

Products								
PlotID	Length	Product	Plies	Net Qty	Fab Type			
J1	14-00-00	9 1/2" NI-40x	1	8	MFD			
J2	18-00-00	11 7/8" NI-40x	1	16	MFD			
J3	16-00-00	11 7/8" NI-40x	1	9	MFD			
J4	14-00-00	11 7/8" NI-40x	1	11	MFD			
J4DJ	14-00-00	11 7/8" NI-40x	· 2	4	MFD			
J5	12-00-00	11 7/8" NI-40x	1	4	MFD			
J6	10-00-00	11 7/8" NI-40x	1	5	MFD			
J7	8-00-00	11 7/8" NI-40x	1	7	MFD			
J8	4-00-00	11 7/8" NI-40x	1	1	MFD			
B7	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD			
B6	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD			
В3	8-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD			
B5	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD			
B1	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD			
B2	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD			
B4	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD			
B21	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD			
B22	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD			

Connector Summary							
Qty	Manuf	Product					
11	H1	IUS2.56/11.88					
2	H1	IUS2.56/11.88					
2	H1	IUS2.56/11.88					
2	H2	HUS1.81/10					

CITY OF HAMILTON **Building Division**

THESE STAMPED DRAWINGS SHALL BE AVAILABLE ON SITE

THE OWNER AND/OR CONTRACTOR SHALL COMPLY WITH THE ONTARIO BUILDING CODE AND ALL OTHER APPLICABLE LAW

frawlags and/or specifications have been reviewed by FEB 2 2 2021 or AFFICIAL



FROM PLAN DATED: JAN 2020

BUILDER: GREENPARK HOMES

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 4

ELEVATION: 2

LOT: 238

CITY: WATERDOWN

SALESMAN: MARIO DICIANO

DESIGNER: AJ **REVISION:**

NOTES:

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND

INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH **BLOCKS REQ'D UNDER CONCENTRATED** LOADS, SEE FIGURE 1, CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7, TABLES 1 & 2, CERAMIC TILE APPLICATION AS PER O.B.C 9.30.6.

LOADING:

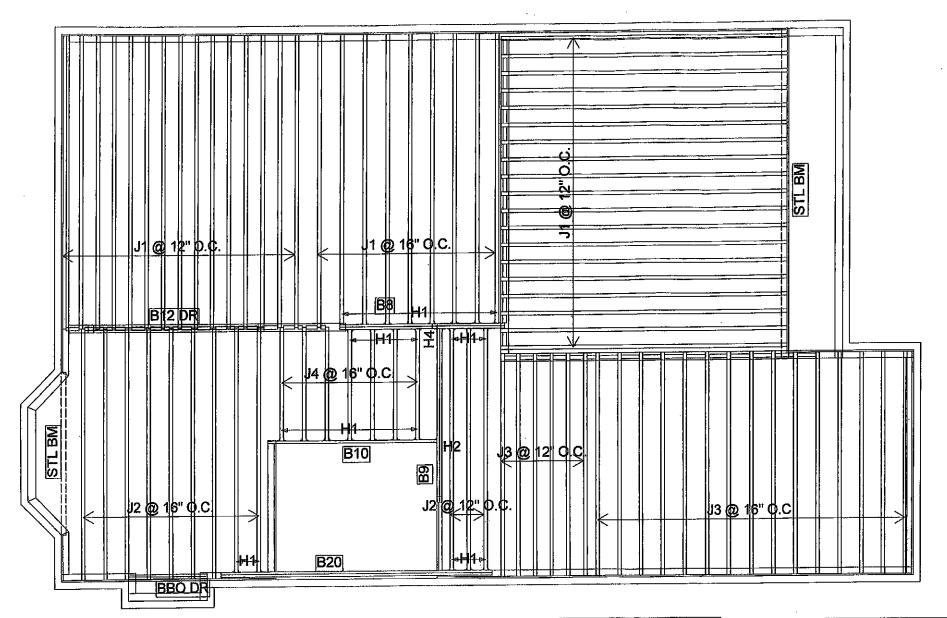
DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 20.0 lb/ft²

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 2020-03-24

1st FLOOR

DECK CONDITION



		Products			
PlotID	Length	Product	Plies	Net Qty	Fab Type
J1	18-00-00	11 7/8" NI-40x	1	43	MFD
J2	16-00-00	11 7/8" NI-40x	1	12	MFD
J3	14-00-00	11 7/8" NI-40x	1	21	MFD
J4	8-00-00	11 7/8" NI-40x	1	7	MFD
B12 DR	12-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	3	3	MFD
B20	16-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
B9	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
B10	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
B8	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD

	Connector Summary									
Qty	Manuf	Product								
7	H1	IUS2.56/11.88								
15	H1	IUS2.56/11.88								
5		IUS2.56/11.88								
1	H2	HUS1.81/10								
1	H4	HGUS410								



FROM PLAN DATED: JAN 2020

BUILDER: GREENPARK HOMES

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 4

ELEVATION: 2

LOT: 238

CITY: WATERDOWN

SALESMAN: MARIO DICIANO

DESIGNER: AJ REVISION:

NOTES:

REFER TO THE NORDIC INSTALLATION **GUIDE** FOR PROPER STORAGE AND INSTALLATION, SQUASH BLOCKS OF 2x4, 2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS. SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURE 7 TABLES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD **CUT OPENINGS** SEE FIGURE 7 TABLES 1 & 2 OF THE INSTALLATION GUIDE. CERAMIC TILE APPLICATION AS PER O.B.C. 9.30.6

LOADING:

DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 20.0 lb/ft²

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 2020-03-24

2nd FLOOR

NORDIC STRUCTURES

COMPANY

Feb. 19, 2020 10:40

PROJECT

J1 2ND FLOOR ABOVE GARAGE.wwb

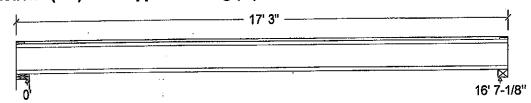
Design Check Calculation Sheet

Nordic Sizer - Canada 7.2

Loads:

Load	Туре	Distribution	Pat- tern	Location Start	[ft] End	Magnitude Start En	Unit
Load1 Load2	Dead Live	Full Area Full Area				20.00 40.00	psf psf

Maximum Reactions (lbs) and Support Bearing (in):



Unfactored: Dead	166		166 332
Live	332		334
Factored:			705
Total	705		705
Bearing:			
Capacity			2336
Joist	2336		2336
Support	9724		-
Des ratio			0.30
Joist	0.30		0.30
Support	0.07		#2
Load case	#2		4-1/8
Length	5-1/2		
Min req'd	1-3/4	· ·	1-3/4
Stiffener	No		No
KD	1.00	1	1,00
KB support	-		-
fcp sup	769		-
Kzcp sup	_		

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

Nordic Joist 11-7/8" NI-40x Floor joist @ 12" o.c.

Supports: 1 - Lumber Wall, No.1/No.2; 2 - Steel Beam, W;

Total length: 17' 3"; Clear span: 16' 5-3/8"; 5/8" nailed and glued OSB sheathing

This section PASSES the design code check.

Limit States Design using CSA-O86-09 and Vibration Criterion:

Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	Vf = · 705	Vr = 2336	lbs	Vf/Vr = 0.30
Moment(+)	Mf = 2926	Mr = 6255 $0.55 = L/360$	lbs-ft	OFESSION = 0.47
Perm. Defl'n	0.09 = < L/999 0.18 = < L/999	0.55 = L/360 0.41 = L/480	in o	1 0 43
Live Defl'n Total Defl'n	0.16 = 1/333 0.27 = L/741	0.83 = L/240	in &	32610.32
Bare Defl'n	0.21 = L/970	0.55 = L/360	in /	KATSOULAKOS \$ 0.37
Vibration	Lmax = 16'-7.1	Lv = 18'-3.6		"""
Defl'n	= 0.028	= 0.038	in "	0.74

MB NO. TAWS476 -STRUCTURAL COMFONENT ONLY

WoodWorks® Sizer

for NORDIC STRUCTURES

J1 2ND FLOOR ABOVE GARAGE.wwb

Nordic Sizer - Canada 7.2

Page 2

											_
Additiona	l Data:										
FACTORS:	f/E			KZ		KT	KS	KN	LC#	•	
۷r	2336	1.00	1.00	-	-	-		-	#2		
	6255			-	1.000		-	_	#2		
EI	371.1 m	illion	_	_	_	-	-	-	#2		
CRITICAL LO	OAD COMB	INATIONS	3 :								
Shear	: LC #2	= 1.25	5D + 1.5I	L							
Moment (+)): LC #2	= 1.25	5D + 1.5I	<u>.</u>							
Deflection	on: LC #1	= 1.01) (perma	anent)							
			+ 1.0L								
			+ 1.0L								
	LC #2	= 1.01	+ 1.0L	(bare	joist)						
Bearing	: Suppo	rt 1 - I	LC #2 = 1	L.25D +	1.5L						
	Suppo	rt 2 - I	C #2 = 1	L.25D +	1.5L		_				
Load Type	es: D=dea	d W≔wir	nd S=sno	ow H≃ea	arth,grou	ndwater	r E≔ear	thquake			
	L=liv	e (use, oc	cupancy)	Ls=1:	ive(stora	ge, equi	(pment	f=fire	-		
Load Pati	terns: s=	S/2 L=I	.+Ls _=r	no patte	ern load	in this	s span				
	Combinat	ions (LO	cs) are l	listed :	in the An	alysis	output				
CALCULATION	ons:							กลา	ICDD##e TO	OBC 2012	2
Eleff = 6	432.91 lb	-in^2 F	<= 6.18€	e06 lbs				_	aronmo iu	UDG 2011	Ž.
"Live" de	eflection	is due	to all r	ion-dead	d loads (live, v	iind, sn	OW)	AMENDED	2020	
									11.014 - 17.00		_

Design Notes:

- 1. WoodWorks analysis and design are in accordance with the 2010 National Building Code of Canada (NBC), Division B, Part 4, and the CSA O86-09 Engineering Design in Wood standard, which includes Update No.1
- 2. Please verify that the default deflection limits are appropriate for your application.
- 3. Refer to Nordic Structures technical documentation for installation guidelines and construction details.
- 4. Nordic I-joists are listed in CCMC evaluation report 13032-R.
- 5. Joists shall be laterally supported at supports and continuously along the compression edge.
- 6. The design assumptions and specifications have been provided by the client. Any damages resulting from faulty or incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their responsibility. This analysis 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 this component based on the design criteria and loadings shown.



