

		Products			
PlotID	Length	Product	Plies	Net Qty	Fab Type
J1	18-00-00	11 7/8" NI-40x	1	14	MFD
J1DJ	18-00-00	11 7/8" NI-40x	2	8	MFD
J2	16-00-00	11 7/8" NI-40x	1	13	MFD
J2DJ	16-00-00	11 7/8" NI-40x	2	4	MFD
J3	14-00-00	11 7/8" NI-40x	1	11	MFD
J4	10-00-00	11 7/8" NI-40x	1	5	MFD
J5	8-00-00	11 7/8" NI-40x	1	2	MFD
J6	6-00-00	11 7/8" NI-40x	1	7	MFD
J7	4-00-00	11 7/8" NI-40x	1	6	MFD
J8	2-00-00	11 7/8" NI-40x	1	2	MFD
B1	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
B5	10-00-00	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	1	1	MFD
B2	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
B4	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
B7	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
B8	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
B9	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD

D-----

OCT 0 6 2020

DATE\_\_

REC BY

			~
		Connecto	r Summary
	Qty	Manuf	Product
	12	H1	IUS2.56/11.88
	6	H1	IUS2.56/11.88
	8	H1	IUS2.56/11.88
l	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

These drawings and/or specifications have been reviewed by

Dec 10/20

FOR CHIEF BUILDING OFFICIAL



### FROM PLAN DATED:

**BUILDER: GREENPARK HOMES** 

SITE: RUSSELL GARDENS PH 3

**MODEL: VALLEYCREEK 3** 

**ELEVATION: 1.2** 

LOT:

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.

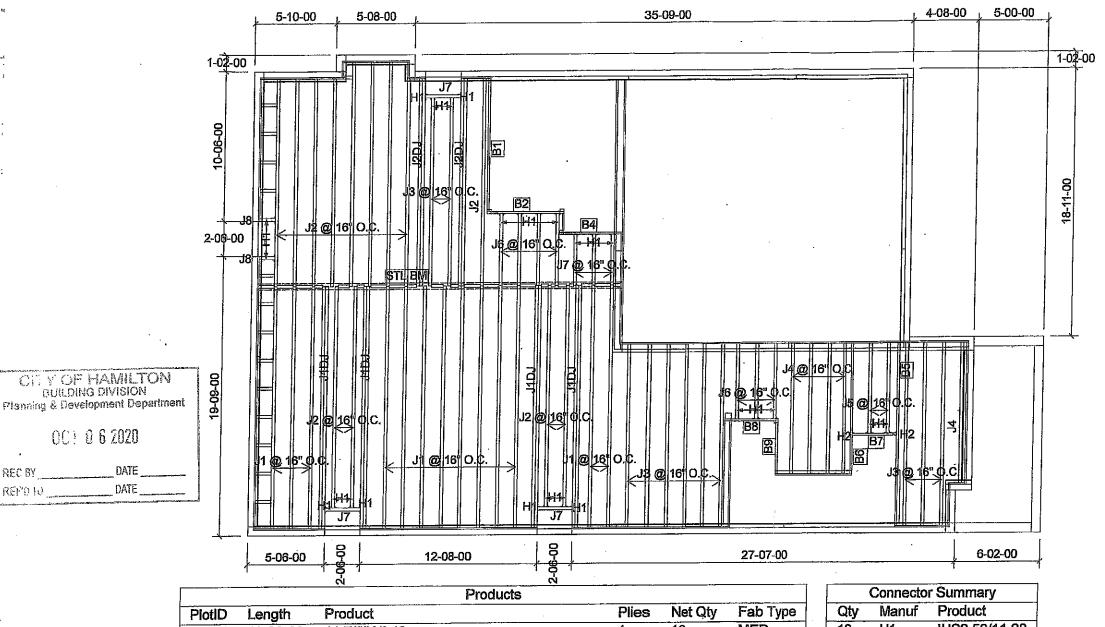
### LOADING:

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

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 2020-02-20

## 1st FLOOR



	!		rioducis			
	PiotID	Length	Product	Plies	Net Qty	Fab Type
	J1	18-00-00	11 7/8" NI-40x	1	13	MFD
	J1DJ	18-00-00	11 7/8" Ni-40x	2	8	MFD
	J2	16-00-00	11 7/8" NI-40x	1	13	MFD
	J2DJ	16-00-00	11 7/8" NI-40x	2	4	MFD
	J3	14-00-00	11 7/8" NI-40x	1	11	MFD
	J4	10-00-00	11 7/8" NI-40x	1	5	MFD
	J5	8-00-00	11 7/8" NI-40x	1	2	MFD
Ì	J6	6-00-00	11 7/8" NI-40x	1	7	MFD
1	J7	4-00-00	11 7/8" NI-40x	1	6	MFD
ļ	J8	2-00-00	11 7/8" Ni-40x	1	2	MFD
1	B1\	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
	B5 \	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
١	В6	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
1	B2	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
/	B4	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
	B7	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
(	В8 (	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
Ì	B9 )	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD

REC BY

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

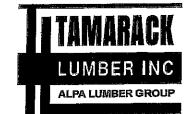
CITY OF HAMILTON **Building Division** 

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

These drawings and/or specifications have been reviewed by

Dec 10/20 JDC FOR CHIEF BUILDING OFFICIAL



FROM PLAN DATED:

**BUILDER: GREENPARK HOMES** 

SITE: RUSSELL GARDENS PH 3

**MODEL: VALLEYCREEK 3** 

**ELEVATION: 3** 

LOT:

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.

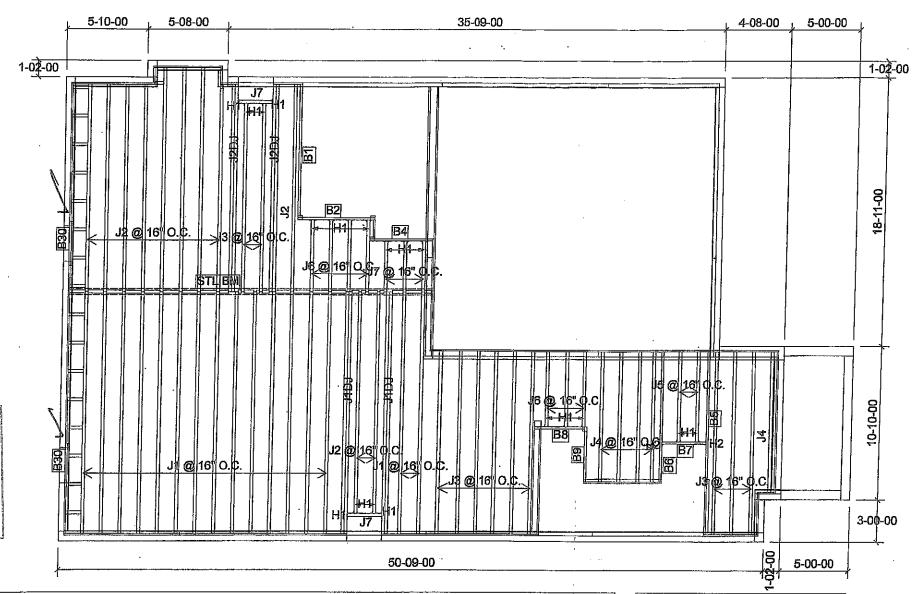
LOADING:

DESIGN LOADS: L/480,000 LIVE LOAD: 40.0 lb/ft2 DEAD LOAD: 20.0 lb/ft<sup>2</sup>

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 2020-02-20

1st FLOOR



-			Products		,	
	PlotID	Length	Product	Plies	Net Qty	Fab Type
Γ.	J1 ·	18-00-00	11 7/8" NI-40x	1	16	MFD
.	J1DJ	18-00-00	11 7/8" NI-40x	2	4	MFD
,	12	16-00-00	11 7/8" NI-40x	1	11	MFD
Ι.	J2DJ	16-00-00	11 7/8" NI-40x	2	4	MFD
١,	J3	14-00-00	11 7/8" NI-40x	1	11	MFD
,	J4	10-00-00	11 7/8" NI-40x	1	5 '	MFD
ل	15	8-00-00	11 7/8" NI-40x	1	2	MFD
ل ا	16	6-00-00	11 7/8" NI-40x	1	7	MFD
ال	17	4-00-00	11 7/8" NI-40x	1	5 .	MFD
E	31)	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
E	35	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
E	36	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
ĮΕ	32	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
/ E	14	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
В	7	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
В	8	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
<b>€</b> B	رو	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
~007	30	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	4	MFD:

CITY OF HAMILTON

Planning & Development Department

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		4-			
	Connector Summary				
Qty	Manuf	Product			
12	H1	IUS2.56/11.88			
4	H1	IUS2.56/11.88			
4	H1	IUS2.56/11.88			
2	H2	HUS1.81/10			

### CITY OF HAMILTON Building Division

Permit No.\_\_\_\_\_

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

These drawings and/or specifications have been reviewed by

inese drawings a

FOR CHIEF BUILDING OFFICIAL

Dec 10/20

DATE

IAMAKAGK
LUMBER INC
ALPA LUMBER GROUP

### FROM PLAN DATED:

**BUILDER: GREENPARK HOMES** 

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 3

**ELEVATION: 1,2** 

LOT:

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:

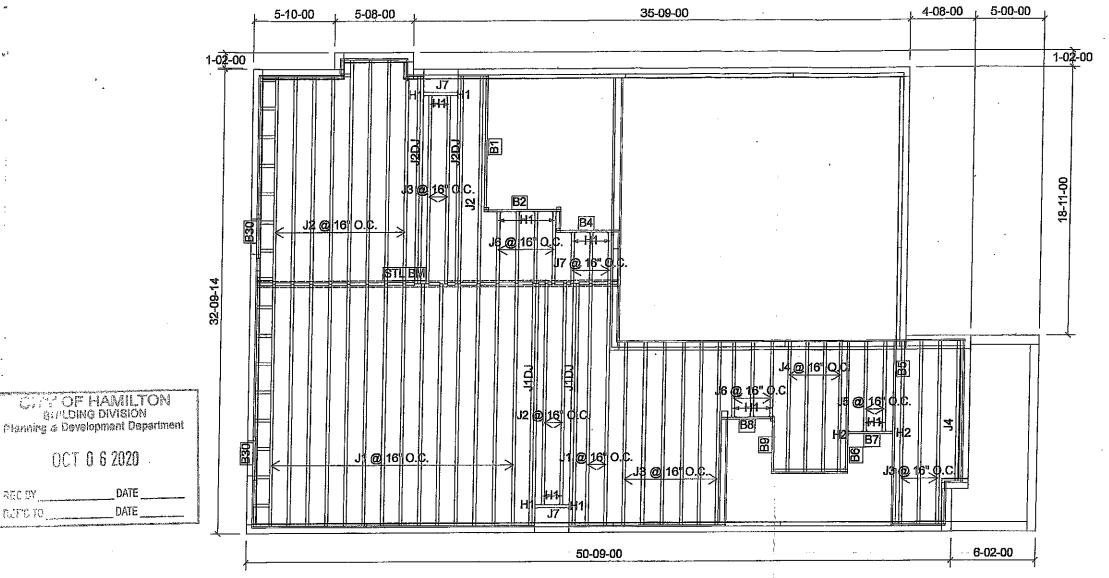
DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft<sup>2</sup> DEAD LOAD: 20.0 lb/ft<sup>2</sup>

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	16	MFD
	J1DJ	18-00-00	11 7/8" NI-40x	2	4	MFD
	J2	16-00-00	11 7/8" NI-40x	1	11	MFD ,
	J2DJ	16-00-00	11 7/8" NI-40x	2	4	MFD
	J3	14-00-00	11 7/8" NI-40x	1	11	MFD
	J4	10-00-00	11 7/8" NI-40x	1	5	MFD
Į	J5	8-00-00	11 7/8" NI-40x	1	2	MFD
	J6	6-00-00	11 7/8" NI-40x	1	7	MFD
	J7	4-00-00	11 7/8" NI-40x	1	5	MFD
	B1	10-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
ĺ	B5	10-00-00	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	1	1	MFD:
1	B2	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
	B4	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD !
ļ	B7	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD .
ļ	B8	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
	B9	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
1	B30	4-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	4	MFD

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DATE

DATE

Connector Summary					
Qty	Qty Manuf Product				
12	H1	JUS2.56/11.88			
4	H1	IUS2.56/11.88			
4	H1	IUS2.56/11.88			
2	H2	HUS1.81/10			

CITY OF HAMILTON Building Division

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These drawings and/or specifications have been reviewed by

JDC FOR CHIEF BUILDING OFFICIAL



### FROM PLAN DATED:

**BUILDER: GREENPARK HOMES** 

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 3

**ELEVATION: 3** 

LOT:

