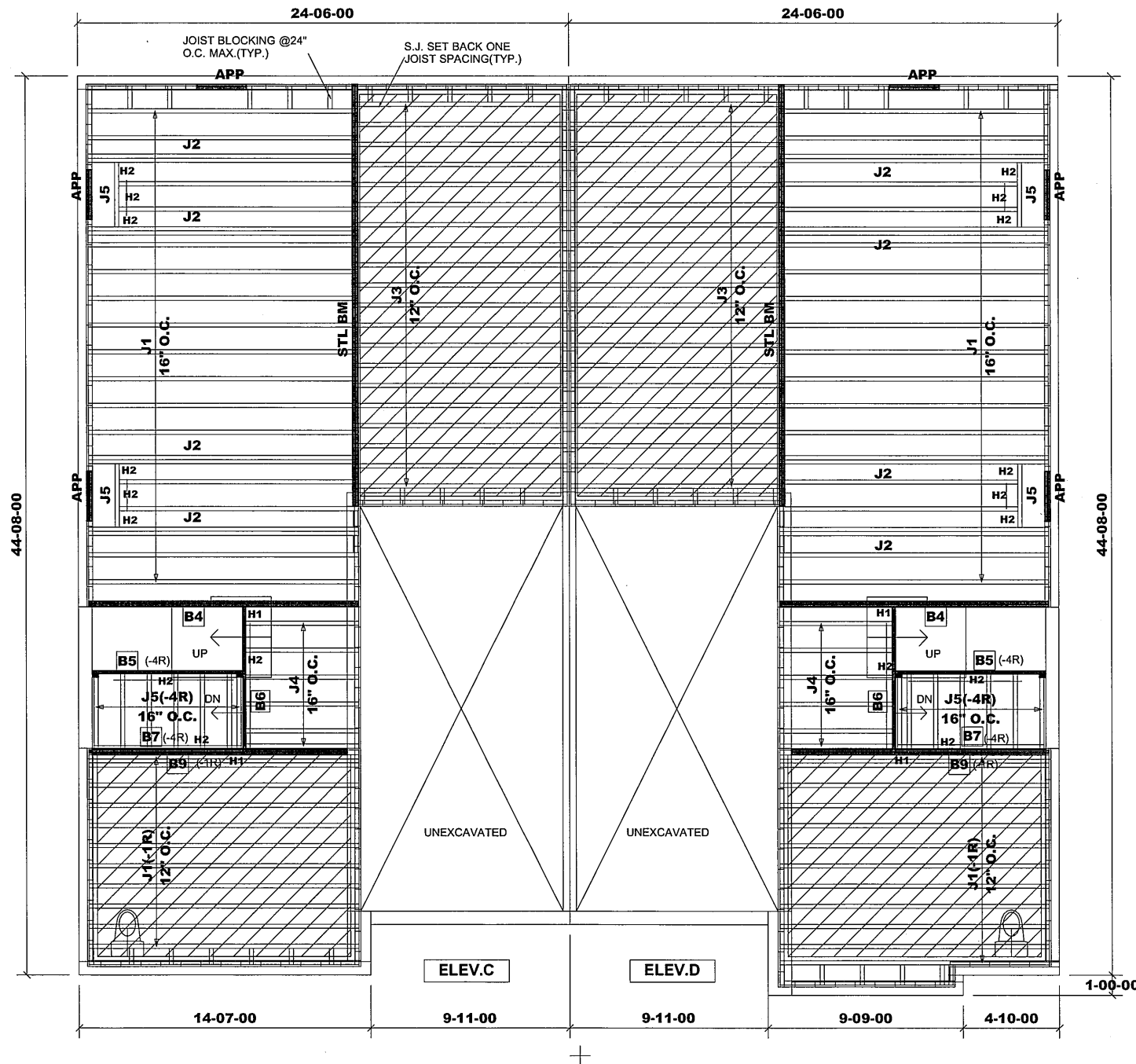
FIRM BCIN 113884
DESIGNER BCIN 25593

First Floor Framing

Do not scale - refer to architectural plans for dimensions



MODEL: SD-9(GERSHWIN)
W/SUNKEN FOYER(-1R)



Products				
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-20	1	55
J2	14-00-00	9 1/2" NI-20	2	16
J3	11-00-00	9 1/2" NI-20	1	40
J4	6-00-00	9 1/2" NI-20	1	12
J5	4-00-00	9 1/2" NI-20	1	18
B4	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	4
B7	13-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	4
B5	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
B6	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
B9	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
Ca1	302-00-00	1 1/8" x 9 1/2" Rim Board	1	1
Bk1	76-00-00	9 1/2" NI-20	1	1

Connector Summary			
PlotID	Qty	Manuf	Product
H1	4		HUS1.81/10
H2	52		LT259

RIMBOARD
1- 1/8" X 9 1/2" O.S.B.
SUBFLOOR - 5/8" GLUE & NAILED
APP - AS PER PLAN
BBO - BEAM BY OTHERS

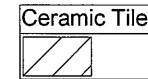
Ceramic tile application as per O.B.C. 9.30.6
Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.

FIRM BCIN 113884
DESIGNER BCIN 25593

First Floor Framing

Do not scale - refer to architectural plans for dimensions

MODEL: SD-9(GERSHWIN)
W/SUNKEN FOYER(-1R)