PWG NO. TAM 5476 -20 STRUCTURAL COMPONENT ONLY

NORDIC **STRUCTURES**

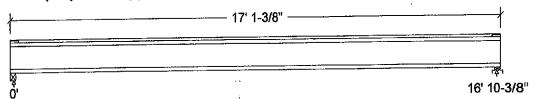
COMPANY Feb. 19, 2020 10:27 **PROJECT** J2 1ST FLOOR.wwb

Design Check Calculation Sheet Nordic Sizer – Canada 7.2

Loads:

Load	Туре	Distribution	Pat- tern	Location Start	[ft] End	Magnitude Start	End	Unit
Load1 Load2	Dead Live	Full Area Full Area				20.00 40.00		psf psf

Maximum Reactions (lbs) and Support Bearing (in):



	U	,	
Unfactored: Dead Live	225 450		225 450
Factored: Total Bearing:	956		956
Capacity Joist Support	2102		2101 3971
Des ratio Joist Support Load case	0.45 - #2	,	0.45 0.24 #2
Length Min req'd	2-3/8 1-3/4		2-3/8 1-3/4 No
Stiffener KD KB support	No 1.00		1.00
fcp sup			769 1.09

Nordic Joist 11-7/8" NI-40x Floor joist @ 16" o.c.

Supports: 1 - Steel Beam, W; 2 - Lumber Sill plate, No.1/No.2; Total length: 17' 1-3/8"; Clear span: 16' 8-5/8"; 3/4" nailed and glued OSB sheathing This section PASSES the design code check.

Limit States Design using CSA-086-09 and Vibration Criterion:

_				
Analysis Value	Design Val		Analysis/Desi	
	Vr = 23	36 lbs	Vf/Vr = 0	.41
l '= I	Mr = 62	55 lbs-ft	Mf/Ms = 0	.64
1 1	0.56 = L/3	60 in	MOOFESSION O	.21
****	T	80 in 🖋	60	.57
**		40 in //	Paren De	.43
••••		60 in 🐉		152
1 2 2 2 2 2 1		-1 3 ft	L VATCOLLIAKOS	152 0.93
		30 1 1 3	B . III. 0	80
= 0.030	= 0.0	20 111		/
	Mf = 4029	Vf = 956 Mf = 4029 0.12 = < L/999 0.24 = L/841 0.36 = L/560 0.29 = L/695 Lmax = 16'-10.4 Vr = 23 Mr = 62 0.56 = L/3 0.42 = L/4 0.84 = L/2 0.56 = L/3 Lv = 18'	Vf = 956	Vf = 956 Mf = 4029 0.12 = < L/999 0.24 = L/841 0.36 = L/560 0.29 = L/695 Lmax = 16'-10.4 = 0.030 Vr = 2336 Mr = 6255 1bs-ft in 0.42 = L/480 in 0.84 = L/240 0.56 = L/360 in in 0.56 = L/360 in in 0.56 = L/360 in in in 0.56 = L/360 in in 0.56 = L/360 in in 0.56 = L/360 in 0.56 = L/360 in 0.56 = L/360 in 0.56 = L/360 in in 0.56 = L/360 in in 0.56 = L/360 in 0.56 = L/360

POLINCE OF ONIT ANG NO. TAM 5477 -20 STRUCTURAL

COMPONENT ONLY

WoodWorks® Sizer

for NORDIC STRUCTURES

J2 1ST FLOOR.wwb

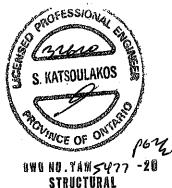
Nordic Sizer - Canada 7.2

Page 2

Additional	Data:					·				
FACTORS:	f/E	KD		KZ .	KL	KT	KS	KN	LC#	
Vr	2336	1.00	1.00		_	-	-	-	#2	
Mr+	6255	1.00	1.00	-	1.000	-	-	-	#2	
EI	371.1 m		-		•	-	-	-	#2	
CRITICAL LO	AD COMB	INATIONS	3 :							
Shear	: LC #2	= 1.25	5D + 1.5I							
Moment (+)	: LC #2	= 1.2 5	5D + 1.5I							
Deflection	n: LC #1	= 1.00) (perma	nent)						
	LC #2	= 1.00	+ 1.0L	(live) .					
	LC #2	= 1.0	+ 1.0L	(tota	1)					
	LC #2	= 1.01) + 1.0L	(bare	joist)					
Bearing	: Suppo	rt 1 - I	C #2 = 1	25D +	1.5L					
_	Suppo	rt 2 - I	C #2 = 1	L.25D +	1.5L		_	L. L		
Load Type	s: D=dea	d W=win	nd S≔sno	ow H=e	arth,grou	ndwate	r Ľ=ear	tnquake		
	L=1.iv	e (use, oc	cupancy)	Ls≃l:	ive(stora	ge, equ:	ipment)	r=rire		
Load Patt	erns: s=	S/2 L=I	Ն+Ls _=r	no patt	ern load	in this	s span			
All Load	Combinat	ions (LC	cs) are l	listed :	in the An	alysis	output			
CALCULATIO	NS:							cox	EADMS TO	OBC 2012
Eleff = 4	59.76 lb	-in^2 F	<= 6.18€	e06 lbs				• • • • • • • • • • • • • • • • • • • •		000 20 12
"Live" de	flection	is due	to all r	non-dead	d loads (live, v	wina, sn	OW)	AMENDED	2020

Design Notes:

- 1. WoodWorks analysis and design are in accordance with the 2010 National Building Code of Canada (NBC), Division B, Part 4, and the CSA O86-09 Engineering Design in Wood standard, which includes Update No.1
- 2. Please verify that the default deflection limits are appropriate for your application.
- 3. Refer to Nordic Structures technical documentation for installation guidelines and construction details.
- 4. Nordic I-joists are listed in CCMC evaluation report 13032-R.
- 5. Joists shall be laterally supported at supports and continuously along the compression edge.
- 6. The design assumptions and specifications have been provided by the client. Any damages resulting from faulty or incorrect information, specifications, and/or designs furnished, and the correctness or accuracy of this information is their responsibility. This analysis 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 this component based on the design criteria and loadings shown.



STRUCTURAL COMPONENT ONLY



PASSED

1ST FLR FRAMING\Flush Beams\B1(i2775) (Flush Beam)

Dry | 1 span | No cant. **BC CALC® Member Report**

February 19, 2020 10:08:06

Build 7239 Job name:

Address:

Customer:

Code reports:

City, Province, Postal Code: WATERDOWN

CCMC 12472-R

File name: Description: VALLEYCREEK 4 EL 1.mmdl

Live

Dead

0.65

6 60

88

89

88

1ST FLR FRAMING\Flush Beams\B1(i2775)

Specifier:

Designer:

ΑJ

Company:

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+	+	+	+	*	*	*	*		 *		<u> </u>	 <u></u>	<u>*</u>	¥.		<u>, , , , , , , , , , , , , , , , , , , </u>	•				 <u>* -</u>	<u></u>	,		<u>. </u>	, -			. •		·	
<u>si</u>		<u></u>				<u></u>		<u> </u>				—									 	• •			 							Ė
			_									 			0	3-11-	-00															В

