

Products								
PlotID	Length	Product	Plies	Net Qty	Fab Type			
J1	18-00-00	9 1/2" NI-40x	1	7	MFD			
J1DJ	18-00-00	9 1/2" NI-40x	2	4	MFD			
J2	16-00-00	9 1/2" NI-40x	1	21	MFD			
J3	14-00-00	9 1/2" NI-40x	1	12	MFD			
J3DJ	14-00-00	9 1/2" NI-40x	2	4	MFD			
J4	12-00-00	9 1/2" NI-40x	1	3	MFD			
J5	6-00-00	9 1/2" NI-40x	1	5	MFD			
J6	4-00-00	9 1/2" NI-40x	1	3	MFD			
J7	2-00-00	9 1/2" NI-40x	1	2	MFD			
J8	18-00-00	9 1/2" NI-80	1	4	MFD			
B1	18-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	3	3	MFD			
B4	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD			
B2	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD			
В3	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD			

Connector Summary							
Qty	Manuf	Product					
6	H1	IUS2.56/9.5					
4	H1	IUS2.56/9.5					
2	H1	IUS2.56/9.5					
6	H1	IUS2.56/9.5					
1	H4	HGUS410					

187704

THESE STAMPED DRAWINGS SHALL BE AVAILABLE ON SITE

THE OWNER AND/OR CONTRACTOR SHALL COMPLY WITH

These drawings and/or specifications have been reviewed by

FOR CHIEF BUILDING OFFICIAL

DATE



FROM PLAN DATED: JAN 2020

BUILDER: GREENPARK HOMES

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 2

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. 1-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.

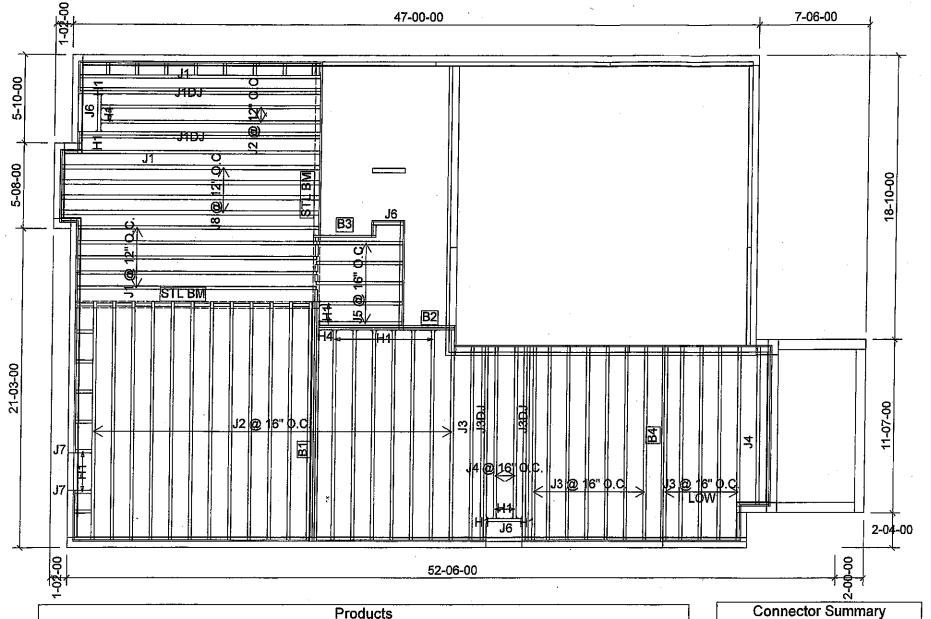
LOADING:

DESIGN LOADS: L/480,000 LIVE LOAD: 40.0 lb/ft2 DEAD LOAD: 20.0 lb/ft²

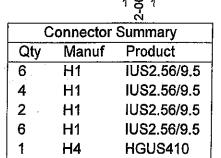
SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 2020-02-20