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:

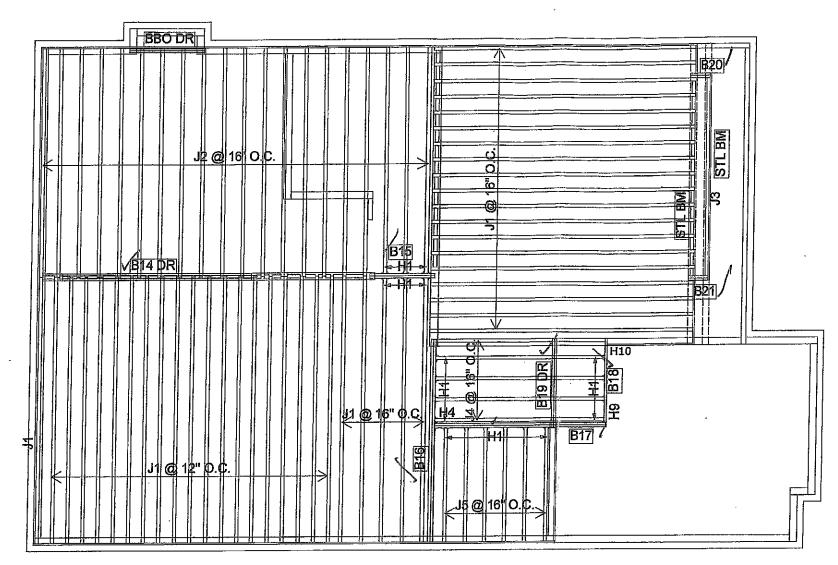
DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft2 DEAD LOAD: 20.0 lb/ft2

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 2020-03-24

## 1st FLOOR

**DECK CONDITION** 



CITY OF HAMILTON
BUILDING DIVISION
Planning & Development Department

OCT 0 6 2020

REC BY \_\_\_\_\_ DATE \_\_\_\_ REF'D TO DATE

		Products			
PlotID	Length	Product	Plies	Net Qty	Fab Type
J1	18-00-00	11 7/8" NI-40x	1	44	MFD
J2	16-00-00	11 7/8" NI-40x	1	20	MFD
J3	14-00-00	11 7/8" NI-40x	1	1	MFD
J4	12-00-00	11 7/8" NI-40x	1	5	MFD
J5	8-00-00	11 7/8" NI-40x	1	6	MFD
B16	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
/ B14 DR	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3	MFD ·
∦ B17	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
B18	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
B15	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
B19 DR	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
B20 /	2-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
B21	2-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD

	Connector Summary				
Qty	Manuf	Product			
4	H1	IUS2.56/11.88			
16	H1	IUS2.56/11.88			
1	H4	HGUS410			
1	H9	LS90			
1 -	H10	H2.5A*			

CITY OF HAMILTON
Building Division

Permit No. 197770

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These drawings and/or specifications have been reviewed by

SDC

\_ Dec 10/20

FOR CHIEF BUILDING OFFICIAL

DATE



FRON PLAN DATED:

**BUILDER: GREENPARK HOMES** 

SITE: RUSSELL GARDENS PH 3

**MODEL: VALLEYCREEK 3** 

**ELEVATION: 1** 

LOT:

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

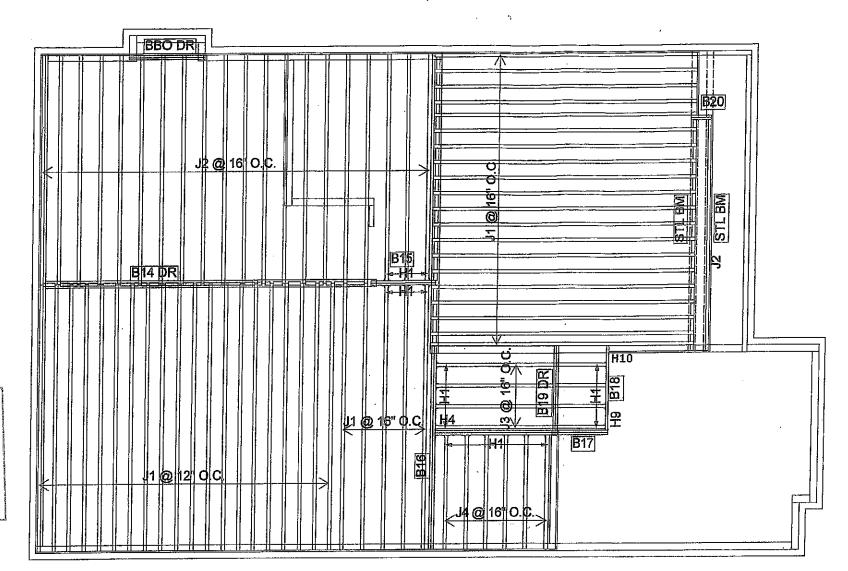
LOADING:

DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft<sup>2</sup> DEAD LOAD: 20.0 lb/ft<sup>2</sup>

**SUBFLOOR:** 5/8" GLUED AND NAILED

**DATE:** 2020-02-21

# 2nd FLOOR



CITY OF HAMILTON
BUILDING DIVISION
Planning & Development Department

OC | 6 6 2020

REC BY \_\_\_\_\_\_DATE \_\_\_\_

			Products			
	PlotID	Length	Product	Plies	Net Qty	Fab Type
	J1	18-00-00	11 7/8" NI-40x	1	45	MFD
	J2	16-00-00	11 7/8" NI-40x	1	21	MFD
	J3	12-00-00	11 7/8" NI-40x	1	4	MFD
	J4	8-00-00	11 7/8" NI-40x	1	6	MFD
	B16	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
	B14 DR	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3	MFD
ΛΙ	B17	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
	B18 /	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
	B15	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
	B19 DR	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
	B20	2-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
٩						···

	Connector Summary				
Qty	Qty Manuf Product				
4	H1	IUS2.56/11.88			
16	H1	IUS2.56/11.88			
1	H4	HGUS410			
1	H9	LS90			
1	H10	H2.5A*			

CITY OF HAMILTON
Building Division

Permit No.

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These drawings and/or specifications have been reviewed by

10C

Dec 10/20

FOR CHIEF BUILDING OFFICIAL

ATE



FROM PLAN DATED:

**BUILDER: GREENPARK HOMES** 

SITE: RUSSELL GARDENS PH 3

**MODEL: VALLEYCREEK 3** 

**ELEVATION: 2** 

LOT:

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

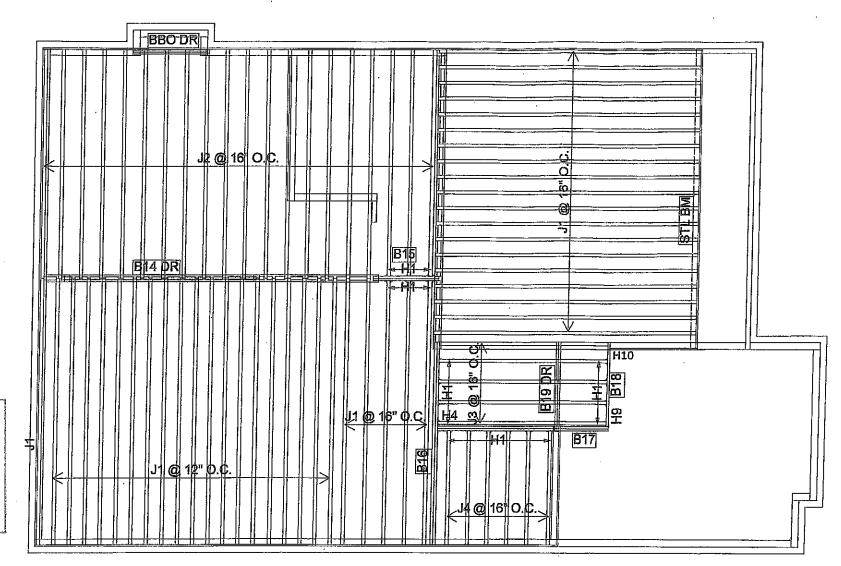
LOADING:

DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft<sup>2</sup> DEAD LOAD: 20.0 lb/ft<sup>2</sup>

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 2020-02-21

2nd FLOOR



CITY OF HAMILTON BUILDING DIVISION anning & Development Department

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		Products			
PlotID	Length	Product	Plies	Net Qty	Fab Type
J1	18-00-00	11 7/8" NI-40x	1	44	MFD
J2	16-00-00	11 7/8" NI-40x	1	20	MFD
J3	12-00-00	11 7/8" NI-40x	1.	5	MFD
J4	8-00-00	11 7/8" NI-40x	1	6	MFD
B16 \	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
B14 DR	14-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	3	3	MFD
B17	12-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
B18	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	1	1	MFD
B15	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD
B19 DR	6-00-00	1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP	2	2	MFD

	Connecto	r Summary
Qty	Manuf	Product
4	H1	IUS2.56/11.88
16	H1	IUS2.56/11.88
1	H4	HGUS410
1	H9	LS90
1	H10	H2.5A*

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

These drawings and/or specifications have been reviewed by

SDY

FOR CHIEF BUILDING OFFICIAL



### FROM PLAN DATED:

**BUILDER: GREENPARK HOMES** 

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 3

**ELEVATION: 3** 

LOT:

**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/ft<sup>2</sup>

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 2020-02-21

2nd FLOOR





### / 1ST FLR FRAMING\Flush Beams\B30(i5007) (Flush Beam) Dry | 1 span | No cant,

Passed

March 24, 2020 15:43:43

**BC CALC® Member Report** 

Build 7239 Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer: Code reports:

CCMC 12472-R

File name:

VALLEYCREEK 3 EL 1 DECK CONDITION.mmdl

Description: 1ST FLR FRAMING\Flush Beams\B30(i5007)

Dead

0.65

12

102

13

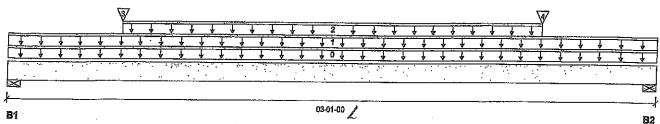
8 8

Specifier:

Designer: AJ

Wind

Company:



Total Horizontal Product Length = 03-01-00

Snow

Reaction Summary (Down / Uplift) (fbs)

Live Dead B1. 3" 90/0 197 / 0 B2, 3" 90/0 197/0

ad Summary						Live
Description	Load Type	Ref.	Start	End .	Loc.	1.00
Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Top	
E13(i1289)	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Top	31
FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-06-08	02-06-08	Top	27
Bk2(i4987)	Conc. Pt. (lbs)	L	00-06-08	00-06-08	Тор	16
Bk2(i4995)	Conc. Pt. (lbs)	L	02-06-08	02-06-08	Тор	16
	Self-Weight E13(i1289) FC1 Floor Material Bk2(i4987)	DescriptionLoad TypeSelf-WeightUnf. Lin. (lb/ft)E13(i1289)Unf. Lin. (lb/ft)FC1 Floor MaterialUnf. Lin. (lb/ft)Bk2(i4987)Conc. Pt. (lbs)	Description         Load Type         Ref.           Self-Weight         Unf. Lin. (lb/ft)         L           E13(i1289)         Unf. Lin. (lb/ft)         L           FC1 Floor Material         Unf. Lin. (lb/ft)         L           Bk2(i4987)         Conc. Pt. (lbs)         L	Description         Load Type         Ref.         Start           Self-Weight         Unf. Lin. (lb/ft)         L         00-00-00           E13(i1289)         Unf. Lin. (lb/ft)         L         00-00-00           FC1 Floor Material         Unf. Lin. (lb/ft)         L         00-06-08           Bk2(i4987)         Conc. Pt. (lbs)         L         00-06-08	Description         Load Type         Ref.         Start         End           Self-Weight         Unf. Lin. (lb/ft)         L         00-00-00         03-01-00           E13(i1289)         Unf. Lin. (lb/ft)         L         00-00-00         03-01-00           FC1 Floor Material         Unf. Lin. (lb/ft)         L         00-06-08         02-06-08           Bk2(i4987)         Conc. Pt. (lbs)         L         00-06-08         00-06-08	Description         Load Type         Ref.         Start         End         Loc.           Self-Weight         Unf. Lin. (lb/ft)         L         00-00-00         03-01-00         Top           E13(i1289)         Unf. Lin. (lb/ft)         L         00-00-00         03-01-00         Top           FC1 Floor Material         Unf. Lin. (lb/ft)         L         00-06-08         02-06-08         Top           Bk2(i4987)         Conc. Pt. (lbs)         L         00-06-08         00-06-08         Top