Total Horizontal Product Length = 03-11-00

Snow

Reaction	Summary	(Down	/ U	olift)	(lbs)	
LICACHOII	Quillinary	(•	/	\ <i>-</i>	

Bearing	Live	•	Dead
B1, 5-1/2"	688 / 0		374/0
B2 3-1/2"	507 / 0		264 / 0

Loa	d	Sur	nma	ıry
Tag	D	escri	ption	

			Acres	F at	1		4.00	
Description	Load Type	Ret.	Start				1.00	_
Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-11-00	Top			
STAIR	Unf. Lin. (lb/ft)	L	00-00-00	03-11-00	Top	• *	120	
	Conc. Pt. (lbs)	L	00-09-08	00-09-08	Top		177	
, ,	Conc. Pt. (lbs)	L	02-01-08	02-01-08	Top		179	
,	Conc. Pt. (lbs)	L	03-05-08	03-05-08	Top		177	
12(i854)	Conc. Pt. (lbs)	L	00-02-12	00-02-12	Тор		188	
	STAIR J8(12787) J8(12785) J8(12790)	Description Load Type Self-Weight Unf. Lin. (lb/ft) STAIR Unf. Lin. (lb/ft) J8(i2787) Conc. Pt. (lbs) J8(i2785) Conc. Pt. (lbs) J8(i2790) Conc. Pt. (lbs)	Description Load Type Ref. Self-Weight Unf. Lin. (lb/ft) L STAIR Unf. Lin. (lb/ft) L J8(12787) Conc. Pt. (lbs) L J8(12785) Conc. Pt. (lbs) L J8(12790) Conc. Pt. (lbs) L	Description Load Type Ref. Start Self-Weight Unf. Lin. (lb/ft) L 00-00-00 STAIR Unf. Lin. (lb/ft) L 00-00-00 J8(12787) Conc. Pt. (lbs) L 00-09-08 J8(12785) Conc. Pt. (lbs) L 02-01-08 J8(12790) Conc. Pt. (lbs) L 03-05-08	Description Load Type Ref. Start End Self-Weight Unf. Lin. (lb/ft) L 00-00-00 03-11-00 STAIR Unf. Lin. (lb/ft) L 00-00-00 03-11-00 J8(12787) Conc. Pt. (lbs) L 00-09-08 00-09-08 J8(12785) Conc. Pt. (lbs) L 02-01-08 02-01-08 J8(12790) Conc. Pt. (lbs) L 03-05-08 03-05-08	Description Load Type Ref. Start End Loc. Self-Weight Unf. Lin. (lb/ft) L 00-00-00 03-11-00 Top STAIR Unf. Lin. (lb/ft) L 00-00-00 03-11-00 Top J8(12787) Conc. Pt. (lbs) L 00-09-08 00-09-08 Top J8(12785) Conc. Pt. (lbs) L 02-01-08 02-01-08 Top J8(12790) Conc. Pt. (lbs) L 03-05-08 03-05-08 Top	Description Load Type Ref. Start End Loc. Self-Weight Unf. Lin. (lb/ft) L 00-00-00 03-11-00 Top STAIR Unf. Lin. (lb/ft) L 00-00-00 03-11-00 Top J8(i2787) Conc. Pt. (lbs) L 00-09-08 00-09-08 Top J8(i2786) Conc. Pt. (lbs) L 02-01-08 02-01-08 Top J8(i2790) Conc. Pt. (lbs) L 03-05-08 03-05-08 Top	Description Load Type Ref. Start End Loc. 1.00 Self-Weight Unf. Lin. (lb/ft) L 00-00-00 03-11-00 Top STAIR Unf. Lin. (lb/ft) L 00-00-00 03-11-00 Top 120 J8(12787) Conc. Pt. (lbs) L 00-09-08 00-09-08 Top 177 J8(12785) Conc. Pt. (lbs) L 02-01-08 02-01-08 Top 179 J8(12790) Conc. Pt. (lbs) L 03-05-08 03-05-08 Top 177

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	783 ft-lbs	17696 ft-lbs	4.4%	1	02-01-08
End Shear	446 lbs	7232 lbs	6.2%	1	01-05-06
Total Load Deflection	L/999 (0.002")	n\a	n\a	4	02-00-08
Live Load Deflection	L/999 (0.001")	n\a	n\a	5	02-00-08
Max Defl.	0.002"	n\a	n\a	4	02-00-08

Max Defi.	0.00
Span / Depth	3.3

Bearing	y Supports	Dim. (£xW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1		5-1/2" x 1-3/4"	1499 lbs	25.3%	12.8%	Spruce-Pine-Fir
B2		3-1/2" x 1-3/4"	1090 lbs	28.9%	14.6%	Spruce-Pine-Fir

Notes

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

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

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 Canadlan Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



COMPONENT ONLY

Wind

Snow

1.00

Tributary

00-00-00

n\a

n\a

n\a

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 canforms to obc 2012 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 Bolse 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®,





PASSED

B2

1ST FLR FRAMING\Flush Beams\B2(i2070) (Flush Beam)

Dry | 1 span | No cant.

February 19, 2020 10:08:06

Build 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

BC CALC® Member Report

File name:

Description: Specifier:

Designer:

Customer: Code reports:

CCMC 12472-R

ΑJ Company:

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VALLEYCREEK 4 EL 1.mmdl

1ST FLR FRAMING\Flush Beams\B2(i2070)

В1

03-05-08 Total Horizontal Product Length = 03-05-08

Snow

Reaction Summary (Down / Uplift) (lbs)

Dead Live Bearing 237/0 451/0 B1, 3-1/2" 206/0 391/0 B2, 2"

Load Cummon	:					Live	Dead	Snow	Wind	Tributary
Load Summary Tag Description	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
0 Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-05-08	Тор		6			00-00-00
1 STAIR	Unf. Lin. (lb/ft)	L	00-00-00	03-05-08	Тор	120	60			n\a
2 J8()	Conc. Pt. (lbs)	Ĺ	00-11-08	00-11-08	Top	214	107			n\a
3 .18()	Conc. Pt. (lbs)	Ĺ	02-03-08	02-03-08	Тор	213	107		new Programme:	n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	731 ft-lbs	17696 ft-lbs	4.1%	1	01-11-11
End Shear	539 lbs	7232 lbs	7.5%	1	02-03-10
Total Load Deflection	L/999 (0.002")	n\a	n\a	4	01-09-07
Live Load Deflection	L/999 (0.001")	n\a	n\a	5	01-09-07
Max Defl.	0.002"	n\a	n\a	4	01-09-07
Span / Depth	3.2	•			

Bearing	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	3-1/2" x 1-3/4"	973 lbs	25.8%	13.0%	Spruce-Pine-Fir
B2	Hanger	2" x 1-3/4"	843 lbs	n\a	19.7%	HUS1.81/10

Cautions

Header for the hanger HUS1.81/10 at B2 is a Double 1-3/4" x 11-7/8" VERSA-LAM® 1.7 2400 DF. Hanger model HUS1.81/10 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

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.

CONFORMS TO OBC 2012

Hanger Manufacturer: Unassigned

AMENDED 2020 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 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



1986 HO. TAM 5479 -20 STRUCTURAL COMPONENT ONLY 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®,





PASSED

1ST FLR FRAMING\Flush Beams\B3(i2318) (Flush Beam)

Dry | 1 span | No cant.

February 19, 2020 10:08:06

Build 7239

Job name:

Address: City, Province, Postal Code: WATERDOWN

BC CALC® Member Report

File name:

VALLEYCREEK 4 EL 1.mmdl

Description: 1ST FLR FRAMING\Flush Beams\B3(i2318)

Specifier:

ΑJ

Wind

Customer: Code reports:

CCMC 12472-R

Designer:

Company:

																											
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10															_				<u> </u>							 -	
/						_					07-0	5-12															
D4																											B2

B4

Total Horizontal Product Length = 07-05-12

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead
B1, 2-5/8"	110/0	101 / 0
B2. 1-3/4"	108 / 0	99 / 0

	ad Summary	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	8now 1.00	Wind 1.15	Tributary
Tag 0	Description Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	07-05-12	Тор		12			00-00-00
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L.	00-00-00	07-05-12	Тор	29	15			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	505 ft-lbs	35392 ft-lbs	1.4%	1	03-09-05
End Shear	198 lbs	14464 lbs	1.4%	1	01-02-08
Total Load Deflection	L/999 (0.004")	n\a	n\a	4	03-09-05
Live Load Deflection	L/999 (0.002")	n\a	n\a	5	03-09-05
Max Defl.	0.004"	n\a	n\a	4	03-09-05
Spon / Denth	7.3				

	Bearing Supports	Dim. (LxVV)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
-	B1 Beam	2-5/8" x 3-1/2"	291 lbs	5.9%	2.6%	Unspecified	
	B2 Column	1-3/4" x 3-1/2"	285 lbs	5.7%	3.8%	Unspecified	

SOVINCE OF ONG NO. TAM 5480-20 STRUCTURAL

COMPONENT ONLY

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

AMENDED 2020

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

> properties and analysis methods. Installation of Bolse 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.

Disclosure

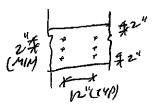
License Agreement (EULA).

building code-accepted design

Completeness and accuracy of input

CONFORMS TO OBC 2012 Use of the Boise Cascade Software is

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



PROVIDE 3 ROWS OF 3½" ARDOX SPIRAL NAILS @ 12 " O/C FOR MULTI-PLY NAILING, MAINTAIN A MIN. 2" LUMBER EDGE/END DISTANCE, DO NOT USE AIR NAILS



PASSED

1ST FLR FRAMING\Flush Beams\B4(i2757) (Flush Beam)

Dry | 1 span | No cant.

February 19, 2020 10:08:06

Build 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer: Code reports:

BC CALC® Member Report

CCMC 12472-R

File name:

VALLEYCREEK 4 EL 1.mmdl

Description:

1ST FLR FRAMING\Flush Beams\B4(i2757)

Specifier:

Designer:

ΑJ

Wind

CONFORMS TO OBC 2012

Live

Dead

Snow

1.00

Wind

1.15

Tributary

00-00-00 n\a n\a n\a

Company:

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										-		-																							
∤ R1										-						0	3-11-0	ю																	B2

Total Horizontal Product Length = 03-11-00

Snow

Reaction Summary (Down / Uplift) (lbs)

Live Dead Bearing 286 / 0 B1, 2" 549 / 0 1077 / 0 589 / 0 B2, 5-1/2"

10	ad Summary	÷					Live	Dead
Tag		Load Type	Ref.	Start	End	Loc.	1.00	0.65
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-11-00	Top		6
1	STAIR	Unf. Lin. (lb/ft)	L	00-00-00	03-04-00	Top	120	60
2	J5(i2769)	Conc. Pt. (lbs)	L	01-02-08	01-02-08	Top	350	175
3	J5(i2755)	Conc. Pt. (lbs)	L	02-06-08	02-06-08	Top	333	167
٥	` '	Conc. Pt. (lbs)	ı	03-09-02	03-09-02	Top	543	309
4	-	Q0110. 1 t. (100)	L-	00 00 00	•• ••			1

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1142 ft-lbs	17696 ft-lbs	6.5%	1	01-08-03
End Shear	1088 lbs	7232 lbs	15.0%	1	02-05-10
Total Load Deflection	L/999 (0.004")	n\a	n\a	4	01-09-09
Live Load Deflection	L/999 (0.002")	n\a	n\a	5	01-09-09
Max Defl.	0.004"	n\a	n\a	4	01-09-09
Span / Depth	3.5				

Bearing	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Memb <u>er</u>	Material
B1	Hanger	2" x 1-3/4"	1181 lbs	n\a	27.6%	HUS1.81/10
B2	Wall/Plate	5-1/2" x 1-3/4"	2352 lbs	39.7%	20.0%	Spruce-Pine-Fir

Cautions

Header for the hanger HUS1.81/10 at B1 is a Double 1-3/4" x 11-7/8" VERSA-LAM® 1.7 2400 DF. Hanger model HUS1.81/10 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

Notes

Design meets Code minimum (L/240) Total load deflection criteria. Design meets Code minimum (L/360) Live toad deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

Resistance Factor phi has been applied to all presented results per CSA O86. AMENDED 2020 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

UNE NO. TAM 548/ -20 STRUCTURAL COMPONENT ONLY Disclosure

OVINCE OF ONT

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



BC CALC® Member Report

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

PASSED

1ST FLR FRAMING\Flush Beams\B5(i2778) (Flush Beam)

Dry | 1 span | No cant.