1st FLOOR



Products							
PlotID	Length	Product	Plies	Net Qty	Fab Type		
.J1	18-00-00	9 1/2" NI-40x	1	7	MFD		
J1DJ	18-00-00	9 1/2" NI-40x	2	4	MFD		
J2	16-00-00	9 1/2" NI-40x	. 1	21	MFD		
J3	14-00-00	9 1/2" NI-40x	1	13	MFD		
J3DJ	14-00-00	9 1/2" NI-40x	2	4	MFD		
J4	12-00-00	9 1/2" NI-40x	1	3	MFD		
J5	6-00-00	9 1/2" NI-40x	1	5	MFD		
J6	4-00-00	9 1/2" NI-40x	1	3	MFD		
J7	2-00-00	9 1/2" NI-40x	1	2	MFD		
J8	18-00-00	9 1/2" NI-80	1	4	MFD		
B1	18-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	3	3	MFD		
B4	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD		
B2	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	<u>2</u>	2	MFD		
В3	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1.	MFD		



187704

THESE STAMPED DRAWINGS SHALL BE AVAILABLE OF STEST FLOOR

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

LUMBER INC ALPA LUMBER GROUP

FROM PLAN DATED: JAN 2020

BUILDER: GREENPARK HOMES

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 2

ELEVATION: 2,3

LOT:

CITY: WATERDOWN

SALESMAN: MARIO DICIANO

DESIGNER: AJ **REVISION:**

NOTES:

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND

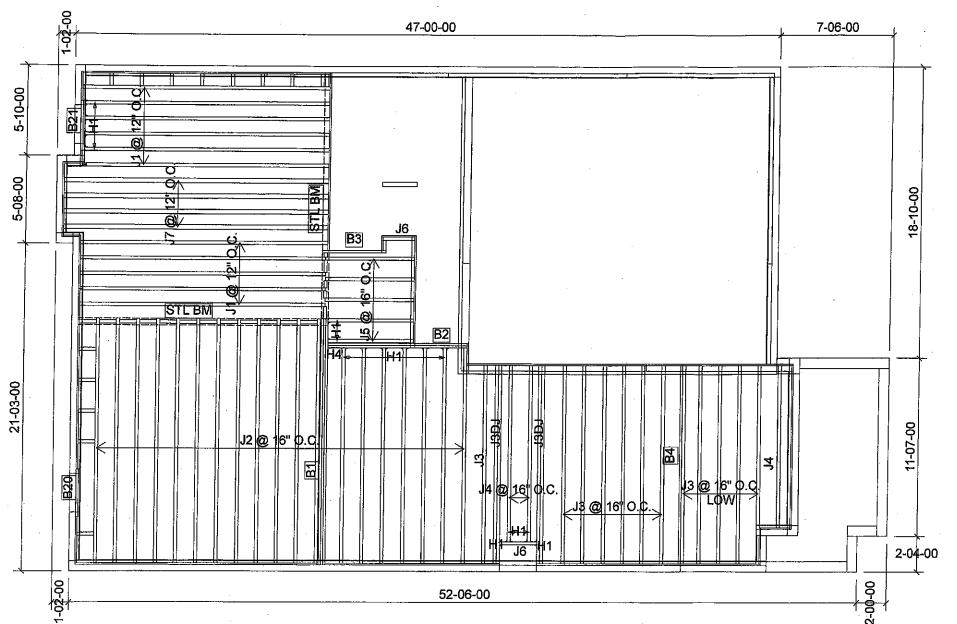
INSTALLATION. **SQUASH BLOCKS** OF 2x4, 2x6, 2x8 #2 S.P.F REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH **BLOCKS** REQ'D UNDER CONCENTRATED LOADS, SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' OVER BRICK REQ. I-JOIST BLOCKING ALONG BEARING AND RIMBOARD CLOSURE AT ENDS. SEE FIGURES 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: 2020-02-20



Products								
PlotID	Length	Product	Plies	Net Qty	Fab Type			
J1	18-00-00	9 1/2" NI-40x	1	11	MFD			
J2	16-00-00	9 1/2" NI-40x	1	19	MFD			
J3	14-00-00	9 1/2" NI-40x	1	12	MFD			
J3DJ	14-00-00	9 1/2" NI-40x	2	4	MFD			
J4	12-00-00	9 1/2" NI-40x	1	3	MFD			
J5	6-00-00	9 1/2" NI-40x	1	5	MFD			
J6	4-00-00	9 1/2" NI-40x	1	2	MFD			
J7	18-00-00	9 1/2" NI-80	1	4	MFD			
B1	18-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	3	3	MFD			
B4	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD			
B2	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD			
B3	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD			
B20	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD			
B21	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	. 2	MFD .			