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	166 ft-lbs	23005 ft-lbs	0.7%	0	01-06-08
End Shear	124 lbs	14464 lbs	0.9%	1	01-02-14
Total Load Deflection	L/999 (0")	n <b>\a</b>	n\a	4	01-06-08
Live Load Deflection	L/999 (O")	n\a	n\a	5	01-06-08
Max Defl.	0"	n <del>la</del>	n\a	4	01-06-08
Span / Depth	97				

Bearing	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	3" x 3-1/2"	276 lbs	6.6%	3.3%	Spruce-Pine-Fir
B2	Wail/Plate	3" x 3-1/2"	276 lbs	6.6%	3.3%	Spruce-Pine-Fir

#### Notes

1 57 7

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

Resistance Factor phi has been applied to all presented results per CSA O86. Resistance Factor phi has been applied to all presented results per CSA 086. [MENDER 2020] 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

PROVIDE3 ROWS OF 3½" ARDOX SPIRAL NAILS @ 8 "O/G FOR MULTI-PLY NAILING, MAINTAIN A MIN.2" LUMBER EDGE/END DISTANCE, DO NOT USE AIR HAILS



Wind

1.15

Tributary

00-00-00

n\a

n\a

n\a

Snow

1.00

### 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®,

## NORDIC STRUCTURES

COMPANY Feb. 19, 2020 09:13 PROJECT
J1 2ND FLOOR.wwb

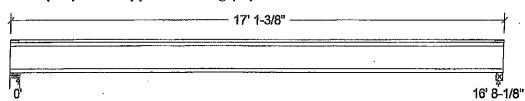
### **Design Check Calculation Sheet**

Nordic Sizer - Canada 7.2

### Loads:

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

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



Unfactored: Dead Live	222 445	· ·	222 445
Factored:	0.45	,	0.45
Total	945	,	945
Bearing:			<del>                                     </del>
Capacity			1
Joist	2336		2138
Support	7735	•	4043
Des ratio			1 1
Joist	0.40		0.44
Support	0.12	•	0.23
Load case	#2		#2
Length	4-3/8		2-5/8
Min req'd	1-3/4	•	1-3/4
Stiffener	No	•	No
KD I	1.00		1.00
KB support	-		1.00
fcp sup	769		769
Kzcp sup	-		1.00

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 @ 16" o.c.

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

Total length: 17' 1-3/8"; Clear span: 16' 6-3/8"; 5/8" nailed and glued OSB sheathing with 1/2" gypsum ceiling

This section PASSES the design code check.

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

Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	Vf = 945	Vr = 2336	lbs	yf/vr = 0.40
Moment (+)	Mf = 3940	Mr = 6255	lbs-ft 🥕	$Q^{\text{CMF/MMc}} = 0.63$
Perm. Defl'n	0.12 = < L/999	0.56 = L/360	in /o	0.21
Live Defl'n	0.24 = L/847	0.42 = L/480	in /s/	greno 0.0.57
Total Defl'n	0.35 = L/564	0.83 = L/240	in /5	祭0.42
Bare Defl'n	0.28 = L/717	0.56 = L/360	in 😫 s	KATSOULAKOS D.50
Vibration	Lmax = 16'-8.1	Lv = 17'-8.1	it i l	// O.94
Defl'n	= 0.032	= 0.038	in \	0.83

OLINCE OF CONTROL STRUCTURAL

COMPONENT ONLY

### WoodWorks® Sizer

#### for NORDIC STRUCTURES

### J1 2ND FLOOR.wwb

#### Nordic Sizer - Canada 7.2

Page 2

ıl Data:									
f/E	KD	KH	KZ	$\mathtt{KL}$	KT	KS	KN	LC#	
2336	1.00	1.00		_	_		-	#2	
6255	1.00	1.00	-	1.000			_		
371.1 mi	illion	_	_	_	-	_		#2	
OAD COMBI	NATIONS	<b>)</b> ;							
: LC #2	= 1.25	D + 1.51	<u></u>						
) : LC #2	= 1.25	5D + 1.51	<u>.</u>					•	
on: LC #1	= 1.00	) (perma	anent)						
LC #2	= 1.00	) + 1.0L	(live)						
LC #2	= 1.00	+ 1.0L	(bare	ioist)					
	t 2 - L	C #2 = 1	.25D +	1.5L					
es: D=dead	W=win	d S≔sno	w H=ea	rth, groun	ndwater	E=eart	thouake		
ONS:									
- · ·	in^2 K	= 6.18e	06 lbs				eass	eadus Ta	ABC 2012
				loads (1	live. wi	ind. sno			
							,	AMENDED	2020
	f/E 2336 6255 371.1 mf OAD COMBI : LC #2 ): LC #2 on: LC #1 LC #2 LC #2 LC #2 : Suppor Suppor es: D=dead L=live terns: s=S Combinati DNS: 47.63 lb-	f/E KD 2336 1.00 6255 1.00 371.1 million OAD COMBINATIONS : LC #2 = 1.25 01: LC #2 = 1.00 CC #2	f/E KD KH 2336 1.00 1.00 6255 1.00 1.00 371.1 million - OAD COMBINATIONS: : LC #2 = 1.25D + 1.55 on: LC #1 = 1.0D (permate	f/E KD KH KZ 2336 1.00 1.00 - 6255 1.00 1.00 - 371.1 million OAD COMBINATIONS: : LC #2 = 1.25D + 1.5L ): LC #2 = 1.25D + 1.5L on: LC #1 = 1.0D (permanent) LC #2 = 1.0D + 1.0L (live) LC #2 = 1.0D + 1.0L (total LC #2 = 1.0D + 1.0L (bare : Support 1 - LC #2 = 1.25D + Support 2 - LC #2 = 1.25D + es: D=dead W=wind S=snow H=ea L=live(use,occupancy) Ls=literns: s=S/2 L=L+Ls =no patte Combinations (LCs) are listed in DNS: 47.63 lb-in^2 K= 6.18e06 lbs	f/E KD KH KZ KL 2336 1.00 1.00 6255 1.00 1.00 - 1.000 371.1 million OAD COMBINATIONS: : LC #2 = 1.25D + 1.5L ): LC #2 = 1.25D + 1.5L on: LC #1 = 1.0D (permanent) LC #2 = 1.0D + 1.0L (live) LC #2 = 1.0D + 1.0L (total) LC #2 = 1.0D + 1.0L (bare joist) : Support 1 - LC #2 = 1.25D + 1.5L support 2 - LC #2 = 1.25D + 1.5L es: D=dead W=wind S=snow H=earth, ground L=live(use, occupancy) Ls=live(storage terms: s=S/2 L=L+Ls _=no pattern load of the Combinations (LCs) are listed in the Analons: 47.63 lb-in^2 K= 6.18e06 lbs	f/E KD KH KZ KL KT 2336 1.00 1.00 6255 1.00 1.00 - 1.000 - 371.1 million OAD COMBINATIONS: : LC #2 = 1.25D + 1.5L ): LC #2 = 1.25D + 1.5L on: LC #1 = 1.0D (permanent) LC #2 = 1.0D + 1.0L (live) LC #2 = 1.0D + 1.0L (total) LC #2 = 1.0D + 1.0L (bare joist) : Support 1 - LC #2 = 1.25D + 1.5L support 2 - LC #2 = 1.25D + 1.5L es: D=dead W=wind S=snow H=earth, groundwater L=live(use, occupancy) Ls=live(storage, equiterns: s=S/2 L=L+Ls =no pattern load in this Combinations (LCs) are listed in the Analysis ons: 47.63 lb-in^2 K= 6.18e06 lbs	f/E KD KH KZ KL KT KS 2336 1.00 1.00 6255 1.00 1.00 - 1.000 371.1 million OAD COMBINATIONS:  : LC #2 = 1.25D + 1.5L ): LC #2 = 1.25D + 1.5L on: LC #1 = 1.0D (permanent)  LC #2 = 1.0D + 1.0L (live)  LC #2 = 1.0D + 1.0L (total)  LC #2 = 1.0D + 1.0L (bare joist)  : Support 1 - LC #2 = 1.25D + 1.5L support 2 - LC #2 = 1.25D + 1.5L es: D=dead W=wind S=snow H=earth, groundwater E=earth L=live(use, occupancy) Ls=live(storage, equipment) terns: s=S/2 L=L+Ls =no pattern load in this span Combinations (LCs) are listed in the Analysis output DNS: 47.63 lb-in^2 K= 6.18e06 lbs	<pre>f/E</pre>	f/E KD KH KZ KL KT KS KN LC# 2336 1.00 1.00 #2 6255 1.00 1.00 - 1.000 #2 371.1 million #2  OAD COMBINATIONS:  : LC #2 = 1.25D + 1.5L ): LC #2 = 1.25D + 1.5L on: LC #1 = 1.0D (permanent)     LC #2 = 1.0D + 1.0L (live)     LC #2 = 1.0D + 1.0L (total)     LC #2 = 1.0D + 1.0L (bare joist) : Support 1 - LC #2 = 1.25D + 1.5L es: D=dead W=wind S=snow H=earth, groundwater E=earthquake     L=live(use, occupancy) Ls=live(storage, equipment) f=fire terns: s=S/2 L=L+Ls =no pattern load in this span Combinations (LCs) are listed in the Analysis output  ONS: 47.63 lb-in^2 K= 6.18e06 lbs  iflection is due to all non-dead loads (live, wind, snow)

### **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.



BWB NO. TAW SYSV-20 STRUCTURAL COMPONENT ONLY





2ND FLR FRAMING\Dropped Beams\B14 DR(i3211) (Oropped Beam)

Passed

February 19, 2020 08:54:40

**BC CALC® Member Report** 

Build 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer: Code reports:

CCMC 12472-R

Dry | 1 span | No cant.

File name:

VALLEYCREEK 3 EL 1.mmdi

2ND FLR FRAMING\Dropped Beams\B14 DR(i3211) Description:

Specifier:

Designer:

Company:

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4 4	.↓		4	<u>*</u>	*		4	Ą.	¥	ŧ	¥	Ā	4	↑ 0	Ą	<b></b>	4	4	Ą	4	4	4	Å	₩_	₩	4	₩.	Ą	¥	4
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<u> </u>	·											·-				J														- 13
_														12-08-	ao /															
i																														ı

Total Horizontal Product Length = 12-08-00

Reaction Summary (Down / Holift) (lbs)

	y fraction allocated	(-~-)			
Bearing	Live	Dead	Snow	Wind	
B1, 4"	3849 / 0	2042 / 0		· · · · · · · · · · · · · · · · · · ·	
B2, 4"	4038 / 0	2135 / 0			,

Loa	ad Summary						Live	Dead	Snow	Wind	Tributary
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	12-08-00	Тор		18			00-00-00
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-04-08	12-04-08	Top	629	315			n\a
2	J1(i3750)	Conc. Pt. (lbs)	L	12-06-14	12-06-14	Тор	339	169	مستختف <u>ة</u>	.cessa	n\a
		•							3/8/8	Mar Contraction	Colored Services

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	25143 ft-lbs	55212 ft-lbs	45.5%	1	06-04-08
End Shear	7518 lbs	21696 lbs	34.7%	1	01-03-14
Total Load Deflection	L/454 (0.32")	n\a	52.8%	4	06-04-08
Live Load Deflection	L/695 (0.209")	n\a	51.8%	5	06-04-08
Max Defl.	0.32"	n\a	n\a	4	06-04-08
Span / Depth	12.3				

Bearing	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
<b>B</b> 1	Wall/Plate	4" x 5-1/4"	8327 lbs	29.7%	32.5%	Spruce-Pine-Fir
B2	Wall/Plate	4" x 5-1/4"	8726 lbs	31.1%	34.1%	Spruce-Pine-Fir

ova no. tansso3 STRUCTURAL COMPONENT ONLY

#### **Notes**

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

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

CANFORMS TO OBG 2012 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. Resistance Factor phi has been applied to all presented results per CSA 086. IMENDED 2020 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

PROVIDES ROWS OF 3%" ARBOX SPIRAL NAILS @ 8 "O/C FOR MULTI-PLY NAILING, MAINTAIN MIN. 2" LUMBER EDGE/END DISTANCE. BONOT USE AIR NAILS BC CALCO, BC FRAMERO, AJSTM, STAGGEN IN AILS 4"BOURDE PLICALLIDISTO, BC RIM BOARD M, BCIO.

### 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, piease call (800)232-0788 before installation.

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





PASSED

2ND FLR FRAMING\Dropped Beams\B19 DR(i3169) (Dropped Beam)

**BC CALC® Member Report** 

Dry | 1 span | No gant.