February 19, 2020 10:08:06

Build 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer:

Code reports:

Load Summary

CCMC 12472-R

File name:

VALLEYCREEK 4 EL 1.mmdl

1ST FLR FRAMING\Flush Beams\B5(i2778) Description:

Wind

Live

Dead

Snow

1.00

Wind

1.15

Tributary

00-00-00

n\a

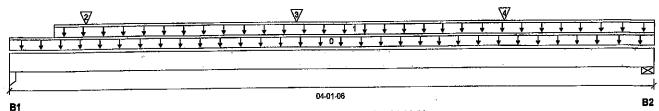
n\a

n\a

Specifier:

Designer: AJ

Company:



Total Horizontal Product Length = 04-01-06

Snow

Reaction Summary (Down / Uplift) (lbs)

Live Bearing 237/0 451/0 B1, 3-1/2" 169 / 0 313/0 B2, 4-3/8"

LU	au Sullillai y			.			4.00	0.00
Tag	Description	Load Type	Ref.	Start	End	Loc.	1.00	0,65
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	04-01-06	Top		6
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-03-08	04-01-08	Тор	3	1
2	J7(i2880)	Conc. Pt. (lbs)	L	00-06-00	00-06-00	Тор	287	143
3	J7(i2828)	Conc. Pt. (lbs)	L	01-10-00	01-10-00	Тор	255	128
4	J7(i2834)	Conc. Pt. (lbs)	Ĺ	03-02-00	03-02-00	Top	208	104
4	J1 (12034)	COITO: 1 C (105)	-			1		

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	722 ft-lbs	17696 ft-lbs	4.1%	1	01-10-00
End Shear	480 lbs	7232 lbs	6.6%	1	02-09-02
Total Load Deflection	L/999 (0.002")	n\a	n\a	4	02-00-01
Live Load Deflection	L/999 (0.001")	n\a	n\a	5	02-00-01
Max Defl.	0.002"	n\a	n\a	4	02-00-01
Span / Depth	3.6				

Bearing	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Column	3-1/2" x 1-3/4"	973 lbs	19.6%	13.0%	Unspecified
B2	Wall/Plate	4-3/8" x 1-3/4"	680 lbs	14.4%	7.3%	Spruce-Pine-Fir

Notes

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

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

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86. AMENDED 2020 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



DUANCE OF ONLY

Disclosure

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



PASSED

1ST FLR FRAMING\Flush Beams\B6(i2804) (Flush Beam)

BC CALC® Member Report

Dry | 1 span | No cant.

February 19, 2020 10:08:06

Bulld 7239 Job name:

Address:

City, Province, Postal Code: WATERDOWN

File name:

VALLEYCREEK 4 EL 1.mmdl

Description: 1ST FLR FRAMING\Flush Beams\B6(i2804)

Specifier:

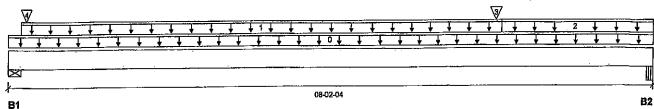
ΑJ

Customer: Code reports:

CCMC 12472-R

Designer:

Company:



Total Horizontal Product Length = 08-02-04

Reaction Summary (Down / Uplift) (lbs)

Dead Snow Live 712/0 418/0 B1, 3-3/4" 584 / 0 348 / 0 B2, 2-5/8"

Loa	ad Summary						LIVe	Dead	Snow	wina	Tributary
		Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
0	Self-Weight	Unf. Lin. (lb/ft)		00-00-00	08-02-04	Тор		12			00-00-00
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-02-00	06-03-08	Тор	53	27			n\a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	06-03-08	08-02-04	Top	29	15			n\a
3	B4(i2757)	Conc. Pt. (lbs)	L	06-02-10	06-02-10	Top	534	277		Action 10 to	n\a
4	B2(i2070)	Conc. Pt. (lbs)	L	00-02-14	00-02-14	Тор	380	200	JE 08	OFESSI	ON Ala
		•							- ∦ "\		- C. A.

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	2231 ft-lbs	35392 ft-lbs	6.3%	1	06-02-10
End Shear	1219 lbs	14464 lbs	8.4%	1	06-11-12
Total Load Deflection	L/999 (0.017")	n\a	n\a	4	04-04-08
Live Load Deflection	L/999 (0.01")	n\a	n\a	5	04-04-08
Max Defl.	0.017"	n\a	n\a	4	04-04-08
Snan / Denth	7.9				

Bearin	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	3-3/4" x 3-1/2"	1590 lbs	19.7%	9.9%	Spruce-Pine-Fir
B2	Beam	2-5/8" x 3-1/2"	1312 lbs	26.7%	11.7%	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. AMENDED 2020 BC CALC® analysis is based on Canadlan Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

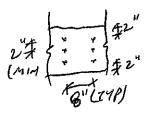
PROVIDE 3 ROWS OF 3½" ARDOX obtain Installation Guide or ask SPIRAL NAILS @ & "O/C FOR questions, please call (800)232-0788 before installation. MULTI-PLY NAILING, MAINTAIN A MIN. 2" LUMBER EDGE/END

UWG NO. TAM 5483-20 STRUCTURAL COMPONENT ONLY

ONINCE OF ON

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 CINFORMS TO BEC 2012 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

BC CALC®, BC FRAMER®, AJS™, N MIN. Z LUMBER EDUT/END ALLJOIST®, BC RIM BOARD™, BCI®, DISTANCE. DO NOT USE AIR NAIL BOISE GLULAM™, BC Floorvalue®, VERSA-LAM®, VERSA-RIM PLUS®





BC CALC® Member Report



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

PASSED

1ST FLR FRAMING\Flush Beams\B7(12764) (Flush Beam)

Dry | 1 span | No cant.

February 19, 2020 10:08:06

Build 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

VALLEYCREEK 4 EL 1.mmdl

File name: Description: 1ST FLR FRAMING\Flush Beams\B7(i2754)

Specifier:

Designer: ΑJ

Customer: Code reports:

CCMC 12472-R

Company:

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										12-	11-04	ļ															В
31										_																	-

Total Horizontal Product Length = 12-11-04

Snow

	Reaction	Summary	(Down /	Uplift)	(lbs)
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Bearing	Live	Dead
31, 1-7/8"	58 / 0	67/0
32 1-3/8"	60 / 0	70 / 0

	al Disconnection	1					Live	Dead	Snow	Wind	Tributary
	ad Summary Description	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
n	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	12-11-04	Тор		6			00-00-00
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	12-11-04	Тор	9	5			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	531 ft-lbs	17696 ft-lbs	3.0%	1	06-04-06
End Shear	141 lbs	7232 lbs	1.9%	1	01-01-12
Total Load Deflection	L/999 (0.023")	n\a	n\a	4	06-04-06
Live Load Deflection	L/999 (0.01")	n\a	n\a	5	06-04-06
Max Defl.	0.023"	n\a	n\a	4	06-04-06
Span / Depth	12.7				

Bearing	y Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	1-7/8" x 1-3/4"	172 lbs	8.5%	4.3%	Spruce-Pine-Fir
B2	Wall/Plate	4-3/8" x 1-3/4"	177 lbs	3.8%	1.9%	Spruce-Pine-Fir

ONINCE OF OF

TWO NO. TAM 5 484-20 STRUCTURÁL COMPONENT ONLY

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.

AMENDED 2020 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

CONFORMS TO OBC 2012 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 sultability 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®,



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

PASSED

2ND FLR FRAMING\Dropped Beams\B12 DR(i2764) (Dropped Beam)

BC CALC® Member Report

Dry | 1 span | No cant.

February 19, 2020 10:08:06

Build 7239 Job name:

Address:

City, Province, Postal Code: WATERDOWN

File name:

VALLEYCREEK 4 EL 1.mmdl

Description: 2ND FLR FRAMING\Dropped Beams\B12 DR(i2764)

Specifier:

ΑJ

Wind

Customer: Code reports:

CCMC 12472-R

Designer:

Company:

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Total Horizontal Product Length = 10-08-00

Snow

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead
B1, 4"	3214 / 0	1685 / 0
B2, 4"	3596 / 0	1876 / 0

	ad Summary 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	10-08-00	Тор		14			00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-04-08	10-08-00	Top	662	331			n\a

Controls Summary	Factored Demand	Factored Resistance	Demandi Resistance	Case	Location
Pos. Moment	17365 ft-lbs	36222 ft-lbs	47.9%	1	05-00-08
End Shear	6320 lbs	17356 lbs	36.4%	1	01-01-08
Total Load Deflection	L/403 (0.302")	n\a	59.6%	4	05-03-11
Live Load Deflection	L/613 (0.198")	n\a	58.7%	5	05-03-11
Max Defl.	0.302"	n\a	n\a	4	05-03-11
Span / Depth	12.8				

Bear	ring Supports	Dim. (LxW)	Demand	Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	4" x 5-1/4"	6928 lbs	24.7%	27.0%	Spruce-Pine-Fir
B2	Wall/Plate	4" x 5-1/4"	7738 lbs	27.6%	30.2%	Spruce-Pine-Fir



BWG NO. TAM 5485-20 STRUCTURAL COMPONENT ONLY

Notes

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

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

AMENDED 2020

Calculations assume unbraced length of Top: 00-03-02, Bottom: 00-03-02. 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

CONFORMS TO OBC 2012 Use of the Bolse 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.