JT/PL: 39002/104573

LI: 314129

Builder: Gold Park

Project: Encore 2

Location: Brampton

Date: October 27, 2019

Designer: NL

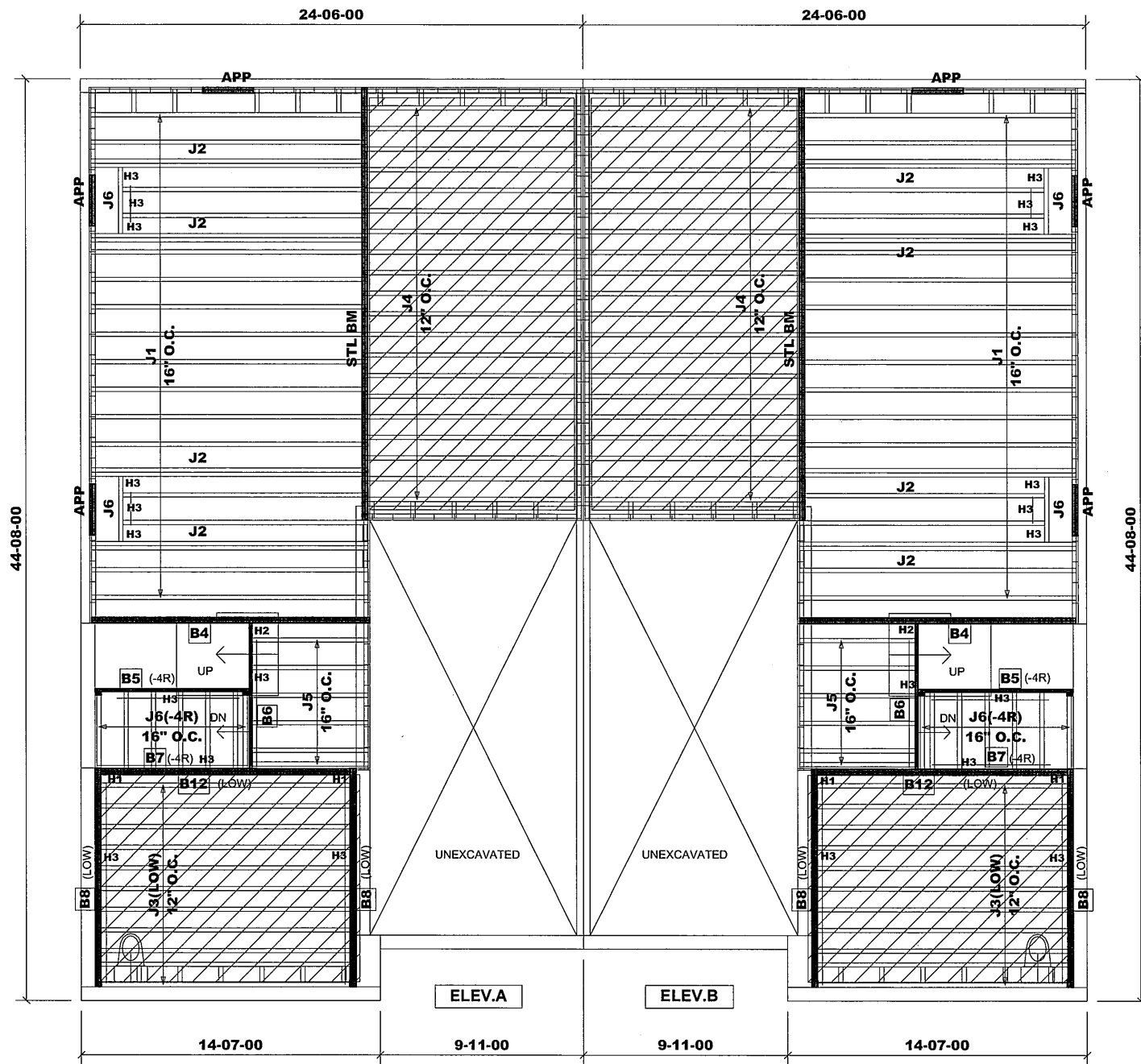
Sheet: 6 of 8

Alpa Roof Trusses Inc.

Maple, Ontario

Salesperson: Derek

Home Lumber



Products				
PlotID	Length	Product	Plies	Net Qty
J1	14-00-00	9 1/2" NI-20	1	32
J2	14-00-00	9 1/2" NI-20	2	16
J3	13-00-00	9 1/2" NI-20	1	22
J4	11-00-00	9 1/2" NI-20	1	40
J5	6-00-00	9 1/2" NI-20	1	12
J6	4-00-00	9 1/2" NI-20	1	18
B4	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	4
B12	13-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	4
B7	13-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	4
B8	11-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	8
B5	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
B6	8-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	2
Ca1	214-00-00	1 1/8" x 9 1/2" Rim Board	1	1
Bk1	72-00-00	9 1/2" NI-20	1	1

FIRM BCIN 113884
DESIGNER BCIN 25593

Connector Summary			
PlotID	Qty	Manuf	Product
H1	4		HGUS410
H2	2		HUS1.81/10
H3	96		LT259

RIMBOARD

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

SUBFLOOR - 5/8" GLUE & NAILED

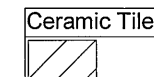
APP - AS PER PLAN
BBO - BEAM BY OTHERS

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

Blocking panels are required over all interior supports
Squash blocks are required under concentrated loads.

First Floor Framing

Do not scale - refer to architectural plans for dimensions



**MODEL: SD-9(GERSHWIN)
W/SUNKEN FOYER(LOW)**

JT/PL: 39002/104573

Builder: Gold Park

Location: Brampton

Designer: NL

Alpa Roof Trusses Inc.

Salesperson: Derek

LI: 314129

Project: Encore 2

Date: October 27, 2019

Sheet: 7 of 8

Maple, Ontario

Home Lumber



Boise Cascade

**Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP****PASSED****2nd Floor - Supply/BOM\Flush Beams\B1(i27391)**

BC CALC® Member Report

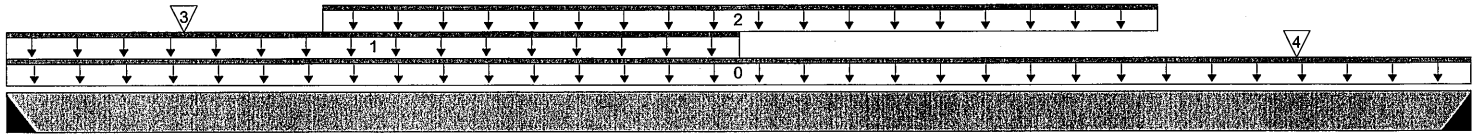
Dry | 1 span | No cant.

October 27, 2019 10:03:27

Build 7118

Job name: 39002(SD-9)
 Address: Encore 2
 City, Province, Postal Code: Brampton, ON
 Customer: Gold Park
 Code reports: CCMC 12472-R

File name: 314129.mmdl
 Description: 2nd Floor - Supply/BOM\Flush Beams\B1(i27391)
 Specifier:
 Designer: NL
 Company: Alpa Roof Trusses



B1

07-00-00

B2

Total Horizontal Product Length = 07-00-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	829 / 0	379 / 0		
B2, 2"	540 / 0	271 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	07-00-00	Top		5			00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-00-00	03-06-00	Top	160	60			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	01-06-00	05-06-00	Top	128	64			n/a
3	J3(i27410)	Conc. Pt. (lbs)	L	00-10-00	00-10-00	Top	148	74			n/a
4	J3(i27399)	Conc. Pt. (lbs)	L	06-02-00	06-02-00	Top	148	74			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	2,552 ft-lbs	11,610 ft-lbs	22.0 %	1	03-03-00
End Shear	1,359 lbs	5,785 lbs	23.5 %	1	00-11-08
Total Load Deflection	L/999 (0.059")	n/a	n/a	4	03-05-00
Live Load Deflection	L/999 (0.04")	n/a	n/a	5	03-05-00
Max Defl.	0.059"	n/a	n/a	4	03-05-00
Span / Depth	8.6				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 1-3/4"	1,717 lbs	n/a	40.2 %	Hanger
B2	Hanger 2" x 1-3/4"	1,149 lbs	n/a	26.9 %	Hanger

Cautions**Notes**

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume member is fully braced.
 Hanger Manufacturer: Unassigned
 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 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9

**Disclosure**

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA).
 Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods.
 Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJST™, ALLJOIST®, BC RIM BOARD™, BCi®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