C	Connector Summary							
Qty	Manuf	Product						
10	H1	IUS2.56/9.5						
2	H1	IUS2.56/9.5						
2	H1	IUS2.56/9.5						
2	H1	IUS2.56/9.5						
1	H4	HGUS410						

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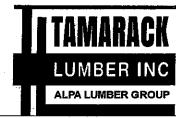
THESE STAMPED DRAWINGS SHALL BE AVAILABLE ON SITE

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

FOR CHIEF BUILDING OFFICIAL

DATE



FROM PLAN DATED: JAN 2020

BUILDER: GREENPARK HOMES

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 2

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 FIGURES 4 & 5 FOR REINFORCEMENT REQUIREMENTS. FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 7. TABLES 1 & 2. CERAMIC TILE APPLICATION AS PER O.B.C 9.30.6.

LOADING:

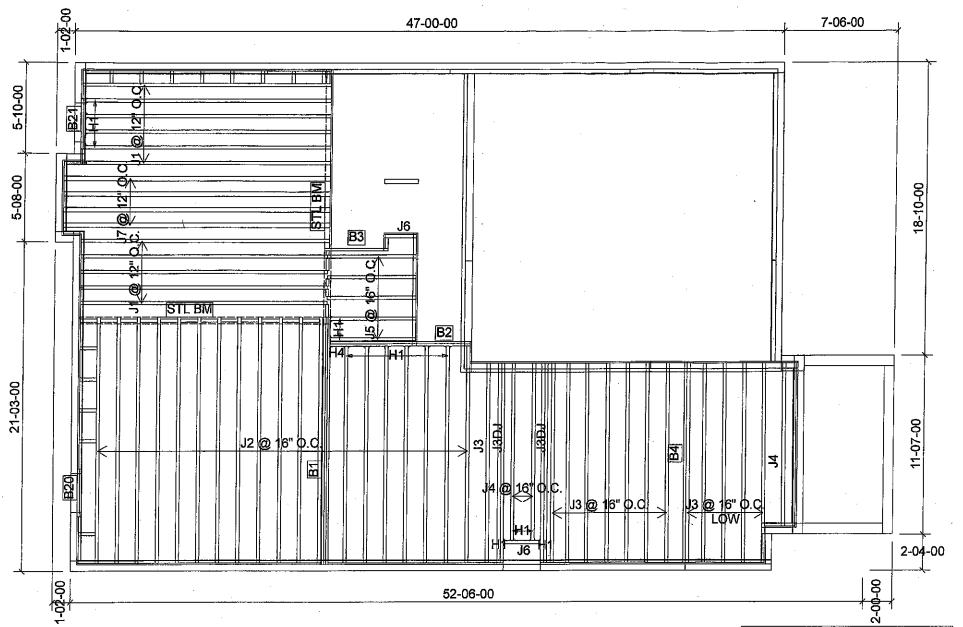
DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 20.0 lb/ft²

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 2020-03-24

1st FLOOR

DECK CONDITION



	Products						
PlotID	Length	Product	Plies	Net Qty	Fab Type		
J1	18-00-00	9 1/2" NI-40x	1	11	MFD		
J2	16-00-00	9 1/2" NI-40x	1	19	MFD		
J3	14-00-00	9 1/2" NI-40x	1	13	MFD		
J3DJ	14-00-00	9 1/2" NI-40x	2	4	MFD		
J4	12-00-00	9 1/2" NI-40x	1	3	MFD		
J5	6-00-00	9 1/2" NI-40x	1	5	MFD		
J6	4-00-00	9 1/2" NI-40x	1	2	MFD		
J ²	18-00-00	9 1/2" NI-80	1	4	MFD		
B1	18-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	3	3	MFD		
B4	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD		
B2	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD		
В3	6-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD		
B20	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD		
B21	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD		