> BOISE GLULAM™. BC FloorValue®. VERSA-LAM®, VERSA-RIM PLUS®,

PROVIDE 3 ROWS OF 3%" ARDOX SPIRAL NAILS @ 12 " O/C FOR MULTI-PLY NAILING, MAINTAIN A MIH.Z" LUMBER EDGE/END DISTANCE. DO NOT USE AIR NAILS BC CALCO, BC FRAMERO, AJSTM, STAGGERL NAILS 6" BETWEEN PLUS ALLJOISTO, BC RIM BOARD N, BCIB, BOUSE CLUB AMIN BC Flood/stugo.





PASSED

2ND FLR FRAMING\Flush Beams\B10(i2802) (Flush Beam)

Dry | 1 span | No cant. **BC CALC® Member Report**

February 19, 2020 10:08:06

Build 7239

Job name:

Address: City, Province, Postal Code: WATERDOWN

File name:

VALLEYCREEK 4 EL 1.mmdi

2ND FLR FRAMING\Flush Beams\B10(12802) Description:

Specifier:

Designer: AJ

Customer: CCMC 12472-R Code reports:

Company:

		1
<u>⊠</u> ∤	09-11-08	——

Total Horizontal Product Length = 09-11-08

Snow

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead
B1, 5-1/2"	997 / 0	531 / 0
B2 2"	656 / 0	358 / 0

	ad Commonic						Live	Dead	Snow	Wind	Tributary
	ad Summary	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
Lag	Description	Unf. Lin. (lb/ft)		00-00-00	09-11-08	Top		6			00-00-00
U	Self-Weight	· ·	-			•	136	68			n\a
1	Smoothed Load	Unf. Lin. (lb/ft)	l.,			•					
2	STAIR	Unf. Lin. (lb/ft)	L	00-05-08	03-08-03	Тор	120	60			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	4082 ft-lbs	17696 ft-lbs	23.1%	1	04-09-08
End Shear	1640 lbs	7232 lbs	22.7%	1	01-05-06
Total Load Deflection	L/999 (0.095")	n\a	n\a	4	04-11-08
Live Load Deflection	L/999 (0.062")	n\a	n\a	5	04-11-08
Max Defl.	0.095"	n\a	n\a	4	04-11-08
Snan / Denth	9.6				•

Regrino	ı Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wali/Plate	5-1/2" x 1-3/4"	2158 lbs	36.5%	18.4%	Spruce-Pine-Fir
B2	Hanger	2" x 1-3/4"	1433 lbs	n\a	33.6%	HUS1.81/10

Cautions

Header for the hanger HUS1.81/10 at B2 is a Double 1-3/4" x 11-7/8" VERSA-LAM® 1.7 2400 DF. Hanger model HUS1.81/10 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

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 086. AMENDED 2020 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



DWG NO. TAM 5486 -20 STRUCTURAL COMPONENT ONLY

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 sultability for a particular application. The output here is based on CONFORMS TO OBC 2012building 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®,





PASSED

2ND FLR FRAMING\Flush Beams\B8(i2812) (Flush Beam)

Dry | 2 spans | No cant.

February 19, 2020 10:08:06

Build 7239

Job name:

Address: City, Province, Postal Code: WATERDOWN

BC CALC® Member Report

File name:

VALLEYCREEK 4 EL 1.mmdl

2ND FLR FRAMING\Flush Beams\B8(i2812) Description:

Wind

Loc.

Top

Top

Top

Top

Top

Top

Top

Live

1.00

482

861

708

714

349

345

Dead

0.65

12

Specifier:

Designer: ΑJ

Customer: Code reports:

CCMC 12472-R

Company:

End

09-08-12

05-03-00

05-08-01

06-08-11

07-11-00

08-07-08

09-03-06

05-07-04 04-01-08		· · · · · · · · ·	TTT	⅓ ₩	V V
		 	† † <u>0</u> † † † †	.	
	d				≥
	<u></u>	05-07-04		04-01-08	В

Total Horizontal Product Length = 09-08-12

Snow

Damend/

Reaction Summary (D	Down / Uplif	t) (lbs)
---------------------	--------------	----------

Bearing	Live	Dead
B1, 4"	1411 / 102	682 / 0
B2, 3-1/2"	3338 / 0	1807 / 0
B3, 2-3/4"	1097 / 241	448 / 0

	pad Summary g Description	Load Type	Ref.	Start
0	Self-Weight	Unf. Lin. (lb/ft)	Ĺ	00-00-00
1	Smoothed Load	Unf, Lin. (lb/ft)	L.	00-00-00
2	-	Conc. Pt. (lbs)	L	05-08-01

Co	ontrols Summary	Factored Demand	Factored Resistance	Dem Resi
5 6	J2(12855) J1(12838)	Conc. Pt. (lbs) Conc. Pt. (lbs)	L	09-03-06
4	-	Conc. Pt. (lbs)	L	07-11-00 08-07-08
3	•	Conc. Pt. (lbs)	L	06-08-11

Controls Summary	Factored Demand	ractoreu Resistance	Resistance	Case	Location
Pos. Moment	2537 ft-lbs	35392 ft-lbs	7.2%	2	02-09-06
Neg. Moment	-3232 ft-lbs	-35392 ft-lbs	9.1%	1	05-07-04
End Shear	1704 lbs	14464 lbs	11.8%	2	01-03-14
Cont. Shear	2773 lbs	14464 lbs	19.2%	1	06-08-14
Total Load Deflection	L/999 (0.008")	n\a	n\a	9	02-08-01
Live Load Deflection	L/999 (0.006")	n\a	n\a	12	02-09-06
	L/999 (-0.001")	n\a	n\a	9	06-10-10
Total Neg. Defl.	0.008"	n\a	n\a	9	02-08-01
Max Defl.		11101	1110	_	
Span / Depth	5.4				

Bearing	: Supports	Dim. (ŁxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
B1	Wall/Plate	4" x 3-1/2"	2970 lbs	34,5%	17.4%	Spruce-Pine-Fir	
	Column	3-1/2" x 3-1/2"	7266 lbs	73.0%	48.6%	Unspecified	
B2	Column		•	07.00/	40.00/	Carusa Dina Cir	
B3	Wall/Plate	2-3/4" x 3-1/2"	2206 lbs	37.3%	18.8%	Spruce-Pine-Fir	

Notes

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

CLAPORMS TO OBC 2012

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86. AMENDED 2020 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

PROVIDE3 ROWS OF 3N" ARDOX SPIRAL HAILS @ 8 "O/C FOR MULTI-PLY NAILING, MAINTAIN A MIN. 2" LUMBER EDGE/END DISTANCE, DO NOT USE AIR NAILS



Wind

1.15

Snow

Tributary

00-00-00

DWS NO. TAM 5487-20 STRUCTURAL COMPONENT ONLY

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®,





PASSED

2ND FLR FRAMING\Flush Beams\B9(i2771) (Flush Beam)

Dry | 1 span | No cant.

February 19, 2020 10:08:06

Bulld 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

BC CALC® Member Report

CCMC 12472-R

Customer:

Code reports:

File name:

VALLEYCREEK 4 EL 1.mmdl

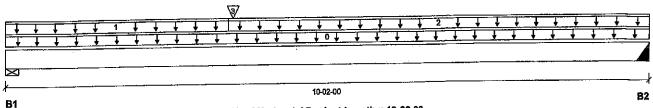
Description: 2ND FLR FRAMING\Flush Beams\B9(i2771)

Specifier:

ΑJ

Designer:

Company:



Total Horizontal Product Length = 10-02-00

Snow

Reaction Summary (Down / Uplift) (lbs)

Live Dead Bearing 363 / 0 563 / 0 B1, 4" 281/0 419/0 B2, 4"

	ad Commons	:					Live	Dead	Snow	Wind	Tributary
	ad Summary Description	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
Tag	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	10-02-00	Тор		12			00-00-00
4	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-06-04	Top	18	9			n\a
1	FC3 Floor Material	Unf. Lin. (lb/ft)	ī	03-06-04	10-02-00	Top	41	20			n\a
2			ī	03-07-02	03-07-02	Top	649	355		Name and Part of the Part of t	n\a
3	B10(i2802)	Conc. Pt. (lbs)		03-01-02	00-01-02	קטי	•		A STATE OF	FESSIC) ALLEGE

Controls Summary	Factored Demand	Factored . Resistance	Demand/ Resistance	Case	Location
Pos. Moment	3978 ft-lbs	35392 ft-lbs	11.2%	1	03-07-02
End Shear	1229 lbs	14464 lbs	8.5%	1	01-03-14
Total Load Deflection	L/999 (0.042")	n\a	n\a	4	04-09-14
	L/999 (0.026")	n\a	n\a	5	04-09-14
Live Load Deflection Max Defl.	0.042"	n\a	n\a	4	04-09-14
Snan / Denth	9.7				

Bearli	ng Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	4" x 3-1/2"	1298 lbs	15.1%	7.6%	Spruce-Pine-Fir
B2	Hanger	4" x 3-1/2"	980 lbs	n\a	5.7%	HGUS410

Cautions

Header for the hanger HGUS410 at B2 is a Double 1-3/4" x 11-7/8" VERSA-LAM® 1.7 2400 DF. Hanger model HGUS410 and seat length were input by the user. Hanger has not been analyzed for adequate capacity.

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.