SE004728



Boise Cascade

**Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP****PASSED****2nd Floor - Supply/BOM\Flush Beams\B2(i27392)**

BC CALC® Member Report

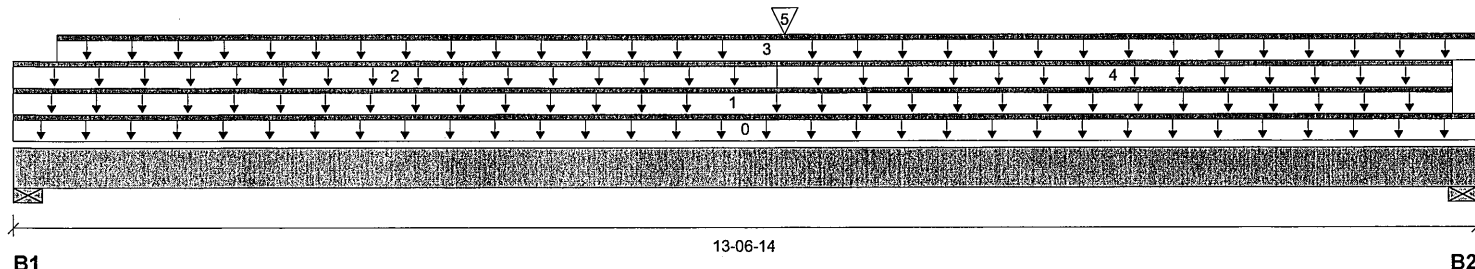
Dry | 1 span | No cant.

October 27, 2019 10:03:27

Build 7118

Job name: 39002(SD-9)
 Address: Encore 2
 City, Province, Postal Code: Brampton, ON
 Customer: Gold Park
 Code reports: CCMC 12472-R

File name: 314129.mmdl
 Description: 2nd Floor - Supply/BOM\Flush Beams\B2(i27392)
 Specifier:
 Designer: NL
 Company: Alpa Roof Trusses



Total Horizontal Product Length = 13-06-14

Reaction Summary (Down / Uplift) (lbs)

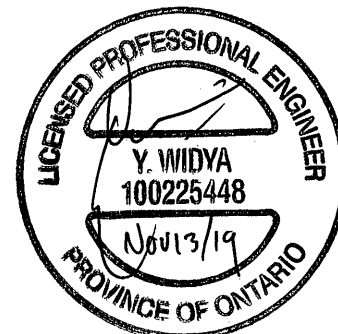
Bearing	Live	Dead	Snow	Wind
B1, 4-3/8"	601 / 0	729 / 0		
B2, 5-1/2"	696 / 0	805 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	13-06-14	Top		10			00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	13-04-02	Top	23	12			n/a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-00-14	Top	6	3			n/a
3	User Load	Unf. Lin. (lb/ft)	L	00-04-14	13-06-14	Top		60			n/a
4	FC1 Floor Material	Unf. Lin. (lb/ft)	L	07-00-14	13-04-02	Top	20	10			n/a
5	B1(i27391)	Conc. Pt. (lbs)	L	07-01-12	07-01-12	Top	824	377			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	8,829 ft-lbs	23,220 ft-lbs	38.0 %	1	07-01-12
End Shear	1,848 lbs	11,571 lbs	16.0 %	1	12-03-14
Total Load Deflection	L/461 (0.335")	n/a	52.0 %	4	06-10-10
Live Load Deflection	L/911 (0.17")	n/a	39.5 %	5	06-10-10
Max Defl.	0.335"	n/a	n/a	4	06-10-10
Span / Depth	16.3				

**Bearing Supports**

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 4-3/8" x 3-1/2"	1,813 lbs	19.2 %	9.7 %	Spruce-Pine-Fir
B2	Wall/Plate 5-1/2" x 3-1/2"	2,050 lbs	17.3 %	8.7 %	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 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 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9
 Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

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

BC CALC® Member Report

Build 7118

Job name: 39002(SD-9)

File name: 314129.mmdl

Address: Encore 2

Description: 1st Floor - Supply/BOM/Flush Beams\B3(i29392)

City, Province, Postal Code: Brampton, ON

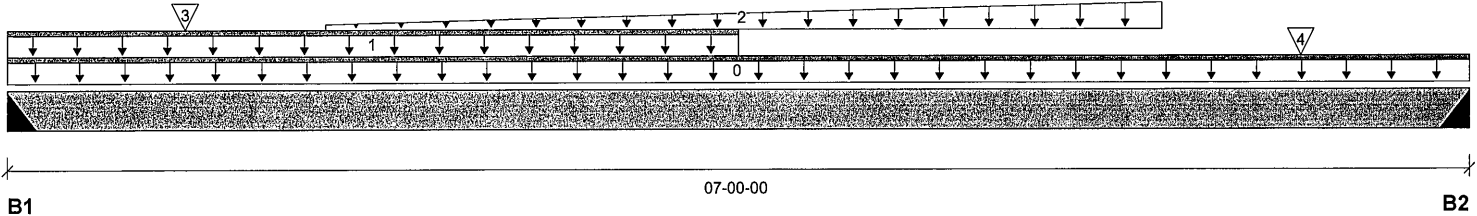
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses


Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	737 / 0	339 / 0		
B2, 2"	860 / 0	385 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	07-00-00	Top		5			00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-00-00	03-06-00	Top	80	30			n/a
2	Smoothed Load	Trapezoidal (lb/ft)	L	01-06-04	05-06-04	Top	71	41			n/a
3	J4(i29365)	Conc. Pt. (lbs)	L	00-10-04	00-10-04	Top	136	68			n/a
4	J4(i29378)	Conc. Pt. (lbs)	L	06-02-04	06-02-04	Top	343	145			n/a

Controls Summary

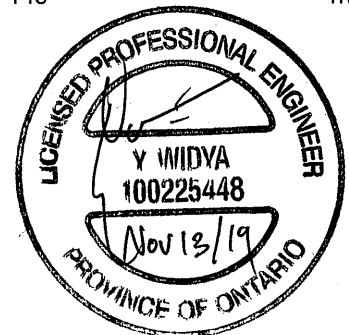
	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	3,001 ft-lbs	11,610 ft-lbs	25.9 %	1	03-06-04
End Shear	1,637 lbs	5,785 lbs	28.3 %	1	06-00-08
Total Load Deflection	L/999 (0.068")	n/a	n/a	4	03-06-04
Live Load Deflection	L/999 (0.047")	n/a	n/a	5	03-06-04
Max Defl.	0.068"	n/a	n/a	4	03-06-04
Span / Depth	8.6				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 1-3/4"	1,529 lbs	n/a	35.8 %	Hanger
B2	Hanger 2" x 1-3/4"	1,771 lbs	n/a	41.5 %	Hanger

Cautions
Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Calculations assume member is fully braced.
 Hanger Manufacturer: Unassigned
 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 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9


Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJST™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

1st Floor - Supply/BOM\Flush Beams\B4(i29373)

Dry | 1 span | No cant.