February 19, 2020 08:54:40

Build 7239

Customer:

Job name:

Address:

Code reports:

City, Province, Postal Code: WATERDOWN

CCMC 12472-R

File name:

VALLEYCREEK 3 EL 1.mmdl

Description:

2ND FLR FRAMING\Dropped Beams\B19 DR(i3169)

Specifier:

Designer: AJ

Company:

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<u> </u>	1 +	<u></u>	4 4	***	4	4 4	<u> </u>	₩ 1 ₩	4	4 4	*	*	<u> </u>	*	<del></del>	<del>- 4</del>	*	<del></del>		
<u> </u>	4 4	4 4	<u> </u>	<del>+</del>	*	4 4	0 ↓	4 4		4 4		<u> </u>	¥	<u>*</u>	<u> </u>	<u> </u>		<u> </u>	<u> </u>	4
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<b>/</b>																				
81						05-0	00-90													<b>B</b> 2

#### Total Horizontal Product Length = 05-09-00

مالا / 156 مورا المستحد من الله المستحدد الله المستحدد الله المستحدد المستح

izeschou sun	mana (notani chi	uri (ma)			
Bearing	Live	Dead	Snow	Wind	
B1, 4"	2180 / 234	1128/0			
B2, 5-1/2"	759 / 0	414/0			

	Loa	ad Summary						Live	Dead	Snow . Wind	Tributary
	Tag	Description	Load Type	Ref.	Start	Enď	Loc.	1.00	0.65	1.00 1.15	
•	0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	05-09-00	Top		12		00-00-00
	1	Smoothed Load	Unf. Lin. (lb/ft)	L	01-02-08	05-02-08	Top	322	161		n\a
	2	_	Conc. Pt. (lbs)	L	00-03-01	00-03-01	Top	1652	831		n\a
	3	-	Conc. Pt. (lbs)	L	00-03-01	00-03-01	Тор	-234		OROFESS	ić., nla
								•		A 64.	Carlo V

Controls Summary	Factored Demand	Factored Resistance	Demand <i>i</i> Resistance	Case	Location
Pos. Moment	2289 ft-lbs	35392 ft-lbs	6.5%	1	03-02-08
End Shear	1413 lbs	14464 lbs	9.8%	1	04-03-10
Total Load Deflection	L/999 (0.008")	n\a	п <b>\а</b>	6	02-09-08
Live Load Deflection	L/999 (0.005")	n\a	n\a	8	02-09-08
Max Defl.	0.008"	n\a	n\a	6	02-09-08
Span / Depth	5.1				

Bearing	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	4" x 3-1/2"	4681 lbs	25.1%	27.4%	Spruce-Pine-Fir
B2	Wall/Plate	5-1/2" x 3-1/2"	1655 lbs	6.4%	7.0%	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 unbraced length of Top: 01-01-08, Bottom: 01-01-08.

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 312" ARDOX SPIRAL NAILS @ 6 "O/C FOR MULTI-PLY NAILING, MAINTAIN A MIN. 2" LUMBER EDGE/END DISTANCE, DO NOT USE AIR NAILS



644 NO. TAN 5504 -20 STRUCTURAL COMPONENT DNLY

### 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

February 19, 2020 08:54:40

### 2ND FLR FRAMING\Flush Beams\B15(j3358) (Flush Beam)

**BC CALC® Member Report** 

**Build 7239** Job name:

Address:

Customer: Code reports:

City, Province, Postal Code: WATERDOWN

CCMC 12472-R

Dry | 1 span | No cant.

File name:

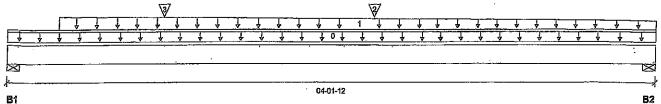
VALLEYCREEK 3 EL 1.mmdi

Description: 2ND FLR FRAMING\Flush Beams\B15(i3358)

Specifier:

Designer.

ΑJ Company:



Total Horizontal Product Length = 04-01-12

reaction Sum	imary (mownire)	กกรงสา สักษารอด			
Bearing	Live	Dead	Snow	Wind	 
B1, 4"	1099 / 0	575 / 0	·		
B2, 2-3/4"	1213 / 0	631 / 0			

Lo	ad Summary						Live	Dead	Snow	Wind	Tributary
Tag		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	04-01-12	Top		12 .			00-00-00
1	Smoothed Load	Trapezoidal (lb/ft)	L	00-04-00		Тор	454	227		•	n\a
		•			04-01-12		320	160			
2	J1(i3255)	Conc. Pt. (lbs)	L	02-04-00	02-04-00	Тор	452	226			n\a
3	J2(i3513)	Conc. Pt. (lbs)	L	01-00-00	01-00-00	Тор	386	193	o de la companya de l	FESSIC	n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos, Moment	2465 ft-lbs	35392 ft-lbs	7.0%	1	02-04-00
End Shear	1766 lbs	14464 lbs	12.2%	1	01-03-14
Total Load Deflection	L/999 (0.004")	n\a	n <b>\</b> a	4	02-01-12
Live Load Deflection	L/999 (0.003")	n\a	n\a	5	02-01-12
Max Defl.	0.004"	n\a	nla	4	02-01-12
Span / Depth	3.7				•

Bearin	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Waterial
B1	Wall/Plate	4" x 3-1/2"	2367 lbs	27.5%	13.9%	Spruce-Pine-Fir
B2	Wall/Plate	2-3/4" x 3-1/2"	2609 lbs	44.1%	22.2%	Spruce-Pine-Fir

#### Notes

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

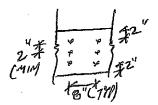
Design meets Code minimum (L/360) Live load deflection criteria.

Calculations assume member is fully braced.

CONFORMS TO OBG 2012

Resistance Factor phi has been applied to all presented results per CSA O86. 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 086. Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



PROVIDE 3 ROWS OF 3½" ARDOX SPIRAL NAILS @ 8 "O/C FOR MULTI-PLY NAILING, MAINTAIN A MIN.2"LUMBER EDGE/END DISTANCE.DONOTUSE AIRNAILS



STRUCTURAL COMPONENT ONLY

### Disclosure

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Passed

February 19, 2020 08:54:40

2ND FLR FRAMING\Flush Beams\B16(j3235) (Flush Beam)

**BC CALC® Member Report Build 7239** 

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer:

Code reports:

CCMC 12472-R

Dry | 1 span | No cant/

File name:

VALLEYCREEK 3 EL 1.mmdl

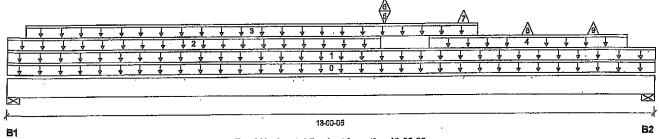
2ND FLR FRAMING\Fiush Beams\B16(i3235) Description:

Wind

Specifier:

Designer: ΑJ

Company:



Total Horizontal Product Length = 13-09-06

Snow

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead
B1, 4-3/8"	527 / 77	672 / 0
B2, 5-1/2"	939 / 113	734 / 0

los	ad Summary						Live
	Description	Load Type	Ref.	Start	End	Loc.	1.00
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	13-00-06	Top	
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	13-00-06	Тор	10
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	07-05-10	Тор	17
3	WALL	Unf. Lin. (lb/ft)	L	00-04-06	09-05-06	Top	
4	Smoothed Load	Unf. Lin. (lb/ft)	L	08-05-14	12-05-14	Тор	135
5	-	Conc. Pt. (lbs)	L	07-06-08	07-06-08	Тор	673
6		Conc. Pt. (lbs)	L	07-06-08	07-06-08	Тор	-181
7	J3(i3270)	Conc. Pt. (lbs)	L	09-01-14	09-01-14	Тор	-3
8		Conc. Pt. (lbs)	L	10-05-14	10-05-14	Тор	-3
9	J3(i3268)	Conc. Pt. (lbs)	Ĺ.	11-09-14	11-09-14	Top	-3
8 9	J3(i3269)	Conc. Pt. (lbs)	L L	10-05-14	10-05-14	Тор	

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	7794 ft-ibs	35392 ft-lbs	22.0%	1	07-05-10
End Shear	2182 lbs	14464 lbs	15.1%	1	11-07-00
Total Load Deflection	L/1040 (0.142")	n\a	23.1%	6	06-08-07
Live Load Deflection	L/999 (0.074")	n\a	n <b>\</b> a	8	06-10-12
Max Defl.	0.142"	n\a	n\a	6	06-08-07
Span / Depth	12.5				

Bearing	Supports	Dim, (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Waterial
B1	Wall/Plate	4-3/8" x 3-1/2"	1630 lbs	17.3%	8.7%	Spruce-Pine-Fir
	Wall/Plate	5-1/2" x 3-1/2"	2325 lbs	19.6%	9.9%	Spruce-Pine-Fir

### Notes

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

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

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 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

PROVIDES ROWS OF 3%" ARDOX SPIRAL NAILS @ 12"0/C FOR MULTI-PLY NAILING, NAINTAIN A MIN. 2" LUMBER EDGE/END DISTANCE, BO NOT USE AIR NAILS

9 n\a n\a 66 n\a n\a TO VINCE OF OWNER DWS NO. YAM 5506 -20

Wind

Snow

Tributary

00-00-00

n\a

Dead

12 5

STRUCTURAL DISCIOSURE ONLY

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### Double 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 2ND FLR FRAMING\Flush Beams\B17(i3222)/Flush Beam)

PASSED

February 19, 2020 08:54:40

**BC CALC® Member Report** 

Build 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

CCMC 12472-R

Customer: Code reports:

File name:

Dry | 2 spans | R cant.

VALLEYCREEK 3 EL 1.mmdl

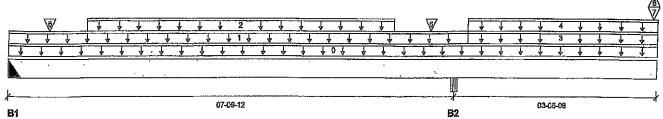
Description: 2ND FLR FRAMING\Flush Beams\B17(i3222)

Wind

Specifier:

Company:

Designer:



#### Total Horizontal Product Length = 11-04-04

Snow

Reaction Summary (Down / Uplift) (ibs)

Dead Bearing Live B1, 4" 264/0 652 / 190 687 / 0 B2, 3-1/2" 1367 / 235

Lo	ad Summary				· ·		Live	Dead	Snow	Wind	Tributary
Tag	•	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	11-04-04	Тор		12			00-00-00
. 1	FC2 Floor Material	Unf. Lin. (lb/ft)	L.	00-00-00	08-00-08	Top	7	4			n\a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	01-04:08	06-08-08	Тор	146	73			n\a
3	STAIR	Unf. Lin. (lb/ft)	L	08-00-08	11-04-04	Top	120	60			n\a
4	FC2 Floor Material	Unf. Lin. (lb/ft)	L	08-00-08	11-04-04	Top	10	5			n\a
5	J5(i3257)	Conc. Pt. (lbs)	L	80-80-00	80-80-00	Тор	160	80			n\a
6	J5(i3262)	Conc. Pt. (lbs)	L	07-04-08	07-04-08	Тор	144	72			n\a
7	B18(i3204)	Conc. Pt. (lbs)	L	11-03-06	11-03-06	Тор	179	24			n\a
8	B18(i3204)	Conc. Pt. (lbs)	L	11-03-06	11-03-08	Top	-161				n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	2448 ft-lbs	35392 ft-lbs	6,9%	3	04-06-08
Neg. Moment	-2856 ft-lbs	-35392 ft-lbs	8.1%	1	07-09-12
End Shear	1056 lbs	14464 lbs	7.3%	3	01-03-14
Cont. Shear	1384 lbs	14464 lbs	9.6%	. 1	06-08-02
Total Load Deflection	2xL/1998 (0,034")	nla	n\a	13	11-04-04
Live Load Deflection	2xL/1998 (0.032")	n\a	n\a	17	11-04-04
Total Neg. Defl.	2xL/1998 (-0.027")	n\a	n\a	12	11-04-04
Max Defl.	0.018"	n\a	n\a	12	04-00-08
Span / Depth	7.6				

Bearing	j Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	_
B1	Hanger	4" x 3-1/2"	1307 ibs	nla	7.7%	HGUS410	٠,
B2	Beam	3-1/2" x 3-1/2"	2908 lbs	19.5%	19.5%	VL 2.0 3100 SP	

POLYNCE OF ON

**6智名 日母。 YAM 5507** STRUCTURAL COMPONENT ONLY

#### Cautions

Header for the hanger HGUS410 at B1 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.