AMENDED 2020 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

PROVIDE 3 ROWS OF 31/1 ARDOX SPIRAL NAILS @ /2"0/C FOR MULTI-PLY NAILING, MAINTAIN A MIN. 2" LUMBER EDGE/END DISTANCE. BO NOT USE AIR NAILS VERSA-LAM®, VERSA-RIM PLUS®,



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Disclosure Use of the Bolse 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 sultability for a particular application. The output here is based on building code-accepted design CONFORMS TO OBC 2012 properties and analysis methods. 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®,



PASSED

1ST FLR FRAMING\Flush Beams\B21(i3058) (Flush Beam)

Dry | 1 span | No cant. **BC CALC® Member Report**

March 24, 2020 16:05:37

Build 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

File name:

VALLEYCREEK 4 EL 1 DECK CONDITION.mmdl

Description: 1ST FLR FRAMING\Flush Beams\B21(i3058)

Specifier:

Designer:

ΑJ

Customer: Code reports:

CCMC 12472-R

Company:

Total Horizontal Product Length = 03-01-00

Snow

Reaction Summary (Down / Uplift) (Ibs)

Dead Live Bearing 21/0 154 / 0 B1, 3" 154 / 0 21/0 B2, 3"

١.	ad Summary						Live	Dead	Snow	Wind	Tributary
	Description	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Тор		12			00-00-00
1	E3(i753)	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Тор		81	٠.		n\a
2	EC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Top	13	7			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	128 ft-lbs	23005 ft-lbs	0.6%	0	01-06-08
End Shear	42 lbs	9401 lbs	0.4%	0	01-02-14
Total Load Deflection	L/999 (0")	n\a	n\a	4	01-06-08
Max Defl.	0"	n\a	n\a	4	01-06-08
Span / Depth	2.7				

Resring	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
	Wall/Plate	3" x 3-1/2"	215 lbs	5,1%	2.6%	Spruce-Pine-Fir
- .	Wali/Plate	3" x 3-1/2"	215 lbs	5.1%	2.6%	Spruce-Pine-Fir

DWO NO . YAM 5489-20 STRUCTURÁL COMPONENT ONLY

ONNICE OF O

Disclosure

CONFORMS TO OBC 20 12 Use of the Boise Cascade Software is

Notes

Design meets Code minimum (L/240) 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 2015 and CSA O88.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

AMENDED 2020

qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of sultability for a particular application. The output here is based on building code-accepted design properties and analysis methods. installation of Bolse Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To

subject to the terms of the End User

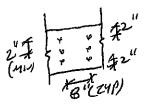
Completeness and accuracy of input

must be reviewed and verified by a

License Agreement (EULA).

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®,



PROVIDE 3 ROWS OF 31/ ARDOX SPIRAL HAILS @ 8 "O/C FOR MULTI-PLY NAILING, MAINTAIN A MIN.2" LUMBER EDGE/END DISTANCE. DO NOT USE AIR HAILS



BC CALC® Member Report



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

PASSED

March 24, 2020 16:05:37

1ST FLR FRAMING\Flush Beams\B22(i3082) (Flush Beam)

Dry | 1 span | No cant.

Build 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer: Code reports:

CCMC 12472-R

File name:

VALLEYCREEK 4 EL 1 DECK CONDITION.mmdl

Description: 1ST FLR FRAMING\Fiush Beams\B22(i3082)

Specifier:

Designer: ΑJ

Company:

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																		u	O-U -	•••																		

Total Horizontal Product Length = 03-01-00

Snow

Reaction Summary (Down / Uplift) (Ibs)

Bearing	Live	Dead
B1, 3"	84/0	194 / 0
B2, 3"	84/0	194 / 0

Lo	ad Summary		:				Live	Dead	Snow	Wind	Tributary
	Description	Load Type	Re	f. Start	End	Loc.	1.00	0.65	1.00	1.15	
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Top		12			00-00-00
1	E5(1757)	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Тор	28	101			nla
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Тор	27	13			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	162 ft-lbs	23005 ft-lbs	0.7%	0	01-06-08
End Shear	53 lbs	9401 lbs	0.6%	0	01-02-14
Total Load Deflection	L/999 (0")	n\a,	n\a	4	01-06-08
Live Load Deflection	L/999 (0")	n\a	n\a	5	01-06-08
Max Defi.	0"	n\a	n\a	4	01-06-08
Span / Depth	2.7				

Beari	ng Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	3" x 3-1/2"	272 lbs	6.5%	3.3%	Spruce-Pine-Fir
B2	Wali/Plate	3" x 3-1/2"	272 lbs	6.5%	3.3%	Spruce-Pine-Fir

Notes

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

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

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

PROVIDE 3 ROWS OF 31% ARDOX SPIRAL NAILS @ 8 "O/6 FOR MULT!-PLY NAILING, MAINTAIN A MIN. 2" LUMBER EBGE/END DISTANCE, DO NOT USE AIR NAILS



DWG NO. TAN 5490-20 STRUCTURAL

DISCISSUPENT ONLY

Use of the Bolse Cascade Software is subject to the terms of the End User License Agreement (EULA). CONFORMS TO OBC 2012Completeness 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 GLULAMIM, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,





PASSED

2ND FLR FRAMING\Flush Beams\B20(i2886) (Flush Beam)

BC CALC® Member Report Dry | 1 span | No cant. October 27, 2020 17:06:32

Build 0

Job name: Address:

Customer:

Code reports:

City, Province, Postal Code: WATERDOWN

CCMC 12472-R

File name: **VALLEYCREEK 4**

2ND FLR FRAMING\Flush Beams\B20(i2886) Description:

Specifier: Designer:

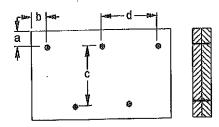
AJ Company:

₩ ₩			\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\
+ + + + + +		-	
FULLY SUPPORTEY	1 BOTTOM ENGE ALONG Total Horizont	FULL WOTH F FOU al Product Length = 16-00-00	

l o	ad Summary				_		Live	Dead	Snow	Wind	Tributary
	Description	Load Type	Ref.	Start	End	Loc	1.00	0.65	1.00	1.15	
0	Self-Weight	Unf. Lin. (lb/ft)	L.	00-00-00	16-00-00	Тор		12 •			00-00-00
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-03-00	Top	6	3			n\a
,	FC3 Floor Material	Unf. Lin. (lb/ft)	L	12-09-00	16-00-00	Тор	6	3			n\a
3	J2(12907)	Conc. Pt. (lbs)	L	00-11-00	00-11-00	Тор	386	193			n\a
4	J2(i2776)	Conc. Pt. (lbs)	L	02-03-00	02-03-00	Top	347	174			n\a
5	J2(i2814)	Conc. Pt. (lbs)	L	13-07-08	13-07-08	Top.	267	133			n\a
6	J2(i2863)	Conc. Pt. (lbs)	L	14-07-08	14-07-08	Тор	289	145			n\a
7	J2(12855)	Conc. Pt. (lbs)	L	15-07-08	15-07-08	Тор	253	127			nla

Controls Summary	Factored Demand	Factored Resistance	Demand <i>i</i> Resistance	Case	Location
Dist. Load	13.28 lb/ft	57645.00 lb/ft	n\a		•
Conc. Load	820 lbs	16813 lbs	4.9%		

Connection Diagram: Full Length of Member



c = 7-7/8" a minimum = 2" d = 200 6 " b minimum = 3"

Calculated Side Load = 410.1 lb/ft Connectors are: 16d Carl on Nalls

· 4

3-1/2" ARDOX SPIRAL

CONFORMS TO UBG 2012 AMENDED 2020



DWG NO. FAM/4824-20 STRUCTURAL COM, ONENT ONLY

Disclosure

Use of the Bolse 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.

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Maximum Floor Spans

Live Load = 40 bsf, Dead Load = 30 psf Simple Spans, L/480 Deffection Limit 3/4" OSB G&N Sheathing







			8:	are		1	1/2" Gyp:	sum Ceiling	
Depth	Serles		On Centi	e Spacing			On Cent	re Spacing	
Dupen	55.,	12"	16"	19.2"	24"	12"	16"	19.2"	24 ^H
	NI-20	15'-7"	14'-2"	13'-4"	12'-4"	15'-7"	14'-2"	13'-4"	12'-4"
	N1-40x	17'-0"	16'-0"	15'-1"	13'-11"	17'-5"	16'-1"	15'-1"	13'-11"
9-1/2"	Nt-60	17'-2"	16'-2"	15'-5"	14'-3"	17'-6"	16'-5"	15'-5"	14'-3"
3 5/2	N1-70	18'-0"	16'-11"	16'-3"	15'-6"	18'-5"	17'-3"	16'-7"	15'-6"
	N1-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	15'-10"
	NI-20	17'-10"	16'-10"	16'-0"	14'-10"	18'-6"	17'-1"	16'-0"	14'-10"
	NI-40x	19'-4"	17'-11"	17'-3"	15'-10"	19'-11"	18'-6"	17'-9"	15'-10"
	NI-60	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18'-9"	17'-11"	17'-1"
11-7/8"	NI-70	20'-9"	19'-2"	18'-3"	17'-5"	21'-4"	19'-9"	18'-10"	17'-10"
	NI-80	21'-1"	19'-5"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
	NI-90x	21'-8"	20'-0"	19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"
	NI-40x	21'-5"	19'-10"	18'-11"	17'-5"	22'-1"	20'-6"	19'-6"	17'-5"
	NI-60	21'-10"	20'-2"	19'-3"	18'-2"	22'-5"	20'-10"	19'-11"	18'-10"
14"	NI-70	23'-0"	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	20'-10"	19'- 9 "
14	N(-80	23'-5"	21'-7"	20'-7"	. 19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
	NI-90x	24'- 1 "	22'-3"	21'-2"	20'-0"	24'-8"	22'-10"	21'-9"	20'-7"
	NI-60	23'-9"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-8"	20'-6"
	NI-70	25'- 1 "	23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9"	21'-6"
16°	NI-70	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-90x	26'-4"	24'-3"	23'-1"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