October 27, 2019 10:04:23

BC CALC® Member Report

Build 7118

Job name: 39002(SD-9)

File name: 314129.mmdl

Address: Encore 2

Description: 1st Floor - Supply/BOM\Flush Beams\B4(i29373)

City, Province, Postal Code: Brampton, ON

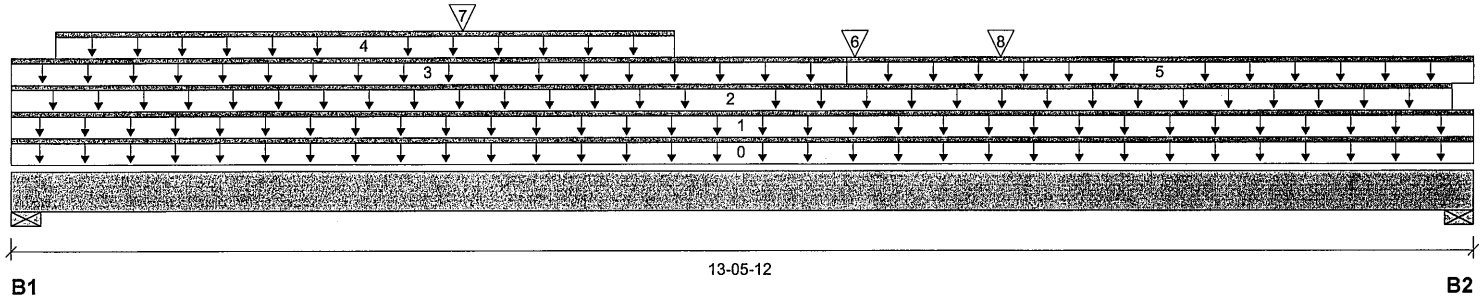
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



Total Horizontal Product Length = 13-05-12

Reaction Summary (Down / Uplift) (lbs)

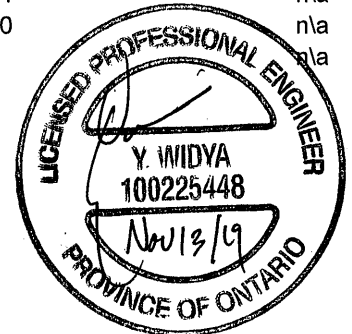
Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	1,061 / 0	793 / 0		
B2, 2-3/8"	1,078 / 0	634 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	13-05-12	Top		10			00-00-00
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	13-05-12	Top	22	11			n/a
2	User Load	Unf. Lin. (lb/ft)	L	00-00-00	13-03-06	Top	20	10			n/a
3	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-08-06	Top	6	3			n/a
4	User Load	Unf. Lin. (lb/ft)	L	00-04-14	06-01-06	Top		60			n/a
5	FC3 Floor Material	Unf. Lin. (lb/ft)	L	07-08-06	13-05-12	Top	19	10			n/a
6	B3(i29392)	Conc. Pt. (lbs)	L	07-09-04	07-09-04	Top	858	384			n/a
7	User Load	Conc. Pt. (lbs)	L	04-01-14	04-01-14	Top	480	180			n/a
8	FC3 Floor Material	Conc. Pt. (lbs)	L	09-01-06	09-01-06	Top	83	31			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	10,942 ft-lbs	23,220 ft-lbs	47.1 %	1	07-09-04
End Shear	2,471 lbs	11,571 lbs	21.4 %	1	00-11-14
Total Load Deflection	L/345 (0.459")	n/a	69.5 %	4	06-08-08
Live Load Deflection	L/556 (0.285")	n/a	64.8 %	5	06-08-08
Max Defl.	0.459"	n/a	n/a	4	06-08-08
Span / Depth	16.7				


Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 3-1/2"	2,583 lbs	50.5 %	25.5 %	Spruce-Pine-Fir
B2	Wall/Plate 2-3/8" x 3-1/2"	2,410 lbs	47.1 %	23.8 %	Spruce-Pine-Fir

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

BC CALC® Member Report

Build 7118

Job name: 39002(SD-9)

File name: 314129.mmdl

Address: Encore 2

Description: 1st Floor - Supply/BOM\Flush Beams\B5(i28739)

City, Province, Postal Code: Brampton, ON

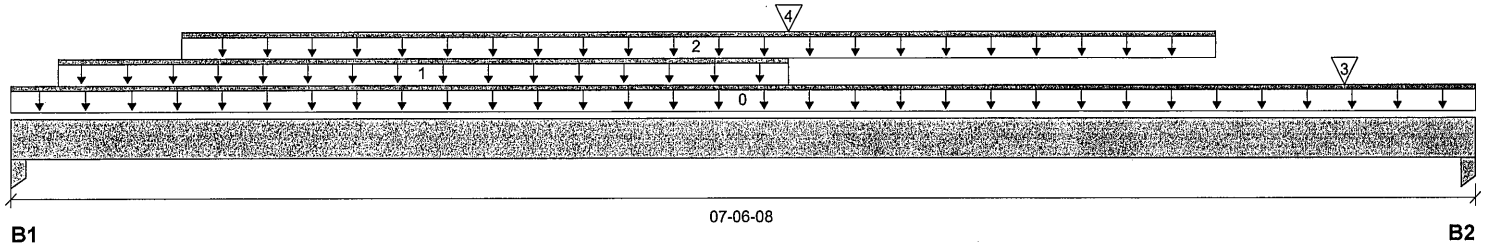
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



Total Horizontal Product Length = 07-06-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 4"	837 / 0	529 / 0		
B2, 4"	784 / 0	408 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	07-06-08	Top		5			00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-02-14	04-00-00	Top	80	90			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	00-10-06	06-02-06	Top	83	42			n/a
3	J5(i28787)	Conc. Pt. (lbs)	L	06-10-06	06-10-06	Top	76	38			n/a
4	User Load	Conc. Pt. (lbs)	L	04-00-00	04-00-00	Top	800	300			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	4,604 ft-lbs	11,610 ft-lbs	39.7 %	1	04-00-00
End Shear	1,704 lbs	5,785 lbs	29.5 %	1	01-01-08
Total Load Deflection	L/999 (0.102")	n/a	n/a	4	03-09-07
Live Load Deflection	L/999 (0.066")	n/a	n/a	5	03-09-07
Max Defl.	0.102"	n/a	n/a	4	03-09-07
Span / Depth	8.8				


Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Column 4" x 1-3/4"	1,917 lbs	26.2 %	22.4 %	Unspecified
B2	Column 4" x 1-3/4"	1,686 lbs	23.1 %	19.7 %	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live 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 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJST™, ALLJOIST®, BC RIM BOARD™, BCi®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

SE004732

BC CALC® Member Report

Build 7118

Job name: 39002(SD-9)

File name: 314129-A+B(-1R).mmdl

Address: Encore 2

Description: 1st Floor - Supply/BOM\Flush Beams\B6(i29423)