Long Cantilever: Sheathing required on bottom flange and adjacent back span or bracing designed by the design professional of record. Design professional of record must address uplift at supports.





Passed

### 2ND FLR FRAMING\Flush Beams\B17(i3222) (Flush Beam)

Dry | 2 spans | R cant.

February 19, 2020 08;54:40

**BC CALC® Member Report** 

**Build 7239** 

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer:

Code reports: -

CCMC 12472-R

File name:

VALLEYCREEK 3 EL 1.mmdl

Description: 2ND FLR FRAMING\Flush Beams\B17(i3222)

Specifier:

Designer:

ΑJ

Company:

Notes

Design meets User specified (2xL/240) Total load deflection criteria. Design meets User specified (2xL/360) Live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Unassigned

CANFORMS TO OBE 2012

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

2020

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

Cantilevers require sheathed bottom flanges, blocking at cantilever support and closure at ends.

PROVIDE3 NOWS OF 31/ ARDOX SPIRAL NAILS @12 "0/6 FOR MULTI-PLY NAILING, MAINTAIN A MIN.2" LUMBER EBGE/END DISTANGE. DO NOT USE AIR NAILS



STRUCTURAL COMPONENT ONLY

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### Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 2ND FLR FRAMING\Flush Beams\B18(i3204) (Flush Beam)

PASSED

**BC CALC® Member Report** 

Dry | 1 span | No cant.

February 19, 2020 08:54:40

**Build 7239** 

Job name: Address:

VALLEYCREEK 3 EL 1.mmdl File name:

Description: 2ND FLR FRAMING\Flush Beams\B18(i3204)

City, Province, Postal Code: WATERDOWN

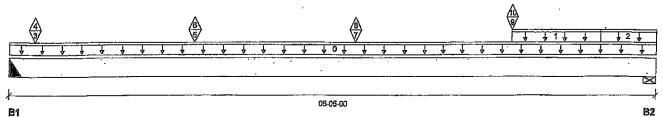
Specifier: Designer:

Customer:

Code reports:

CCMC 12472-R

ΑJ Company:



#### Total Horizontal Product Length = 05-05-00

Reaction Summary (Down / Uplift) (lbs)

TO COMPANY AND UNITED AND ADDRESS OF THE PARTY	nanosono 3 1 a- u- u- u- u- u-	,		
Bearing	Live	Dead	Snow	Wind
B1, 2"	180 / 162	25/0		
B2, 5-1/2"	158 / 143	25/0		

Lo	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	05-05-00	Top		6			00-00-00
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	04-02-08	04-11-08	Top		1			n\a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	Ł	04-11-08	05-05-00	Top		2			n\a
3	J3(i3360)	Conc. Pt. (lbs)	L	00-02-08	00-02-08	Top	62	4			n\a
4	J3(i3360)	Conc. Pt. (lbs)	L	00-02-08	00-02-08	Top	-53				n\a
5	J3(i3270)	Conc. Pt. (lbs)	L	01-06-08	01-06-08	Тор	91	4			n\a
6	J3(i3270)	Conc. Pt. (lbs)	L	01-06-08	01-06-08	Top	-84				n\a
7	J3(i3269)	Conc. Pt. (lbs)	L	02-10-08	02-10-08	Top	91	4			n\a
8	J3(i3269)	Conc. Pt. (lbs)	L.	02-10-08	02-10-08	Тор	-84				п\а
9	J3(i3268)	Conc. Pt. (lbs)	L	04-02-08	04-02-08	Top	90	3			n\a
10	J3(i3268)	Conc. Pt. (lbs)	L	04-02-08	04-02-08	Тор	-84				n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	351 ft-lbs	17696 ft-lbs	2.0%	1	02-10-08
Neg. Moment	-268 ft-lbs	-17696 ft-lbs	1.5%	4	02-10-08
End Shear	220 lbs	7232 lbs	3.0%	1	03-11-10
Total Load Deflection	L/999 (0.002")	n\a	n\a	6	02-07-00
Live Load Deflection	L/999 (0.002")	n\a	n\a	8	02-07-00
Total Neg. Defl.	L/999 (-0.001")	n\a	n\a	7	02-07-00
Max Defl.	0.002"	n\a	n\a	6	02-07-00
Span / Depth	5.0				•

Bearing	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Hanger	2" x 1-3/4"	300 lbs	n\a	7.0%	LS90
B1	Uplift		221 lbs			
B2	Wall/Plate	5-1/2" x 1-3/4"	268 lbs	4.5%	2.3%	Spruce-Pine-Fir
B2	Uplift		192 lbs			



086 NO. TAN 5508 -20 STRUCTURAL GOMPONENT ONLY





PASSED

February 19, 2020 08:54:40

### 2ND FLR FRAMING\Flush Beams\B18(i3204) (Flush Beam)

**BC CALC® Member Report** 

**Build 7239** Job name:

Address:

Customer:

Code reports:

City, Province, Postal Code: WATERDOWN

CCMC 12472-R

Dry | 1 span | No cant.

HISIMPSON ALSAHLS90 @ 01.31

File name:

VALLEYCREEK 3 EL 1.mmdi

Description: 2ND FLR FRAMING\Flush Beams\B18(i3204)

AJ

Specifier:

Designer:

Company:

Cautions

Uplift of 221 lbs found at bearing B1.

Hanger B1 cannot handle uplift of -221 lbs

Header for the hanger LS90 at B1 is a Double 1-3/4" x 11-7/8" VERSA-LAM® 1.7 2400 DF. Hanger model LS90 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

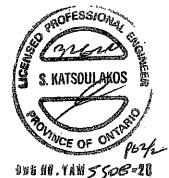
CAMPORMS TO DBC 2012

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 OS6.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



STRUCTURÁL CONFONENT ONLY

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### 2ND FLR FRAMING\Flush Beams\B20(i3182) (Flush Beam)

Dry [ 1 span | No cant.

February 19, 2020 08:54:40

PASSED

**Build 7239** 

Job name:

Address:

**BC CALC® Member Report** 

City, Province, Postal Code: WATERDOWN

Customer:

Code reports:

CCMC 12472-R

.File name;

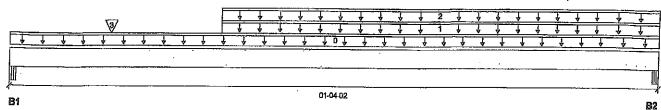
VALLEYCREEK 3 EL 1.mmdl

Description: 2ND FLR FRAMING\Flush Beams\B20(i3182)

Specifier.

Designer:

Company:



Total Horizontal Product Length = 01-04-02

Reaction Summary (Down / Uplift) (Ibs)

Bearing	Live	Dead	Snow	Wind
B1, 5-1/4"	30 / 0	94/0	47/0	
B2, 4-1/8"	32/0	82/0	39/0	

Loa	ad Summary						Live	Dead	Snow	Wind	Tributary
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	01-04-02	Тор		12			00-00-00
1	E29(i2653)	Unf. Lin. (lb/ft)	L	00-05-04	01-04-02	Top	33	111	63		n/a
2	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-05-04	01-04-02	Top	19	9			n\a
3	E28(i2652)	Conc. Pt. (ibs)	L	00-02-08	00-02-08	Тор	15	51	29	CESS!	n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	18 ft-lbs	35392 ft-lbs	n\a	13	00-08-10
End Shear	88 lbs	14464 lbs	0.6%	13	00-05-04
Span / Depth	0.7				

Bearing	y Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Materia!
B1	Beam	5-1/4" x 3-1/2"	217 lbs	2.2%	1.0%	Unspecified
B2	Beam	4-1/8" x 3-1/2"	194 lbs	2.5%	1.1%	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. Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition. Importance Factor: Normal Part code: Part 9 CANFORMS TO OBC 2012

AMENDED 2020

PROVIDE 3 ROWS OF 3½" ARDOX SPIRAL NAILS @ 6 " 0/6 FOR MULTI-PLY HAILING, MAINTAIN A MIN. 2" LUMBER EDGE/END DISTANCE. DO NOT USE AIR NAILS



dws 40. TAM 5509 = 20 STRUCTURAL COMPONENT BULY

#### 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

February 19, 2020 08:54:40

2ND FLR FRAMING\Flush Beams\B21(f3201) (Flush Beam)

**BC CALC® Member Report** 

**Build 7239** 

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer:

Code reports:

CCMC 12472-R

Dry | 1 span | No cant.

File name:

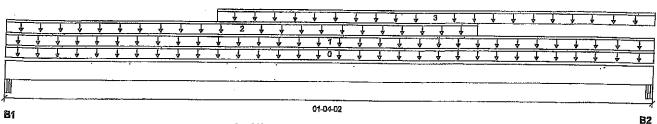
Description: 2ND FLR FRAMING\Flush Beams\B21(i3201)

VALLEYCREEK 3 EL 1.mmdl

Specifier:

Designer: ΑJ

Company:



Total Horizontal Product Length = 01-04-02

1 ACCOUNTERED TO CONTRACT	INDINGRANT A FINANCIA IN INC.	Abressed farrant		
Bearing	Live	Dead	Snow	Wind
B1, 5-1/4"	18/0	51/0	22/0	
B2, 4-1/8"	12/0	26 / 0	8/0	

Lo	ad Summary						Live	Dead	Snow	Wind	Tributary
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	01-04-02	Тор		12			00-00-00
1	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	6	3			n\a
2	E31(i2650)	Unf. Lin. (lb/ft)	L	00-00-00	00-11-12	Top	16	56	32		n\a
3	FC2 Floor Material	Unf. Lin. (lb/ft)	L	00-05-04	01-04-02	Тор	6	3		AFESS	
				_					# 8V		IO <sub>N</sub> n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	10 ft-lbs	35392 ft-lbs	n\a	13	00-08-10
End Shear	46 lbs	14464 lbs	0.3%	1	00-05-04
Span / Depth	0.7				• •

Bearing	Supports	Dim. (LxVV)	Demand	Demandi Resistance Support	Demand/ Resistance Member	Material
B1	Beam	5-1/4" x 3-1/2"	116 lbs	1.2%	0.5%	Unspecified
B2	Beam	4-1/8" x 3-1/2"	59 lbs	0.8%	0.3%	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 086. Unbalanced snow loads determined from building geometry were used in selected product's verification.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

CONFORMS TO OBC 2012

AMENDED 2020

PROVIDE3 ROWS OF 3%" ARDOX SPIRAL NAILS @6 "O/G FOR MULTI-PLY WAILING, MAINTAIN A MIN.2" LUMBER EDGE/END DISTANCE, DO NOT USE AIR NAILS 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 Bolse Cascade engineered wood products must be in accordance with current Installation Guide and applicable building codes. To obtein Installation Guide or ask questions, please call (800)232-0788 before installation.

COM. ONENT ONLY

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

## NORDIC STRUCTURES

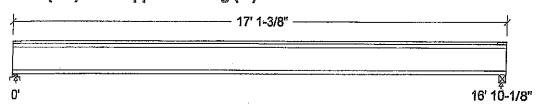
COMPANY Feb. 19, 2020 09:11 PROJECT
J1 1ST FLOOR.wwb

### Design Check Calculation Sheet Nordic Sizer – Canada 7.2

### Loads:

Load Type		Distribution	Pat-	- Location [ft]		Magnitude	Unit	
				tern	Start	End	Start Er	ıd İ
	Load1	Dead	Full Area				20.00	psf
ı	Load2	Live	Full Area			İ	40.00	psf

### Maximum Reactions (Ibs) and Support Bearing (in):



Unfactored: Dead	225		225
Live	449	<u>`</u>	449
Factored: Total Bearing:	954		954
Capacity	•	•	
Joist	2101		2138
Support	3971		4043
Des ratio			1 1
Joist	0.45		0.45
Support	0.24		0.24
Load case	#2		#2
Length	2-3/8		2-5/8
Min req'd	1-3/4		1-3/4
Stiffener	No		No
KD	1.00		1.00
KB support	1.00		1.00
fcp sup	769		769
Kzcp sup	1.09		1.00

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

Supports: 1 - Lumber Sill plate, No.1/No.2; 2 - Lumber Beam, No.1/No.2; Total length: 17' 1-3/8"; Clear span: 16' 8-3/8"; 3/4" nailed and glued OSB sheathing

This section PASSES the design code check.