			Mid-Spar	n Blocking		Mid-S	pan Blocking an	ıd 1/2" Gypsum	Ceiling
Depth	Series			e Spacing			. On Cente	re Spacing	
Deptii	301103	12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	15'-7"	14'-2"	13'-4"	12'-4"	15'-7"	14'-2"	13'-4"	12'-4"
	NI-40x	17'-9"	16'-1"	15'-1"	13'-11"	17'-9"	16'-1"	15'-1"	13'-11"
9-1/2"	NI-60	18'-1"	16'-5"	15'-5"	14'-3"	18'-1"	16'-5"	15'-5"	14'-3"
3-115	NI-70	19'-10"	17'-11"	16'-9"	15'-6"	19'-10"	17'-11"	16'-9"	15'-6"
	NI-80	20'-2"	18'-3"	17'-1"	15'-10"	20'-2"	18'-3"	17'-1"	15'-10"
	NI-20	18'-10"	17'-1"	16'-0"	14'-10"	18'-10"	17'-1"	16'-0"	14'-10'
	NI-40x	21'-3"	19'-3"	17'-9"	15'-10"	21'-3"	19'-3"	17 -9"	15'-10'
	NI-60	21'-9"	19'-8"	18'-5"	17'-1"	21'-9"	19'-8"	18'-5"	17'-1"
11-7/8"	NI-70	23'-4"	21'-5"	20'-1"	18'-6"	23'-8"	21'-5"	20'-1"	18'-6"
		23'-7"	21'-10"	20'-5"	18'-11"	24'-1"	21'-10"	20'-5"	18'-11'
	NI-80 NI-90x	24'-3"	22'-6"	21'-3"	19'-7"	24'-8"	22'-7"	21'-3"	19'-7"
	NI-40x	24'-2"	21'-5"	19'-6"	17'-5"	24'-2"	21'-5"	19'-6"	17'-5"
	NI-60	24'-9"	22'-5"	21'-0"	19'-6"	24'-9"	22'-5"	21'-0"	19'-6"
		26'-1"	24'-3"	22'-9"	21'-0"	26'-8"	24'-3"	22'-9"	21'-0"
14"	NI-70	26'-6"	24'-7"	23'-3"	21'-6"	27'-1"	24'-10"	23'-3"	21'-6"
	NI-80	20-5 27'-3"	25'-4"	24'-1*	22'-4"	27'-9"	25'-10"	24'-3"	22'-4"
	NI-90x	27'-3"	24'-11"	23'-5"	21'-7"	27'-6"	24'-11"	23'-5"	21'-7"
	Nt-60	27 -3 28'-8"	26'-8"	25'-3"	23'-4"	291-3"	26'-11"	25'-3"	23'-4"
16 ⁵	NI-70	28 -8 29'-1"	20-0 27'-0"	25'-9"	23'-10"	29'-8"	27'-6"	25'-10"	23'-10"
	NI-80	29'-11"	27'-10"	26'-6"	24'-10"	30'-6"	28'-5"	26'-11"	24'-10"
	NI-90x	79-11	21 -10	- ZQ "Q	27-10	<u>~~~</u>			

^{1.} Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 30 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/480 and a total load deflection limit of L/240.

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.

a live load denection unit or 1/450 and a total load denection limit of 1/240.

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 celling 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 celling attached to joists.

^{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 086-09, 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-L274C.



Maximum Floor Spans Live Load = 40 psf, Dead Load = 15 psf Simple Spans, L/480 Deflection Limit

5/8" OSB G&N Stleathing







			8a	ire			1/2" Gyps	um Ceiling	
Daneh	Series			e Spacing				e Spacing	
Depth	delica	12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	15'-1"	14'-2"	13'-9"	N/A	15'-7"	14'-8"	14'-2"	N/A
	NI-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
9-1/2"	Nt-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	N/A
3-1/2	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A
	NI-80	17'-3"	16'-3"	15'-8"	N/A	17'-8"	16'-7"	16'-0"	N/A
	N1-20	16'-11"	16'-0"	15'-5"	N/A	17'-6"	16'-6"	16'-0"	N/A
	NI-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A
1 1 -7/8"	NI-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
	Nt-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18'-7"	17'-9"	N/A
	NI-80	19'-9"	18'-3"	17'-6"	N/A	20'-4"	18'-10"	17'-11"	N/A
	NI-90x	20'-4"	18'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A
	NI-40x	20'-1"	18'-7"	17'-10"	N/A	20'-10"	19'-4"	18'-6"	N/A
	NI-60	20'-5"	18'-11"	18'-1"	N/A	21'-2"	19'-7"	18'-9"	N/A
14"	NI-70	21'-7"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A
14	NI-80	21'-11"	20'-3"	19'-4"	N/A	22'-7"	20'-11"	20'-0"	N/A
	N1-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
16"	NI-80	23'-11"	22'-1"	21'-1"	N/A	24'-8"	22'-10"	21'-9"	N/A
	NI-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A

		Mid-Span	Blocking	pan Blocking an	and 1/2" Gypsum Ceiling				
Carias				'	On Centre Spacing				
261152	12"			24"	12"	16"	19.2"	24"	
NU-20		15'-3"	14'-5"	N/A	16'-8"	15'-3"	14'-5"	N/A	
		16'-11"	16'-1"	N/A	18'-5"	17' -1"		N/A	
		17'-1"	16'-4"	N/A	18'-7"	17'-4"		N/A	
		17'-10"	17'-2"	N/A	19'-7"	18'-3"		N/A	
-		18'-0"	17'-4"	N/A	19'-10"	18'-5"		N/A	
			17'-3"	N/A	19 -11	18'-3"		N/A	
			18'-8"	N/A	21'-7"	20'-2"	19'-2"	N/A	
•			18'-11"	N/A	21 11	20'-4"	19'-6"	N/A	
			19'-11"	N/A	23'-0"	21'-5"	20'-5"	N/A	
					23'-3"	21'-7"	20'-8"	N/A	
					23'-10"	22'-2"	21'-2"	N/A	
					24'-3"	22'-7"	21'-7"	N/A	
			21'-3"	N/A	24'-8"	22'-11"	21'-11"	N/A	
			22'-3"	N/A	25'-10"	24'-0"	22'-11"	N/A	
			22'-7"		26'-2"	24'-4"	23'-2"	N/A	
			23'-3"		26'-10"	24'-11"	23'-9"	N/A	
			23'-4"	N/A	27'-2"	25'-3"	24'-2"	N/A	
			24'-6"		28'-5"	26'-5"	25'-2"	N/A	
			24'-10"		28'-10"	26'-9"	25*-6"	N/A	
					29'-7"	27'-5"	26'-2"	N/A	
	Series NI-20 NI-40x NI-60 NI-70 NI-80 NI-20 NI-60 NI-70 NI-80 NI-90x NI-60 NI-70 NI-80 NI-90x NI-60 NI-70 NI-80 NI-90x NI-60 NI-70 NI-80 NI-90x	Ni-20 16'-8" Ni-40x 17'-11" Ni-60 18'-2" Ni-80 19'-5" Ni-20 19'-6" Ni-80 21'-0" Ni-60 21'-4" Ni-70 22'-6" Ni-80 22'-9" Ni-90x 23'-4" Ni-40x 23'-7" Ni-60 24'-0" Ni-70 25'-3" Ni-80 25'-7" Ni-90x 26'-4" Ni-90x 26'-5" Ni-70 26'-5" Ni-70 27'-9" Ni-80 28'-2"	Series	12" 16" 19.2"	Series	Series	Series	Series	

^{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 Ulimate 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/480 and a total load deflection limit of L/240.

a live to an deflection wint of 19-40 and a cotation of the control of the composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.

^{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-L274C.



Maximum Floor Spans

Live Load = 40 psf, Dead Load = 15 psf Simple Spans, L/480 Deflection Limit 3/4* OSB G&N Sheathing







			Ва	are			1/2" Gyps	ium Ceiling	3 24" 24" " 13'-5" 0" 15'-2" 1" 15'-3" " 15'-11"					
0-46	Serles			e Spacing			On Centre Spacing							
Depth	Series	12"	16"	19.2"	24"	12"	16"	19.2"						
	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"						
	NI-40x	17'-0"	16'-0"	15'-5"	14'-9"	17'-5"	16'-5"	15'-10"						
0.4/20	NI-40X	17'-2"	16'-2"	15'-7"	14'-11"	17'-6"	16'-7"	15'-11"						
9-1/2"	NI-30	18'-0"	16'-11"	16'-3"	15'-7"	18'-5"	17'-3"	16'-7"						
	NI-80	18'-3"	17¹-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"						
	NI-20	17'-10"	16'-10"	16'-2"	15'-6"	18'-6"	17'-4°	16'-9"	16'-1"					
		19'-4"	17'-11"	17'-3"	16'-6"	19'-11"	18'-6"	17'-9"	17'-0"					
	NI-40x	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"					
11-7/8"	NI-60	20'-9"	19'-2"	18'-3"	17'-5"	21'-4"	19'-9"	18'-10"	17'-10"					
,	NI-70	20'-5"	19'-5"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"					
	NI-80	21'-8"	20'-0"	19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"					
	NI-90x	21'-5"	19'-10"	18'-11"	17'-11"	22'-1"	20'-6"	19'-7"	18'-7"					
	NI-40x	21'-3 21 '-1 0"	20'-2"	19'-3"	18'-2"	22'-5"	20'-10"	19'-11"	18'-10"					
	N1-60	21'-10	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	20'-10"	19'-9"					
14"	NI-70	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"					
	NI-80		22'-3"	21'-2"	20'-0"	24'-8"	22'-10"	21'-9"	20'-7"					
	NI-90x	24'-1"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-8"	20'-6"					
	NI-60		23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9*	21'-6"					
16"	NI-70	25'-1"	23 -2 23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"					
10	NI-80	25'-6"		23'-1"	21'-10"	26'-11"	24'-11"	23'-8*	22'-5"					
	NI-90x	26'-4"	24'- <u>3"</u>	79 - Y	21-10	20-11								