City, Province, Postal Code: Brampton, ON

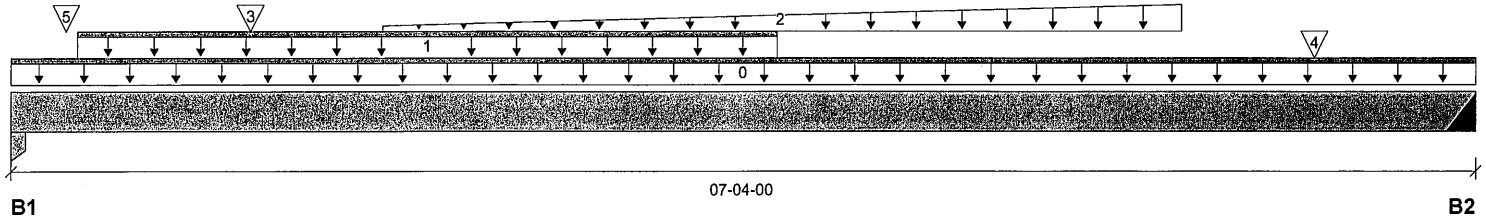
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



Total Horizontal Product Length = 07-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 4"	837 / 0	402 / 0		
B2, 2"	877 / 0	393 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	07-04-00	Top		5			00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-04-00	03-10-00	Top	80	30			n/a
2	Smoothed Load	Trapezoidal (lb/ft)	L	01-10-04	05-10-04	Top	71	41			n/a
3	J5(i29585)	Conc. Pt. (lbs)	L	01-02-04	01-02-04	Top	121	61			n/a
4	J5(i29485)	Conc. Pt. (lbs)	L	06-06-04	06-06-04	Top	343	145			n/a
5	-	Conc. Pt. (lbs)	L	00-03-05	00-03-05	Top	116	76			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	3,119 ft-lbs	11,610 ft-lbs	26.9 %	1	03-10-04
End Shear	1,673 lbs	5,785 lbs	28.9 %	1	06-04-08
Total Load Deflection	L/999 (0.075")	n/a	n/a	4	03-10-00
Live Load Deflection	L/999 (0.051")	n/a	n/a	5	03-10-00
Max Defl.	0.075"	n/a	n/a	4	03-10-00
Span / Depth	8.8				


Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Column 4" x 1-3/4"	1,758 lbs	24.1 %	20.6 %	Unspecified
B2	Hanger 2" x 1-3/4"	1,807 lbs	n/a	42.3 %	HUS1.81/10

Cautions

Header for the hanger HUS1.81/10 at B2 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF.

BC CALC® Member Report

Build 7118

Job name: 39002(SD-9)

File name: 314129-A+B(-1R).mmdl

Address: Encore 2

Description: 1st Floor - Supply/BOM\Flush Beams\B7(i29583)

City, Province, Postal Code: Brampton, ON

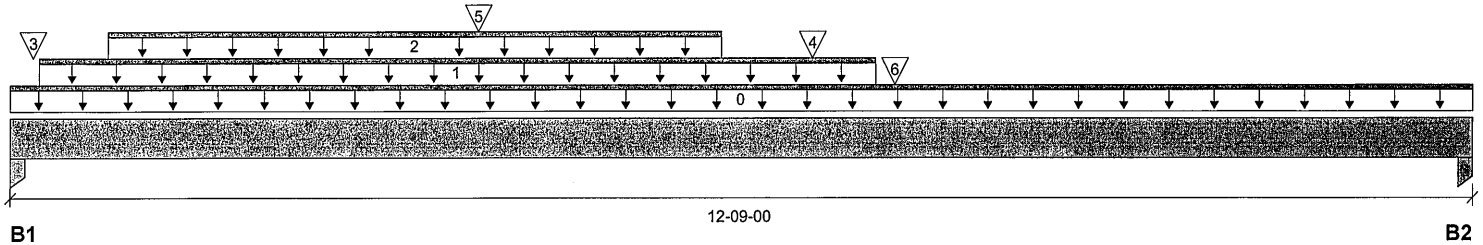
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



Total Horizontal Product Length = 12-09-00

Reaction Summary (Down / Uplift) (lbs)

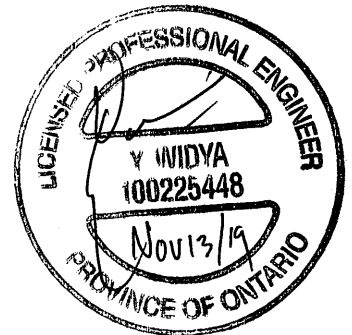
Bearing	Live	Dead	Snow	Wind
B1, 4"	1,037 / 0	867 / 0		
B2, 4"	843 / 0	604 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	12-09-00	Top		10			00-00-00
1	User Load	Unf. Lin. (lb/ft)	L	00-03-00	07-06-08	Top		60			n/a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	00-10-06	06-02-06	Top	86	43			n/a
3	J6(i29630)	Conc. Pt. (lbs)	L	00-02-06	00-02-06	Top	64	32			n/a
4	-	Conc. Pt. (lbs)	L	06-11-14	06-11-14	Top	106	53			n/a
5	User Load	Conc. Pt. (lbs)	L	04-01-00	04-01-00	Top	320	120			n/a
6	PBO9(i29635)	Conc. Pt. (lbs)	L	07-08-08	07-08-08	Top	914	460			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	9,484 ft-lbs	21,312 ft-lbs	44.5 %	1	07-06-08
End Shear	2,401 lbs	11,571 lbs	20.8 %	1	01-01-08
Total Load Deflection	L/422 (0.347")	n/a	56.9 %	4	06-04-06
Live Load Deflection	L/728 (0.201")	n/a	49.5 %	5	06-04-06
Max Defl.	0.347"	n/a	n/a	4	06-04-06
Span / Depth	15.4				


Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Column 4" x 3-1/2"	2,639 lbs	18.1 %	15.5 %	Unspecified
B2	Column 4" x 3-1/2"	2,020 lbs	13.8 %	11.8 %	Unspecified

Notes

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

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

Calculations assume unbraced length of Top: 05-02-08, Bottom: 05-02-08.