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

	-			
Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	Vf = 954	Vr = 2336	lbs	Vf/Vr = 0.41
Moment(+)	Mf = 4019	Mr = 6255	lbs-ft	GFEMMINT = 0.64
Perm. Defl'n	0.12 = < L/999	0.56 = L/360	in 🧸	0.21
Live Defl'n	0.24 = L/844	0.42 = L/480	in 🎉	0.57
Total Defl'n	0.36 = L/562	$0.84 = L/240^{\circ}$	in /3 (	20.57
Bare Defl'n	0.29 = L/697	0.56 = L/360	in 🙀 ]	52 Pol. 52
Vibration	Imax = 16'-10.1	Lv = 18'-1.3	ft 🔰 S	KATSOUKOKOS \$0.52
Defl'n	= 0.030	= 0.038	in 🖁	0.80
·····			12 18	<del></del>

ÀWA NO.TAW≶491 -20 Structural Component only

OVINCE OF ONE

### WoodWorks® Sizer

#### for NORDIC STRUCTURES

#### J1 1ST FLOOR.wwb

### Nordic Sizer - Canada 7.2

Page 2

	Additional	Data:									•
	FACTORS:				KZ		KT	KS	KN	LC#	
1	Vr	2336	1.00	1.00	-	-			-	#2 <sup>"</sup>	
	Mr+	6255	1.00	1.00		1.000	-	-	-	#2	
	EI	371.1 m	illion	-	-	-	_	-	_	#2	
ı	CRITICAL LO										
Į	Shear										
I	Moment (+)										
ĺ	Deflection										
l				+ 1.0L							
l					(total)						
l	LC #2 = 1.0D + 1.0L (bare joist)  Bearing : Support 1 - LC #2 = 1.25D + 1.5L										
l	Bearing										
l	T 1 m				25D + 3			_	_		
l	Load Types	s: D≕αeac	l W≔Win	a s=snc	w H≕eai	ctn, groui	ndwater	E=eart	hquake		
	T 3 D		e (use, oci	cupancy)	Ls=liv	re (storaç	je, equi	oment)	f=fire		
	Load Patte All Load C	erns: s-c	ODE (IC)	-7 220 1 11	o patter	n load i	in this	span			
l	CALCULATION		ons the	s) are r	Tared II	i the Ana	rrasis o	output			
l			15A2 7/2	- 6 10-	06 lba				cousa	DMS Th	ARE 2012
	ETeff = 459.76 lb-in^2 K= 6.18e06 lbs CONFORMS TO OBC 2012 "Live" deflection is due to all non-dead loads (live, wind, snow)										
_	TTAG. GGT	Tec: 1011	TO UNE I	-O GIT II	on-dead	TOSOS (1	.ive, Wi	na, snov	v) A	MENDED	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.



DWG NO. TAW SY91 -28
STRUCTURAL
COMPONENT ONLY





PASSED

Tributary

00-00-00 n\a

### 1ST FLR FRAMING\Flush Beams\B1(i3068) (Flush Beam)

Dry J 1 span | No cant,

February 19, 2020 08:54:40

**Build 7239** 

Job name:

Customer:

Code reports:

Address: City, Province, Postal Code: WATERDOWN

**BC CALC® Member Report** 

CCMC 12472-R

File name: Description: VALLEYCREEK 3 EL 1.mmdl

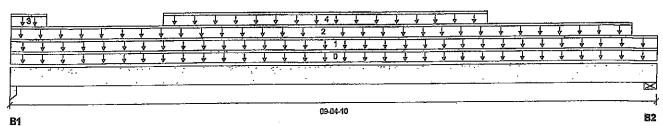
1ST FLR FRAMING\Flush Beams\B1(i3068)

Wind

Specifier:

Designer:

Company:



Total Horizontal Product Length = 09-04-10

Sno₩

Reaction	Summary	(Down /	(Uplift)	(lbs)
				Fa 4

Bearing	 Live	 Dead
B1, 1-3/4"	396 / 0	590 / 0
B2, 1-7/8"	192 / 0	468 / 0

I na	ad Summary						Live	Dead	Snow	Wind
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	09-04-10	Top		6		•
1	FC1 Floor Material	Unf. Lin. (lb/ft)	Ĺ	00-00-00	09-04-10	Top	9	4		
2	12(11307)	Unf. Lin. (lb/ft)	L	00-00-00	09-00-04	Top		81	سوير. سوير.	CKERRU
3	12(i1307)	Unf. Lin. (lb/ft)	L .	00-00-00.	00-06-04	Top	392	181	Store Of the	ofessi
4	12(11307)	Unf. Lin. (lb/ft)	L	02-02-08	06-10-14	Тор	64	29	13/	2262

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1693 ft-lbs	11502 ft-lbs	14.7%	0	04-08-07
End Shear	1082 lbs	7232 lbs	15.0%	1	01-01-10
Total Load Deflection	L/999 (0.056")	n\a	n\a	4	04-08-07
Live Load Deflection	L/999 (0.019")	n\a	n\a	5	04-08-07
Max Defl.	0.056"	n\a	n\a	4	04-08-07
Span / Depth	9.3			•	

Bearing	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Column	1-3/4" x 1-3/4"	1332 lbs	53.6%	35.7%	Unspecified
B2	Wall/Plate	1-7/8" x 1-3/4"	656 lbs	50.0%	25.2%	Spruce-Pine-Fir

#### Notes

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

CONFORMS TO OBG 2012

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

598 NO. TAM 5493 -20 STRUCTURÁL <u>Disclosure</u> Only

POUNCE OF ON

S. KATSOULAKOS

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### 1ST FLR FRAMING\Flush Beams\B2(i2954) (Flush Beam)

PASSED

February 19, 2020 08:54:40

**BC CALC® Member Report** 

**Build 7239** 

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer:

Code reports:

CCMC 12472-R

Dry | 1 span | No cant.

File name:

VALLEYCREEK 3 EL 1.mmdl

Description:

1ST FLR FRAMING\Flush Beams\B2(i2954)

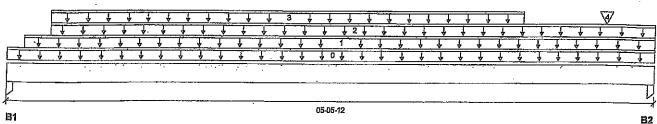
Specifier:

Designer:

Wind

CONFORMS TO OBC 2012

Company:



### Total Horizontal Product Length = 05-05-42

Snow

Reaction Summary (Down / Uplift) (Ibs)

Live Dead 1150 / 0 B1, 3-1/2" 802 / 0 B2, 3-1/2" 1329 / 0 946 / 0

Loa	ad Summary						Live	Dead	Snow
Tag		Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	05-05-12	Тор		6	
1	13(i1308)	Unf. Lin. (lb/ft)	L	00-01-12	05-05-12	Тор		81	
2⋅	13(i1308)	Unf. Lin. (lb/ft)	L	00-04-06	05-05-12	Top	380	190	
3	Smoothed Load	Unf. Lin. (lb/ft)	L.	00-04-06	04-04-06	Тор	105	52	PROFE
4	•	Conc. Pt. (lbs)	Ŀ	05-01-00	05-01-00	Тор	108	100	Okon V

Controls Summary	Factored Demand	Factored Resistance	Demand <i>i</i> Resistance	Case	Location
Pos. Moment	3584 ft-lbs	17696 ft-lbs	20.3%	1	02-07-14
End Shear	2529 lbs	7232 lbs	35.0%	1	01-03-06
Total Load Deflection	L/999 (0.024")	n <b>la</b>	n\a	4	02-08-06
Live Load Deflection	L/999 (0.014")	n\a	n <b>\</b> a	5	02-08-06
Max Defi.	0.024"	n\a	n\a	4	02-08-06
Span / Denth	5.1				

Bearin	g Supports	Dim. (Lx₩)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Column	3-1/2" x 1-3/4"	2728 lbs	54.9%	36.5%	Unspecified
B2	Column	3-1/2" x 1-3/4"	3176 lbs	63.9%	42.5%	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. AMENDED 2020 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



Wind

1.15

Tributary

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

## STRUCTURAL COMPONENT ONLY

### Disclosure

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PASSED

1ST FLR FRAMING\Flush Beams\B4(i3034) (Flush Beam)

Dry I 1 span | No cant.

February 19, 2020 08:54:40

**BC CALC® Member Report Build 7239** 

Job name:

Address: City, Province, Postal Code: WATERDOWN

Customer: Code reports:

CCMC 12472-R

File name:

VALLEYCREEK 3 EL 1.mmdl

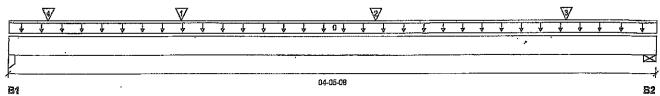
1ST FLR FRAMING\Flush Beams\B4(i3034) Description:

Specifier:

Designer:

conforms to obc 2012

Company:



#### Total Horizontal Product Length = 04-05-08

Snow

Reaction Summary (Down / Uplift) (lbs)

Bearing Live Dead B1, 3-1/2" 130 / 0 119/0 B2, 4-3/8" 152 / 0 90/0

Lo	ad Summary						Live	Dead	Snow Wind	i Tributary
Tag		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	04-05-08	Top		6		00-00-00
1	J7(i3073)	Conc. Pt. (lbs)	Ĺ	01-02-02	01-02-02	Top	100	50		n\a
2	J7(i3097)	Conc. Pt. (lbs)	L	02-06-02	02-06-02	Top	100	50		n\a
3	J7(13055)	Conc. Pt. (lbs)	L.	03-10-02	03-10-02	Top	76	38		n\a
4	<b>—</b> 1	Conc. Pt. (lbs)	L	00-03-03	00-03-03	Тор	7	44	Andrew Community of the	n∖a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	331 ft-lbs	17696 ft-lbs	1.9%	1	02-06-02
End Shear	248 lbs	7232 lbs	3.4%	1	01-03-06
Total Load Deflection	L/999 (0.001")	n\a	n\a	4	02-02-07
Live Load Deflection	L/999 (0.001")	n\a	n\a	5	02-02-07
Max Defl.	0.001"	n\a	n\a	4	02-02-07
Snan / Denth	4.0				

Bearing	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Column	3-1/2" x 1-3/4"	344 lbs	6.9%	4.6%	Unspecified
B2	Wall/Plate	4-3/8" x 1-3/4"	340 lbs	7.2%	3.6%	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 086. AMENDED 2020 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



### 646 NO. TAN *5497 -*20 STRUCTURAL COMPONENT ONLY **Disclosure**

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### Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP /1ST FLR FRAMING\Flush Beams\B5(i3064) (Flush Beam)

PASSED

February 19, 2020 08:54:40

BC CALC® Member Report

Build 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer: Code reports:

CCMC 12472-R

Dry | 1 span | No cant/

VALLEYCREEK 3 EL 1.mmdl

File name: 1ST FLR FRAMING\Flush Beams\B5(i3064) Description:

Wind

Specifier:

Designer:

Company:

09-04-06 **B**1 32

#### Total Horizontal Product Length = 09-04-06

Snow

Reaction Summary (Down / Uplift) (lbs)

Bearing Live Dead 340/0 205/0 B2, 4-3/8" 227 / 0 160 / 0

Lo	ad Summary						Live	
Tag		Load Type	Ref.	Start	End	Loc.	1.00	
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	09-04-06	Top		
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	02-10-00	Тор	13	
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	02-10-00	09-04-06	Top	27	
3	B7(i3091)	Conc. Pt. (lbs)	L	02-10-14	02-10-14	Тор	355	•
4	FC1 Floor Material	Conc. Pt. (lbs)	L	09-02-03	09-02-03	Top	•	•

O		Factored	Demand/	_	
Controls Summary	Factored Demand	Resistance	Resistance	Case	Location
Pos. Moment	1869 ft-lbs	17696 ft-lbs	10.6%	1	02-10-14
End Shear	719 lbs	7232 lbs	9.9%	1	01-03-14
Total Load Deflection	L/999 (0.033")	n\a	n\a	4	04-05-01
Live Load Deflection	L/999 (0.021")	n\a	n\a	5	04-04-02
Max Defl.	0.033"	n <b>ia</b>	n\a	4	04-05-01
Span / Depth ·	8.9			•	

Bearing	j Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	4" x 1-3/4"	766 lbs	17.8%	9.0%	Spruce-Pine-Fir
B2	Wall/Plate	· 4-3/8" x 1-3/4"	541 lbs	11.5%	5.8%	Spruce-Pine-Fir

#### Notes

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

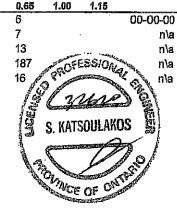
Calculations assume member is fully braced.

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 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



### 178 NO. TAN 5498-20 STRUCTURAL COMPONENT ONLY

### **Disclosure**

Dead

Snow

Wind

Tributary

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 CONFORMS TO OBE 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 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

February 19, 2020 08:54:40

1ST FLR FRAMING\Flush Beams\B6(f3054) (Flush Beam)

**BC CALC® Member Report** 

**Build 7239** 

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer:

Code reports:

CCMC 12472-R

Dry | 1 span | No cant.