			Mid-Spar	Blocking		Mid-Span Blocking and 1/2" Gypsur					
O4h	Series			e Spacing			e Spacing				
Depth	361169	12"	16"	19.2"	24"	12"	16"	19.2"	24"		
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"		
		18'-8"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"		
LAN	NI-40x	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"		
9-1/2"	NI-60	20'-0"	18'-7"	17'-9"	16'-7"	20'-5"	18'-11"	17'-10"	16'-7"		
	NI-70	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10"		
	NI-80	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"		
	NI-20	20-1	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-8"		
	NI-40x		20'-7"	19'-7"	18 ¹ -4"	22'-8"	20'-10"	19'-8"	18'-4"		
11-7/8"	N1-60	22'-1"	20 <i>-7</i> 21'-8"	20'-8"	19'-7"	23'-10"	22'-3"	21'-2"	19'-9"		
11-770	NI-70	23'-4"	21'-11"	20'-11"	19'-9"	24'-1"	22'-6"	21'-5"	20'-0"		
	NI-80	231-7"		21'-6"	20'-4"	24'-8"	23'-0"	22'-0"	20'-9"		
	N1-90x	24'-3"	22'-6"	21'-8"	19'-5"	25'-1"	23'-2"	21'-9"	19'-5"		
	NI-40x	24'-5"	22'-9"	21-0	20' -1 0"	25'-6"	23'-8"	22'-4"	20'-10"		
	NI-60	24'-10"	23'-1"	23'-2"	21'-10"	26'-8"	24'-11"	23'-9"	22'-4"		
14°	NI-70	26'-1"	24'-3"	23'-5"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"		
	NI-80	26'-6"	24'-7"		22'-9"	27'-9"	25'-11"	24'-8"	23'-4"		
	NI-90x	27'-3"	25'-4"	24'-1"	22'-10"	28'-0"	261-2"	24'-9"	23'-1"		
	NI-60	27'-3"	25'-5"	24'-2"		29'-3"	20 -2 27'-4"	26'-1"	24'-8"		
	N1-70	28'-8"	26'-8"	25'-4"	23'-11"		27 -4 27'-9"	26'-5"	25'-0"		
16"	NI-80	29'-1"	27'-0"	25'-9"	24'-4"	29'-8"		20 -5 27'-2"	25'-8"		
	NI-90x	29'-11"	27'-10"	26'-6"	25'-0"	30'-6"	28'-5"	21-2	45 -0		

^{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/480 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-L274C.



Maximum Floor Spans

Live Load = 40 psf; Dead Load = 30 psf Simple Spans, L/480 Deflection Limit 5/8" OSB G&N Sheathing







			88	are		i	1/2" Gyps	um Ceiling	
Depth	Series		On Centr	e Spacing			e Spacing		
nehru	361163	12"	16"	19.2"	24"	12"	16"	19.2°	24"
	NI-20	15'-1"	14'-1"	13'-3"	N/A	15'-7"	14'-1"	13'-3"	N/A
	N1-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
9-1/2"	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	N/A
3-1/2	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A
	NI-80	17'-3"	16'-3"	15'-8"	N/A	17'-8"	16'-7"	16'-0"	N/A
	NI-20	16'-11"	16'-0"	15'-5"	N/A	17'-6"	16'-6"	16'-0"	N/A
	NI-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A
	N1-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
11-7/8"	NI-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18'-7"	17'-9"	N/A
	NI-80	19'-9"	18'-3"	17'-6"	N/A	20'-4"	18'-10"	17'-11"	N/A
	NI-90x	20'-4"	18'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A
	NI-40x	20'-1"	18'-7"	17'-10"	N/A	20'-10"	19'-4"	18'-6"	N/A
1	NI-60	20'-5"	18'-11"	18'-1"	N/A	21'-2"	19'-7"	18'-9"	N/A
14"	N1-70	21'-7"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A
14	NI-80	21'-11"	20'-3"	19'-4"	N/A	22'-7"	20'-11"	20'-0"	N/A
	NI-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
16"	NI-80	23'-11"	22'-1"	21'-1"	N/A	24'-8"	22'-10"	21'-9"	N/A
•	NI-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A

Depth	Series	Mid-Span Blocking On Centre Spacing				Mid-Span Blocking and 1/2" Gypsum Ceiling On Centre Spacing			
		9-1/2"	NI-20	15'-7"	14'-1"	13'-3"	N/A	15'-7"	14'-1"
NI-40x	17'-9"		16'- 1 "	15'-1"	N/A	17'-9"	16'-1"	15'-1"	N/A
NI-60	18'-1"		16'-4"	15'-4"	N/A	18'-1"	16'-4"	15'-4"	N/A
NI-70	19'-2"		17'-10"	16'- 9 "	N/A	19'-7"	17'-10"	16'-9"	N/A
N1-80	19'-5"		18'-0"	17'-1"	N/A	19'-10"	18'-3"	17'-1"	N/A
11-7/8"	NI-20	18'-9"	17'-0"	16'-0"	N/A	18'-9"	1 7'-0"	16'-0"	N/A
	NI-40x	21'-0"	19'-3"	17'-9"	N/A	21'-3"	19'-3"	1 7′- 9"	N/A
		21-4"	19'-8"	18'-5"	N/A	21'-8"	19'-8"	18'-5"	N/A
	NI-60	22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-4"	20'-0"	N/A
	N1-70	22'-9"	21'-1"	20'-1"	N/A	23¹-3"	21'-7"	20'-5"	N/A
	ŅI-80	22-9 23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
	NI-90x	23'-7"	21'-5"	19'-6*	N/A	24'-1"	21'-5"	19'-6"	N/A
14"	NI-40x		21-3 22'-3"	21'-0"	N/A	24'-8"	22'-5"	21'-0"	N/A
	NI-60	24'-0"	22-3 23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-9"	N/A
	N1-70	25'-3"	23'-8"	22'-7"	N/A	26'-2"	24'-4"	23'-2"	N/A
	NI-80	25'-7"		23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
	NI-90x	26'-4"	24'-4"			27'-2"	24'-10"	23'-4"	N/A
16"	NI-60	26'-5"	24'-6"	23'-4"	N/A	28'-5"	26'-5"	25'-2"	N/A
	N1-70	27'-9"	25'-8"	24'-6"	N/A	28'-10"	26'-9"	25 - 2 25'- 6"	N/A
	NI-80	28'-2"	26'-1"	24'-10"	N/A	4			
	NI-90x	29'-0",	26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-2"	N/A

^{1.} Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 30 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/480 and a total load deflection limit of L/240.

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

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

^{2.} Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less. The composite floor may include 1/2 inch gypsum celling 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.

^{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-L274C.

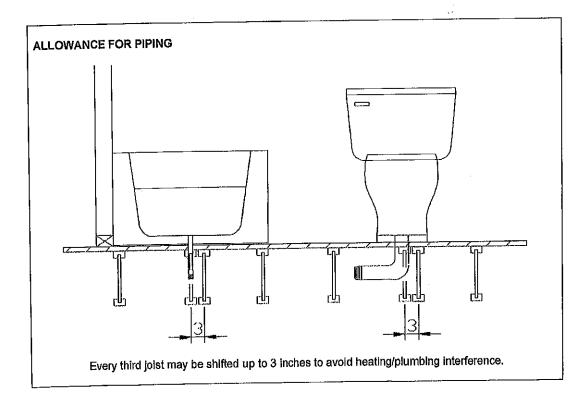


Allowance for Piping (Installation Notes)

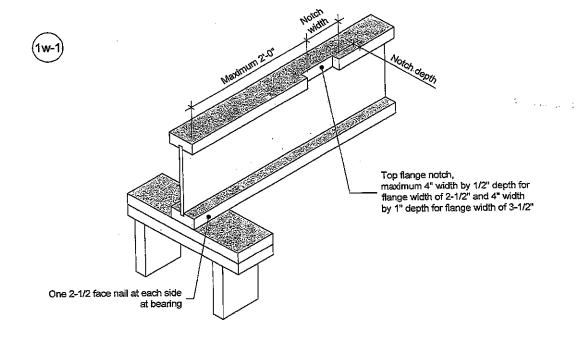
The floor layouts have usually not been checked for heating and/or plumbing interference. On-site adjustment of joists of up to 3 inches is permitted to avoid interferences. When moving a joist, the subfloor thickness shall be checked with code requirements when the joist spacing exceeds 19.2 inches. Except for cutting to length, I-joist flanges should never be cut, drilled, or notched.

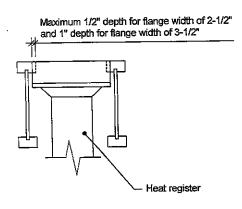
Installation of Nordic I-joists shall be as per *Nordic Joist Installation Guide for Residential Floors*. Refer to Tables 1 and 2 for maximum web hole and duct chase openings, respectively. These tables are based on the I-joists being used at their maximum spans. The minimum distance given may be reduced for shorter spans; contact your distributor for additional information.

The detail below shows the 3-inch allowance for piping. Every third joist may be shifted up to 3 inches to avoid heating/plumbing interference. For other applications, please contact your distributor.



Revised April 12, 2012





- 1. Blocking required at bearing for lateral support, not shown for clarity.
- 2. The maximum dimensions for a notch on the side of the top flange are 4-inch width by 1/2-inch depth for flange width of 2-1/2 inches, and 4-inch width by 1-inch depth for flange width of 3-1/2 inches.
- 3. This detail applies to simple-span joists and multiple-span joists where the notch is located at the end half-span.
 4. For other applications, contact Nordic Structures.

This document supersedes all previous versions. If the document has been in effect for more than one year, consult nordic.ca or contact Nordic Structures. All nails shown in the details are assumed to be common nails unless otherwise noted. Nails shall have a diameter not less than 0.128 inch for 2-1/2-inch nails, or 0.144 inch for 3-inch nails. Individual components not shown to scale for clarity.

NORDIC **STRUCTURES**

T 514-871-8526 1866 817-3418 nordic.ca

Notch in I-joist for Heat Register

CATEGORY I-joist - Typical Floor Framing and Construction Details

DOCUMENT

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