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 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

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

BC CALC® Member Report

Build 7118

Job name: 39002(SD-9)

File name: 314129-C+D(-2R).mmdl

Address: Encore 2

Description: 1st Floor - Supply/BOM\Flush Beams\B8(i30404)

City, Province, Postal Code: Brampton, ON

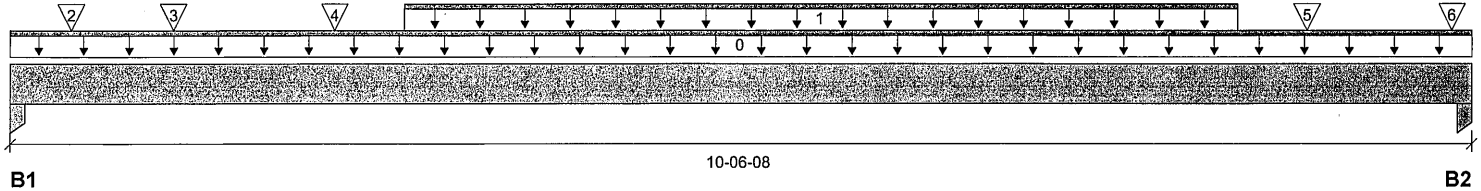
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses


Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 4"	1,367 / 0	736 / 0		
B2, 3-1/2"	1,640 / 0	924 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	10-06-08	Top		10			00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	02-10-02	08-10-02	Top	255	128			n/a
2	J3(i30423)	Conc. Pt. (lbs)	L	00-05-04	00-05-04	Top	196	98			n/a
3	J3(i30418)	Conc. Pt. (lbs)	L	01-02-02	01-02-02	Top	243	122			n/a
4	J3(i30419)	Conc. Pt. (lbs)	L	02-04-02	02-04-02	Top	276	138			n/a
5	J3(i30426)	Conc. Pt. (lbs)	L	09-04-02	09-04-02	Top	280	140			n/a
6	B12(i30428)	Conc. Pt. (lbs)	L	10-04-12	10-04-12	Top	459	281			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	6,997 ft-lbs	23,220 ft-lbs	30.1 %	1	05-04-02
End Shear	2,562 lbs	11,571 lbs	22.1 %	1	09-05-08
Total Load Deflection	L/675 (0.178")	n/a	35.5 %	4	05-04-02
Live Load Deflection	L/999 (0.116")	n/a	n/a	5	05-04-02
Max Defl.	0.178"	n/a	n/a	4	05-04-02
Span / Depth	12.7				


Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Column 4" x 3-1/2"	2,970 lbs	20.3 %	17.4 %	Unspecified
B2	Column 3-1/2" x 3-1/2"	3,615 lbs	28.3 %	24.2 %	Unspecified

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live 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 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9
 Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Nail one ply to another with
 3 1/2" spiral nails @ 10"
 o.c, staggered in 2 rows

BC CALC® Member Report

Build 7118

Job name: 39002(SD-9)

File name: 314129-C+D(-1R).mmdl

Address: Encore 2

Description: 1st Floor - Supply/BOM/Flush Beams\B9(i29968)

City, Province, Postal Code: Brampton, ON

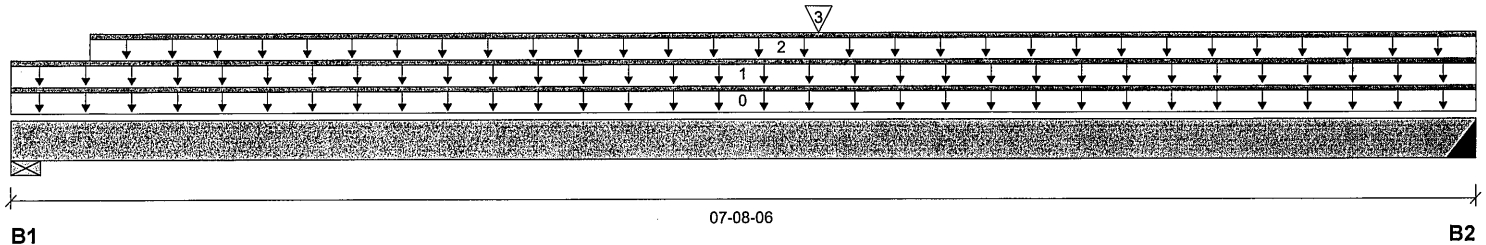
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



Total Horizontal Product Length = 07-08-06

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	207 / 0	311 / 0		
B2, 2"	241 / 0	348 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	07-08-06	Top		5			00-00-00
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-08-06	Top	16	9			n/a
2	User Load	Unf. Lin. (lb/ft)	L	00-04-14	07-08-06	Top		60			n/a
3	User Load	Conc. Pt. (lbs)	L	04-02-14	04-02-14	Top	320	120			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1,976 ft-lbs	11,610 ft-lbs	17.0 %	1	04-02-14
End Shear	685 lbs	5,785 lbs	11.8 %	1	06-08-14
Total Load Deflection	L/999 (0.052")	n/a	n/a	4	03-11-03
Live Load Deflection	L/999 (0.024")	n/a	n/a	5	03-11-03
Max Defl.	0.052"	n/a	n/a	4	03-11-03
Span / Depth	9.5				


Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate 1-7/8" x 1-3/4"	699 lbs	34.6 %	17.5 %	Spruce-Pine-Fir
B2	Hanger 2" x 1-3/4"	797 lbs	n/a	18.7 %	HUS1.81/10

Cautions

Header for the hanger HUS1.81/10 at B2 is a Single 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF.

Notes

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

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

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

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 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

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BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BC®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

SE009736

BC CALC® Member Report

Build 7118

Job name: 39002(SD-9)

File name: 314129-C+D(-2R).mmdl

Address: Encore 2

Description: 1st Floor - Supply/BOM\Flush Beams\B10(i30409)

City, Province, Postal Code: Brampton, ON

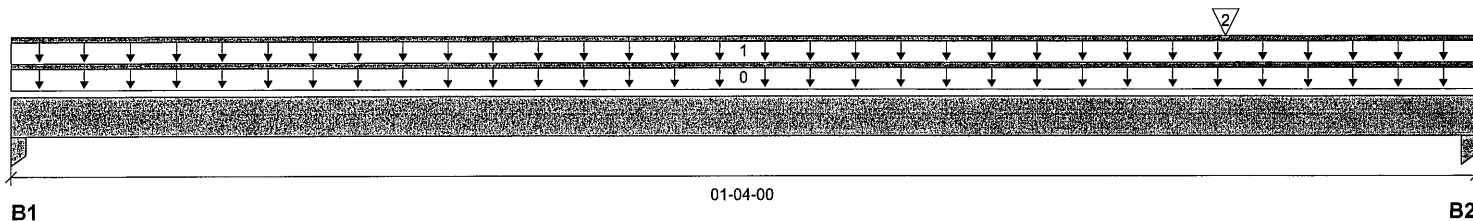
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



Total Horizontal Product Length = 01-04-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 4"	2 / 0	4 / 0		
B2, 4"	22 / 0	14 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-04-00	Top		5			00-00-00
1	FC7 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	01-04-00	Top	3	1			n/a
2	J7(i30413)	Conc. Pt. (lbs)	L	01-01-04	01-01-04	Top	20	10			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1 ft-lbs	7,546 ft-lbs	n/a	0	00-08-00
End Shear	3 lbs	3,761 lbs	n/a	0	00-04-00
Span / Depth	1.0				

Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Column 4" x 1-3/4"	6 lbs	0.1 %	0.1 %	Unspecified
B2	Column 4" x 1-3/4"	51 lbs	0.7 %	0.6 %	Unspecified

Notes

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 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of Boise Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtain Installation Guide or ask questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

SE004737

1st Floor - Supply/BOM\Flush Beams\B11(i30403)

Dry | 1 span | No cant.