VALLEYCREEK 3 EL 1.mmdl

File name: Description: 1ST FLR FRAMING\Flush Beams\B6(i3054)

Wind

Specifier:

Designer: ΑJ

Company:

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<b>↓</b>	4	<b>†</b>	<b>*</b>	4	4	4	 Ŧ	Ţ	¥		4	4		ļ	Ŷ	*	1 4		<b>↓</b>		Ą	4	1	. ,	,	Ŷ	†	+	Ą		,	<b>↓</b>	4	*	4
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#### Total Horizontal Product Length = 09-02-12

Snow

Reaction Summary (Down / Uplift) (lbs)

Bearing Live Dead B1, 2-3/8" 340/0 204/0 B2, 4-3/8" 260 / 0 161 / 0

Lo	ad Summary						Live	Dead	Snow	Wind	Tributary
Tag		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	09-02-12	Top		6			00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	09-02-12	Top	12	6			n <b>\</b> a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	02-08-06	Top	3				n\a
3	FC1 Floor Material	Unf. Lin. (lb/ft)	L	02-08-06	09-02-12	Top	25	12	45 min	ESSION	™w <sub>w</sub> n\a
4	B7(i3091)	Conc. Pt. (lbs)	L	02-09-04	02-09-04	Тор	321	170 🦼	1 To 1	Harris Sales	`¥ . ∜⊾n\a
			F41	<b>5</b>		•		19		2	

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1867 ft-lbs	17696 ft-lbs	10.5%	1	02-09-04
End Shear	719 lbs	7232 lbs	9.9%	1	01-02-04
Total Load Deflection	L/999 (0.035")	n\a	n <b>\a</b>	4	04-03-07
Live Load Deflection	L/999 (0.022")	n\a	n\a	5	04-03-07
Max Defl.	0.035"	n\a	n\a	4	04-03-07
Span / Depth	8.9				

Bearin	ig Supports	Dim. (LxVV)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	2-3/8" x 1-3/4"	765 lbs	29.9%	15.1%	Spruce-Pine-Fir
B2	Wall/Plate	4-3/8" x 1-3/4"	592 lbs	12.6%	6.3%	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.

CONFORMS TO OBE 2012

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

848 NO. YAW*5499* -20 STRUCTURAL DISCIOSURE ONLY

ON OF ON

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.

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CCMC 12472-R

### Single 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1ST FLR I/RAMING\Flush Beams\B7(i3091) (Flush Beam)

Passed

February 19, 2020 08:54:40

**BC CALC® Member Report** 

**Build 7239** 

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer:

Code reports:

Dry | 1 span | No cant.

File name:

VALLEYCREEK 3 EL 1.mmdl

Description: 1ST FLR FRAMING\Flush Beams\B7(i3091)

Specifier:

Designer:

Company:

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				·	<del></del>											. •										· · · · · ·					
<u> </u>																	$\rightarrow$														
<b>B</b> 1															03-	02-00															B2

Total Horizontal Product Length = 03-02-00

Reaction Summary (Down / I Inlift) (lhs)

a zoeste erosit e estilit	որդորգության անտահագրագրանի աշտ	Second (seese)			
Bearing	Live	Dead	Snow	Wind	
B1, 2"	320/0	170 / 0			
B2, 2"	356 / 0	187/0	•		

Lo	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	03-02-00	Тор		6			00-00-00
1	STAIR	Unf. Lin. (lb/ft)	L	00-00-00	03-02-00	Тор	120	60			n\a
2	J5(i3083)	Conc. Pt. (lbs)	L	01-02-00	01-02-00	Top	164	82			n\a ,
3	J5(i3089)	Conc. Pt. (lbs)	L	02-06-00	02-06-00	Тор	132	66			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	561 ft-lbs	17696 ft-lbs	3.2%	1	01-03-09
End Shear	389 lbs	7232 lbs	5.4%	1	01-01-14
Total Load Deflection	L/999 (0.001")	n\a	nla	4	01-07-01
Live Load Deflection	L/999 (0.001")	n\a	n\a	5	01-07-01
Max Defl.	0.001"	n\a	n\ <del>a</del>	4	01-07-01
Snan / Denth	3.0				

Bearin	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	<b>Material</b>
B1	Hanger	2" x 1-3/4"	692 lbs	n\a	16.2%	HUS1.81/10
B2	Hanger	2" x 1-3/4"	768 lbs	n\a	18.0%	HUS1.81/10

### Cautions

Header for the hanger HUS1.81/10 at B1 is a Single 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.

Header for the hanger HUS1.81/10 at B2 is a Single 1-3/4" x 11-7/8" VERSA-LAM® 1.7 2400 DF.

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 086. Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



UVE NO. TAM 5500 -20 STRUCTURAL COMPONENT ONLY

#### 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 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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### Śingle 1-3/4" x 11-7/8" VERSA-LAM® 2.0 3100 SP 1ST FLR FRAMING\Flush Beams\B8(I3040) (Flush Beam)

Passed

February 19, 2020 08:54:40

**BC CALC® Member Report** 

**Build 7239** 

Job name:

Address:

City, Province, Postal Code: WATERDOWN

CCMC 12472-R

Customer:

Code reports:

Dry | 1 span | No cant.

File name:

VALLEYCREEK 3 EL 1.mmdf

Description: 1ST FLR FRAMING\Flush Beams\B8(i3040)

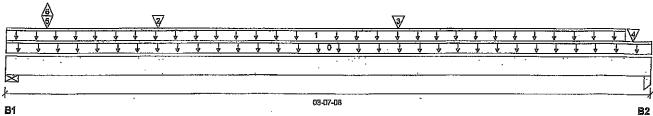
Wind

CONFORMS TO OBC 2012

Specifier:

Company:

Designer:



#### Total Horizontal Product Length = 03-07-08

Snow

Reaction Summary (Down / Uplift) (lbs)

Bearing Live Dead 1398 / 0 B1, 5-1/2" 2671 / 245 B2, 1-3/4" 221/0 423/0

Lo	ad Summary		•				Live
Tag	•	Load Type	Ref.	Start	End	Loc.	1.00
0	Self-Weight	Unf. Lin. (ib/ft)	L	00-00-00	03-07-08	Тор	
1	STAIR	Unf. Lin. (lb/ft)	L	00-00-00	03-05-12	Top	120
2	J6(i3045)	Conc. Pt. (lbs)	L	00-10-04	00-10-04	Top	126
3	J6(i3081)	Conc. Pt. (lbs)	L	02-02-04	02-02-04	Top	142
4	J6(i3048)	Conc. Pt. (lbs)	L	03-06-04	03-06-04	Top	142
5	17(i1315)	Conc. Pt. (lbs)	L	00-02-12	00-02-12	Top	2263
6	17(i1315)	Conc. Pt. (lbs)	L	00-02-12	00-02-12	Тор	-245

		Factored	Demand/		
Controls Summary	Factored Demand	Resistance	Resistance	Case	Location
Pos. Moment	604 ft-lbs	17696 ft-lbs	3.4%	1	02-02-04
End Shear	348 lbs	7232 lbs	4.8%	1	02-05-14
Total Load Deflection	L/999 (0.001")	n\a	n\a	6	01-11-08
Live Load Deflection	L/999 (0.001")	n\a	n/a	8	01-11-08
Max Defl.	0.001"	nla	n\a	6	01-11-08
Span / Depth	3.2				

Bearing	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wali/Plate	5-1/2" x 1-3/4"	5754 lbs	97.2%	49.0%	Spruce-Pine-Fir
B2	Column	1-3/4" x 1-3/4"	911 lbs	36.6%	24.4%	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 Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



### ING NO. TAN 550/ -28 STRUCTURAL COMPONENT ONLY

#### Disclosure

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### Single 1-3/4" x 11-7/8" VERSA-LAM@ 2.0 3100 SP 15T FLR FRAMING\Flush Beams\B9(i3046) (Flush Beam)

PASSED

February 19, 2020 08:54:40

**BC CALC® Member Report** 

**Build 7239** 

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer:

Code reports: CCMC 12472-R Dry | 1 span | No cant.

File name:

VALLEYCREEK 3 EL 1.mmdi

Description:

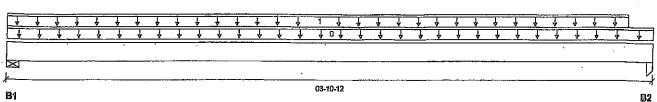
1ST FLR FRAMING\Flush Beams\B9(i3046)

Specifier:

Designer:

Company:

Wind



Total Horizontal Product Length = 03-40-12

Snow

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead
B1, 2-3/8"	47/0	35/0
B2, 3-1/2"	45 / 0	35/0

	ad Summary Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
, ay			izei.				1,00	U.03	1-00	(-10	
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-10-12	Top		6			00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-09-00	Тор	25	12			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	93 ft-lbs	17696 ft-lbs	0.5%	1	01-10-13
End Shear	43 lbs	7232 lbs	0.6%	1	01-02-04
Total Load Deflection	L/999 (0")	n\a	n\a	4	01-10-13
Live Load Deflection	L/999 (0")	n\a	n\a	5	01-10-13
Max Defl.	0"	n\a	n\a	4	01-10-13
Span / Denth	36				

Bearing	Supports	Dim, (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material .
B1	Wall/Plate	2-3/8" x 1-3/4"	114 lbs	4.4%	2.2%	Spruce-Pine-Fir
B2	Column	3-1/2" x 1-3/4"	112 lbs	2.2%	1.5% .	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.

AMENDED 2020 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

COFESSION SOLVINGE OF OT

> 144 NO . YANS502—-20 STRUCTURAL COMPONENT ONLY

#### Disclosure

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Live Load = 40 jst, Dead Load = 30 pst Simple Spans; L/480 Deffection Unit 3/4" OSB G&N Sheathing







			В	are			1/2" Gyr	sum Ceiling	
Depth	Series		On Cent	re Spacing		On Centre Spacing			
•		12"	16"	19,2"	24"	12"	16"	19,2"	24"
	NI-20	15'-7"	14'-2"	13'-4"	1.2'-4"	15'-7"	14'-2"	13'-4"	12'-4"
	NJ-40x	17'-0"	16'-0"	15'-1"	13'-11"	17'-5"	16'-1"	75'-1"	13'-11"
9-1/2"	NI-60	17'-2"	16'-2"	15'-5"	14'-3"	17'-6"	16'-5"	15'-5"	14'-3"
•	NI-70	18'-0"	16'-11"	16'-3"	15'-6"	18'-5"	17'-3"	16'-7"	15'-6"
	NI-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"
aa m foll	NI-60	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18 <b>'-</b> 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"
	N1-80	21'-1"	19'-5"	18'-5"	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"
	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22′-3"	21'-2"	201-0"
	NI-90x	24'-1"	22'-3"	21'-2"	20'-0"	24'-8"	221-101	21'-9"	20'-7"
	NI-60	23'-9"	22'-0"	20'-11"	19'-10"	24'-6"	22'-9"	21'-8"	20'-5"
a ell	N!-70	25'-1"	23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9"	21'-6"
16"	08-10	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-90x	26'-4"	24¹-3"	23'-1"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

			Mid-Spa	n Blocking	Mid-	Span Blocking a	nd 1/2" Gypsur	n Ceiling		
Depth	Series		On Cent	re Spacing	-	l	On Centre Spacing			
•		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"	
•	NI-70	1 <del>9</del> '-10"	17'-11"	16'-9"	15'-6"	19'-10"	17'-11"	15'-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"	16¹-0"	14'-10"	
•	N1~40x	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"	
	NI-80	23'-7"	21'-10"	20'-5"	18'-11"	24'-1"	21'-10"	20'-5"	18'-11"	
	NI-90x	241-34	221-6"	21'-3"	19'-7"	24'-8"	22'-7" ·	21'-3"	19'-7"	
	NI-40x	24'-2"	21'-5"	19 <sup>1</sup> -6 <sup>8</sup>	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"	
14"	NI-70	26'-1"	24'-3"	22'-9"	21'-0"	26'-8"	24'-3"	22¹-9"	21'-0"	
	Nt-80	26'-6"	24'-7"	23'-3"	21'-6"	27'-1"	24 <sup>1</sup> -10"	23'-3"	21'-6"	
	NI-90x	27'-3"	25'-4"	241-1"	22'-4"	27'-9"	25'-10"	24'-3"	22'-4"	
	NI-60	27'-3"	24'-11"	23'-5"	21'-7"	27'-6"	24'-11"	23'-5"	21'-7"	
. ed	NI-70	28'-8"	26'-8"	25'-3"	23'-4"	29'-3"	26'-11"	25'-3"	23'-4"	
16"	NI-80	29'-1"	27'-0"	25'-9"	23'-10"	29'-8"	27'-6"	25'-10"	23'-10"	
	NI-90x	29'-11"	27'-10"	26 <b>'</b> -6"	24'-10"	30'-6"	28'-5"	26' <b>-11</b> "	24'-10"	

- 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.
- 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-foists 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 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.