October 27, 2019 14:37:38

BC CALC® Member Report

Build 7118

Job name: 39002(SD-9)

File name: 314129-C+D(-2R).mmdl

Address: Encore 2

Description: 1st Floor - Supply/BOM\Flush Beams\B11(i30403)

City, Province, Postal Code: Brampton, ON

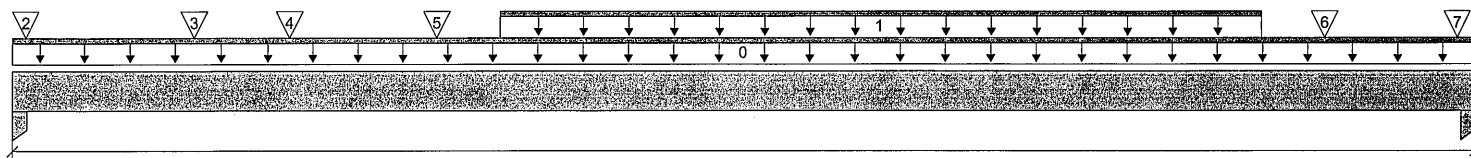
Specifier:

Customer: Gold Park

Designer: NL

Code reports: CCMC 12472-R

Company: Alpa Roof Trusses



B1

11-06-08

B2

Total Horizontal Product Length = 11-06-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 4"	1,390 / 0	752 / 0		
B2, 3-1/2"	1,943 / 0	1,076 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	11-06-08	Top		10			00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	03-10-02	09-10-02	Top	255	128			n/a
2	J5(i30416)	Conc. Pt. (lbs)	L	00-01-04	00-01-04	Top	114	57			n/a
3	J3(i30423)	Conc. Pt. (lbs)	L	01-05-04	01-05-04	Top	259	129			n/a
4	J3(i30418)	Conc. Pt. (lbs)	L	02-02-02	02-02-02	Top	243	122			n/a
5	J3(i30419)	Conc. Pt. (lbs)	L	03-04-02	03-04-02	Top	276	138			n/a
6	J3(i30426)	Conc. Pt. (lbs)	L	10-04-02	10-04-02	Top	280	140			n/a
7	B12(i30428)	Conc. Pt. (lbs)	L	11-04-12	11-04-12	Top	631	363			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	8,441 ft-lbs	23,220 ft-lbs	36.4 %	1	05-04-02
End Shear	2,847 lbs	11,571 lbs	24.6 %	1	10-05-08
Total Load Deflection	L/505 (0.263")	n/a	47.6 %	4	05-10-02
Live Load Deflection	L/777 (0.171")	n/a	46.3 %	5	05-10-02
Max Defl.	0.263"	n/a	n/a	4	05-10-02
Span / Depth	13.9				


Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Column 4" x 3-1/2"	3,024 lbs	20.7 %	17.7 %	Unspecified
B2	Column 3-1/2" x 3-1/2"	4,260 lbs	33.3 %	28.5 %	Unspecified

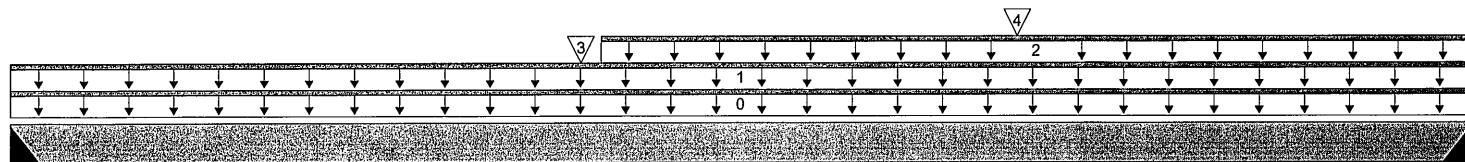
Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live 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 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9
 Connection design assumes point load is top-loaded. For connection design of side-loaded point loads, please consult a technical representative or professional of Record.

Nail one ply to another with
 3 1/2" spiral nails @ 10"
 o.c, staggered in 2 rows

Job name: 39002(SD-9)
 Address: Encore 2
 City, Province, Postal Code: Brampton, ON
 Customer: Gold Park
 Code reports: CCMC 12472-R

File name: 314129-C+D(-2R).mmdl
 Description: 1st Floor - Supply/BOM\Flush Beams\B12(i30552)
 Specifier:
 Designer: NL
 Company: Alpa Roof Trusses



B1

12-02-00

B2

Total Horizontal Product Length = 12-02-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	724 / 0	525 / 0		
B2, 2"	672 / 0	667 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	12-02-00	Top	1.00	0.65	1.00	1.15	00-00-00
1	FC7 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	12-02-00	Top	24	12			n/a
2	User Load	Unf. Lin. (lb/ft)	L	04-11-00	12-02-00	Top		60			n/a
3	PBO9(i29791)	Conc. Pt. (lbs)	L	04-09-00	04-09-00	Top	784	374			n/a
4	User Load	Conc. Pt. (lbs)	L	08-04-08	08-04-08	Top	320	120			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	7,385 ft-lbs	23,220 ft-lbs	31.8 %	1	04-09-00
End Shear	1,709 lbs	11,571 lbs	14.8 %	1	11-02-08
Total Load Deflection	L/564 (0.254")	n/a	42.6 %	4	06-00-00
Live Load Deflection	L/998 (0.144")	n/a	36.1 %	5	06-00-00
Max Defl.	0.254"	n/a	n/a	4	06-00-00
Span / Depth	15.1				


Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 3-1/2"	1,742 lbs	n/a	20.4 %	HGUS410
B2	Hanger 2" x 3-1/2"	1,841 lbs	n/a	21.6 %	HGUS410

Cautions

Header for the hanger HGUS410 at B1 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF.

Header for the hanger HGUS410 at B2 is a Double 1-3/4" x 9-1/2" VERSA-LAM® 1.7 2400 DF.

SE004739

Maximum Floor Spans – M2.1, L/360

Design Criteria

Spans:	Simple span
Loads:	Live load = 40 psf and dead load = 20 psf
Deflection limits:	L/360 under live load and L/240 under total load
Sheathing:	5/8 in. nailed-glued oriented strand board (OSB) sheathing



Maximum Floor Spans

Joist depth	Joist series	Bare On centre spacing				1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	15'-1"	14'-3"	13'-10"	-	15'-7"	14'-9"	14'-3"	-
	NI-40x	16'-2"	15'-3"	14'-8"	-	16'-7"	15'-8"	15'-1"	-
	NI-60	16'-4"	15'-4"	14'-10"	-	16'-9"	15'-9"	15'-3"	-
	NI-80	17'-3"	16'-3"	15'-8"	-	17'-8"	16'-7"	16'-0"	-
11-7/8"	NI-20	17'-0"	16'-0"	15'-6"	-	17'-6"	16'-7"	16'-0"	-
	NI-40x	18'-2"	17'-1"	16'-6"	-	18'-9"	17'-6"	16'-11"	-
	NI-60	18'-5"	17'-3"	16'-8"	-	19'-0"	17'-8"	17'-1"	-
	NI-80	19'-9"	18'-3"	17'-7"	-	20'-4"	18'-10"	18'-0"	-
	NI-90	20'-2"	18'-8"	17'-10"	-	20'-9"	19'-2"	18'-4"	-
14"	NI-40x	20'-1"	18'-8"	17'-10"	-	20'-10"	19'-4"	18'-6"	-
	NI-60	20'-6"	18'-11"	18'-2"	-	21'-2"	19'-8"	18'-9"	-
	NI-80	21'-11"	20'-3"	19'-4"	-	22'-7"	20'-11"	20'-0"	-
	NI-90	22'-5"	20'-8"	19'-9"	-	23'-0"	21'-4"	20'-4"	-
16"	NI-60	22'-4"	20'-8"	19'-9"	-	23'-1"	21'-5"	20'-6"	-
	NI-80	23'-11"	22'-1"	21'-1"	-	24'-8"	22'-10"	21'-9"	-
	NI-90	24'-5"	22'-6"	21'-6"	-	25'-1"	23'-2"	22'-2"	-

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-11"	15'-5"	14'-6"	-	17'-1"	15'-5"	14'-6"	-
	NI-40x	17'-11"	17'-0"	16'-5"	-	18'-5"	17'-4"	16'-7"	-
	NI-60	18'-2"	17'-1"	16'-6"	-	18'-8"	17'-6"	16'-10"	-
	NI-80	19'-5"	18'-0"	17'-5"	-	19'-10"	18'-5"	17'-8"	-
11-7/8"	NI-20	19'-7"	18'-2"	17'-6"	-	20'-3"	18'-8"	17'-6"	-
	NI-40x	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-0"	-
	NI-60	21'-4"	19'-9"	18'-11"	-	21'-11"	20'-5"	19'-6"	-
	NI-80	22'-9"	21'-1"	20'-2"	-	23'-3"	21'-8"	20'-8"	-
	NI-90	23'-3"	21'-6"	20'-6"	-	23'-9"	22'-0"	21'-0"	-
14"	NI-40x	23'-8"	21'-11"	20'-11"	-	24'-4"	22'-8"	20'-11"	-
	NI-60	24'-0"	22'-3"	21'-3"	-	24'-8"	22'-11"	21'-11"	-
	NI-80	25'-7"	23'-9"	22'-7"	-	26'-2"	24'-4"	23'-3"	-
	NI-90	26'-1"	24'-2"	23'-0"	-	26'-8"	24'-9"	23'-7"	-
16"	NI-60	26'-5"	24'-6"	23'-5"	-	27'-2"	25'-3"	24'-2"	-
	NI-80	28'-2"	26'-1"	24'-10"	-	28'-10"	26'-9"	25'-6"	-
	NI-90	28'-8"	26'-6"	25'-3"	-	29'-3"	27'-2"	25'-11"	-

Notes:

1. The tabulated clear spans are based on CSA O86-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

The construction details for residential designs are prone to changes.

Details released after April 2014 supersedes N-C301

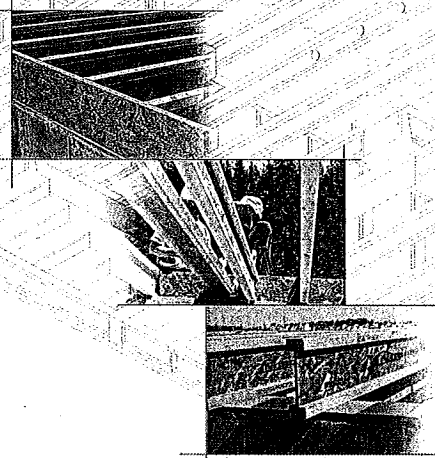
Installation must comply with latest documentation on I-Joist and other Nordic products from the <http://nordic.ca/>

This document does not constitute a record of the structural integrity of the building nor suitability of the design assumptions made. Nordic Structures is responsible only for the structural adequacy of its component based on the design criteria and loadings shown on the calculation sheets.

(Nordic Request 1810-095)

NORDIC ENGINEERED WOOD

INSTALLATION GUIDE FOR RESIDENTIAL FLOORS



Distributed by:



SAFETY AND CONSTRUCTION PRECAUTIONS



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



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

WARNING

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

Avoid Accidents by Following These Important Guidelines:

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 continuously 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 centre, and must be secured with a minimum of two 2-1/2" nails fastened to the top surface of each I-joist. Nail the bracing to a lateral restraint at the end of each bay. Lap ends of adjoining bracing over at least two I-joists.
 - Or, sheathing (temporary or permanent) can be nailed to the top flanges of the first 4 feet of I-joists at the end of the bay.
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. Bundle 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 flanges.
5. Protect I-joists from weather, and use spacers to separate bundles.
6. Bundled units should be kept intact until time of installation.
 - 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.

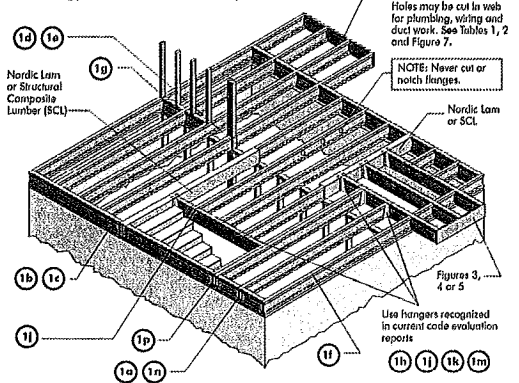


INSTALLING NORDIC I-JOISTS

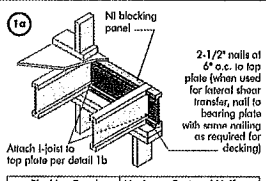
1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not, contact your supplier.
2. Except for cutting to length, I-joist flanges should never be cut, drilled, or notched.
3. Install I-joists so that top and bottom flanges are within 1/2 inch of true 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 unbraced 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 erection bracing and blocking panels have been omitted for clarity.

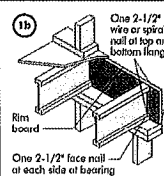


All nails shown in the above details are assumed to be common wire nails unless otherwise noted. 3" (0.122" dia.) common spiral nails may be substituted for 2-1/2" (0.126" dia.) common wire nails. Framing lumber assumed to be Spruce-Pine-Fir No. 2 or better. Individual components not shown to scale for clarity.



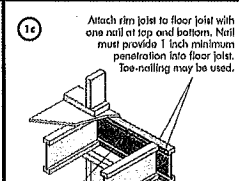
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
Ni Joists	3,300

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



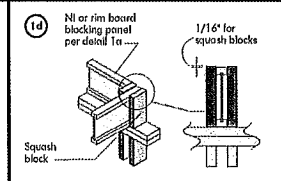
Blocking Panel or Rim Joist	Maximum Factored Uniform Vertical Load* (plf)
1-1/8" Rim Board Plus	8,090

*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.



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.



Pair of Squash Blocks	Maximum Factored Uniform Vertical Load* (plf)
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.