Live Load = 40 psf, Dead Load = 15 psf Simple Spans, L/480 Deflection Limit 5/8" OSB G&N Sheathing







			Е	are			1/2" Gyp	sum Ceiling		
Depth	Series		On Cent	re Spacing		On Centre Spacing				
÷		12°	16"	19.2"	24"	12"	16"	19.2"	24º	
	NI-20	15'-1"	14'-2"	13'- <del>9</del> "	N/A	151-7"	14'-8"	14'-2"	N/A	
	NI-40x	16'-1"	15¹-2°	14¹-8"	N/A	16'-7"	15'-7"	15 <b>'-1"</b>	N/A	
9-1/2"	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	N/A	
	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A	
	NJ-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	
	NJ-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A	
	NI-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A	
11-7/8"	NI-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18¹-7°	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	217"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A	
	Nt-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'-5"	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 <b>'-9</b> "	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	
	NJ-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A	

			Mid-Spa	n Blacking		∬ Mid-	Span Blocking a	nd 1/2" Gypsun	Ceiling
Depth	Series		On Cent	re Spacing		On Centre Spacing			
20pm.		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NJ-20	16'-8"	15'-3"	14'-5"	N/A	16'-8"	15'-3"	14'-5"	N/A
	NI-40x	17'-11"	16'-11"	16'-1"	N/A	18'-5"	17'-1"	16'-1"	N/A
9-1/2"	NI-60	18'-2"	17'-1"	16'-4"	N/A	18'-7"	17'-4"	16'-4"	N/A
	NI-70	19'-2"	17'-10"	17'-2"	N/A	19'-7"	18'-3"	17'-7"	N/A
	NJ-80	19'-5"	18'-0"	17'-4"	N/A	19'-10"	18'-5"	17'-8"	N/A
	NI-20	19'-6"	18'-1"	17'-3"	N/A	19'-11"	18'-3"	17'-3"	N/A
	NI-40x	21'-0"	19'-6"	18'-8"	N/A	21'-7"	20'-2"	<u> 19'-2"</u>	N/A
	NI-60	21'-4"	19'-9"	18'-11"	N/A	21'-11"	20'-4"	19'-6"	N/A
11-7/8"	NI-70	22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-5"	20'-5"	N/A
	NJ-80	22¹-9"	21'-1"	20'-1"	N/A	231-3"	21'-7"	20'-8"	N/A
	NI-90x	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
	NI-40x	23'-7"	21'-11"	20'-11"	N/A	24'-3"	22'-7"	21'-7"	N/A
	NJ-60	24'-0"	22'-3"	21'-3"	N/A	24'-8"	22'-11"	21'-11"	N/A
14"	N1-70	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-11"	N/A
	NI-80	25'-7"	231-8"	22'-7"	N/A	26'-2"	24'-4"	23'-2"	N/A
	NI-90x	26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
	NI-60	26'-5"	24'-6"	23'-4"	N/A	27'-2"	25'-3"	24'-2"	N/A
	NI-70	27'-9"	25'-8"	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
16"	NI-80	28'-2"	26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A
	NI-90x	29'-0"	26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-2"	N/A

<sup>1.</sup> 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.

<sup>2.</sup> Spans are based on a composite floor with glued-natied 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.

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

<sup>4.</sup> 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 086-09, NBC 2010, and OBC 2012.

<sup>6.</sup> 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-LZ74C.



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







			. в	lare		1	1/2" Gyr	sum Ceiling	
Depth	Series		On Cent	re Spacing		On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	· 16'-4"	15'-5"	14'-6"	13'-5"
	NI-40x	17'-0"	16'-0"	15'-5"	14'-9"	17'-5"	16'-5"	15'-10"	15'-2"
9-1/2"	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-6"	16'-7"	15'-11"	15'-3"
	NI-70	18'-0"	16'-11"	16'-3"	15'-7"	18'-5"	17'-3"	16'-7"	15¹-11"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	16'-1"
	NI-20	17'-10"	16'-10"	16'-2"	15'-6"	18'-6"	17'-4"	16'-9"	16'-1"
	NI-40x	19'-4"	17'-11"	17'-3"	16'-6"	19'-11"	18'-6"	17'-9"	17'-0"
	NI-50	19'-7"	18'-2"	17'-5"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"
11-7/8"	NI-70	20'-9"	19'-2"	18'-3"	<b>17'-5"</b>	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'-5"	18'-6"
	NI-40x	21'-5"	19'-10"	.18'-11"	17'-11"	22'-1"	20'-6"	19'-7"	18'-7"
	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"
	NI-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'- <del>9</del> "	23'-10"	22'-9"	21'-5"
16"	NI-80	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-90x	26'-4"	24'-3"	23'-3"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

			Mid-Spa	n Blocking		Mid-	Span Blocking a	nd 1/2" Gypsun	n Ceiling
Depth	Series	-	On Cent	re Spacing			On Cent	tre Spacing	
		12"	16"	19.2"	24 <sup>ii</sup>	12"	16"	19.2"	24"
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-8"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15' <b>-</b> 2"
9-1/2"	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
•	NI-70	20'-0"	18'-7"	17'-9"	16'-7"	20'-5"	18'-11"	17'-10°	16'-7"
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10"
	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"
	NI-40x	21'-10"	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-8"
400	NI-60	22'-1"	20'-7"	19'-7"	18 <sup>1</sup> -4"	22'-8"	20'-10"	19'-8"	18'-4"
11-7/8"	NI-70	23'-4"	21 -8"	20'-8"	19'-7"	23'-10"	22'-3"	21'-2"	19'-9"
	NI-80	23'-7"	21-11"	20'-11"	19'-9"	24'-1"	22'-6"	21'-5"	20'-0"
	NI-90x	24'-3"	22'-6"	21'-6"	. 20'-4"	24'-8"	23'-0"	22'-0"	20'-9"
	NI-40x	24'-5"	22'-9"	21'-8"	19'-5°	25'-1"	23'-2"	21'-9"	19'-5"
	NI-6D	24'-10"	23'-1"	22'-0"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10"
14 <sup>n</sup>	NI-70	26'-1"	24'-3"	23'-2"	21'-10"	26'-8"	24'-11"	23'-9"	22'-4"
	NI-80	26'-6"	24'-7"	23'-5"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"
	NI-90x	. 27'-3"	25'-4"	24'-1"	22'-9"	27'-9"	25'-11"	24'-8"	23'-4"
	NI-60	27'-3"	25'-5"	24'-2"	22'-10"	28'-0"	26'-2"	24'-9"	23'-1"
	NI-70	28'-8"	26'-8"	25'-4"	23'-11"	29'-3"	27'-4"	26'-1"	24'-8"
16"	NI-80	29'-1"	27 <b>'-</b> 0"	25'-9"	24'-4"	2 <del>9</del> ′-8"	27'-9"	26'-5"	25'-0"
	NI-90x	29'-11"	27'-10"	26'-6"	25'-0"	30'-6"	28'-5"	27'-2"	25'-8"

<sup>1.</sup> 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 1/240.

<sup>2.</sup> 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 hearings.

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

<sup>5.</sup> 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.

<sup>6.</sup> 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.



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







			ε	Sare		1	1/2" Gyr	sum Ceiling	
Depth	Series		On Cent	re Spacing	•	Ϊ .	On Cen	tre Spacing	
•		12" ·	16"	19.2"	24"	12"	16"	19.2"	24"
	N1-20	15'-1"	14'-1"	13'-3"	N/A	15'-7"	14'-1"	13'-3"	N/A
	NI-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"	151.3"	N/A
•	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A
	08-IN	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
	NJ-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
	Nf-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	201-20"	19 <sup>1</sup> -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
	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"	NJ-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"	22¹-4°	N/A

			Mid-Spa	n Blocking	Mid-	Mid-Span Blocking and 1/2" Gypsum Celling			
Depth	Series		On Cent	re Spacing		On Centre Spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	15'-7"	14'-1"	13'-3"	N/A	15'-7"	14'-1"	13'-3"	N/A
	NI-40x	17'-9"	16'-1"	15'-1"	N/A	17'-9"	16'-1"	15'-1"	N/A
9-1/2"	NI-60	18'-1"	16'-4"	<u> 35'-4"</u>	N/A	18'-1"	16'-4"	15'-4"	N/A
,	NJ-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
	NI-20	18'-9"	17'-0"	16 <sup>7</sup> -0"	N/A	18'-9"	17'-0"	16'-0"	N/A
	NI-40x	21'-0"	19'-3"	17'-9"	N/A	21'-3"	19'-3"	17'-9"	N/A
	NI-60	21'-4"	19'-8"	18'-5"	N/A	21'-8"	19'-8"	18'-5"	N/A
11-7/8"	Nt-70	22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-4"	20'-0"	N/A
	NI-80	22'-9"	21'-1"	20'-1"	N/A	23'-3"	21'-7"	20'-5"	N/A
	NI-90x	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
	Nt-40x	23'-7"	21'-5"	19'-6"	N/A	24'-1"	21'-5"	19'-6"	N/A
	NI-60	24'-0"	22'-3"	21'-0"	N/A	24'-8"	22'-5"	21'-0"	N/A
34"	NI-70	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-9"	N/A
	NI-80	25'-7"	23'-8"	<u>22'-7"</u>	N/A	26'-2"	24'-4"	23'-2"	N/A
	NJ-90x	26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	231.9"	N/A
	NI-60	26'-5"	24'-6°	23'-4"	N/A	27'-2"	24'-10"	23'-4"	N/A
	NI-70	27'-9"	25¹~8°	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
16"	N1-80	28'-2"	26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A
	NI-90x	29'-0".	26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-2"	N/A

- 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.SoL + 1.25b. 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.
- Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.
   Minimum bearing length shall be 1-3/4 inches for the end bearings.
- 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 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.

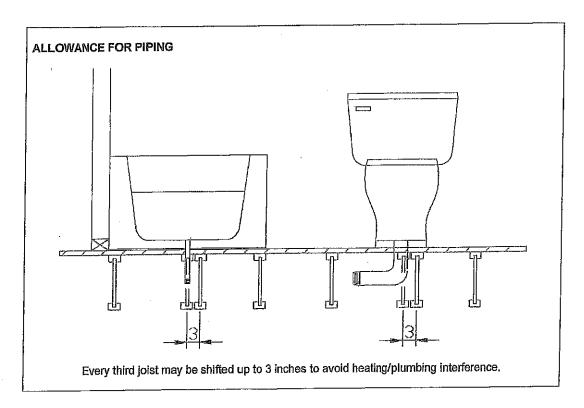


# Allowance for Piping (Installation Notes)

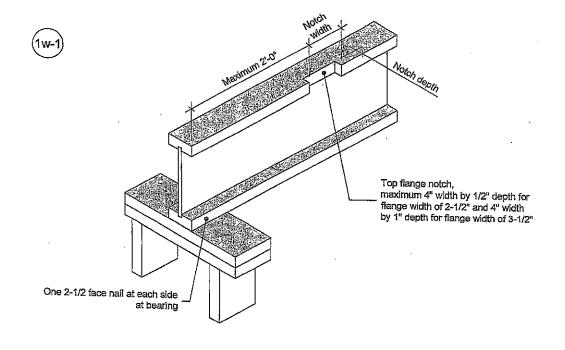
The floor layouts have usually not been checked for heating and/or plumbing interference. On-site adjustment of joists of up to 3 inches is permitted to avoid interferences. When moving a joist, the subfloor thickness shall be checked with code requirements when the joist spacing exceeds 19.2 inches.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

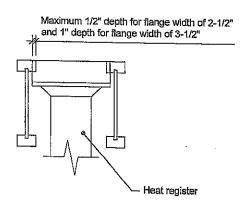
Installation of Nordic I-joists shall be as per *Nordic Joist Installation Guide for Residential Floors*. Refer to Tables 1 and 2 for maximum web hole and duct chase openings, respectively. These tables are based on the I-joists being used at their maximum spans. The minimum distance given may be reduced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





Notes:

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 helf-span.

4. For other applications, contact Nordio 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** 

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Notch in I-joist for Heat Register

CATEGORY

I-joist - Typical Floor Framing and Construction Details

DOCUMENT

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