Connector Summary Oty Manuf Product										
Qty Manuf Product		Connector Summary								
		Qty	Manuf	Product						
10 H1 IUS2.56/9.5		10	H1	IUS2.56/9.5						
2 H1 IUS2.56/9.5		2	H1	IUS2.56/9.5						
2 H1 IUS2.56/9.5		2	H1	IUS2.56/9.5						
2 H1 IUS2.56/9.5	l	2	H1	IUS2.56/9.5						
1 H4 HGUS410		1	H4	HGUS410						

187704

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

FOR CHIEF BUILDING OFFICIAL

DATE



FROM PLAN DATED: JAN 2020

BUILDER: GREENPARK HOMES

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 2

ELEVATION: 2,3

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:

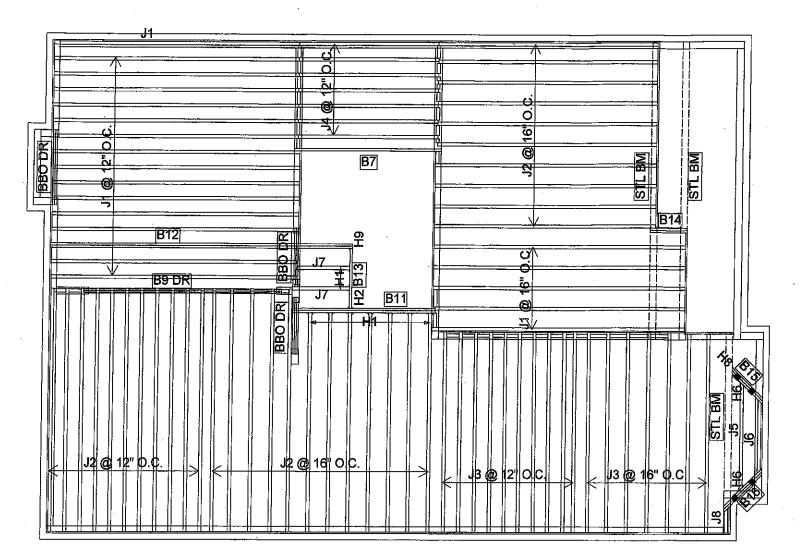
DESIGN LOADS: L/480,000 LIVE LOAD: 40.0 ib/ft² DEAD LOAD: 20.0 lb/ft2

SUBFLOOR: 3/4" GLUED AND NAILED

DATE: 2020-03-24

1st FLOOR

DECK CONDITION



	Products						
PlotID	Length	Product	Plies	Net Qty	Fab Type		
J1	18-00-00	9 1/2" NI-40x	1	20	MFD		
J2	16-00-00	9 1/2" NI-40x	1	33	MFD		
J3	14-00-00	9 1/2" NI-40x	1	17	MFD		
J4	10-00-00	9 1/2" NI-40x	1	7	MFD		
J5	8-00-00	9 1/2" NI-40x	1	1.	MFD		
J6	6-00-00	9 1/2" NI-40x	1	1	MFD		
J7	4-00-00	9 1/2" NI-40x	1	2	MFD		
J8	2-00-00	9 1/2" NI-40x	1	1	MFD		
B12	22-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD		
B9 DR	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD		
B7	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD		
B11	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD		
B13	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD		
B14	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD		
B15	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD		
B16	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD		

Draduate

	Connector Summary							
Qty	Manuf	Product						
2	H1	IUS2.56/9.5						
7	H1	IUS2.56/9.5						
1	H2	HUS1.81/10						
1	H6	LSSR2.56Z						
1	H6	LSSR2.56Z						
1	H8	LSSR410Z						
1	H9	LS90						

CITY OF HAMILTON **Building Division**

187704

THESE STAMPED DRAWINGS SHALL BE AVAILABLE ON

THE OWNER AND/OR CONTRACTOR SHALL COMPLY WITH DATE: 2020-02-12 IE ONTARIO BUILDING CODE AND ALL OTHER APPLICABLE LAW

2nd FLOOR

TAMARACK LUMBER INC ALPA LUMBER GROUP

FROM PLAN DATED: JAN 2020

BUILDER: GREENPARK HOMES

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 2

ELEVATION: 1

LOT:

CITY: WATERDOWN

SALESMAN: MARIO DICIANO

DESIGNER: AJ **REVISION:**

NOTES:

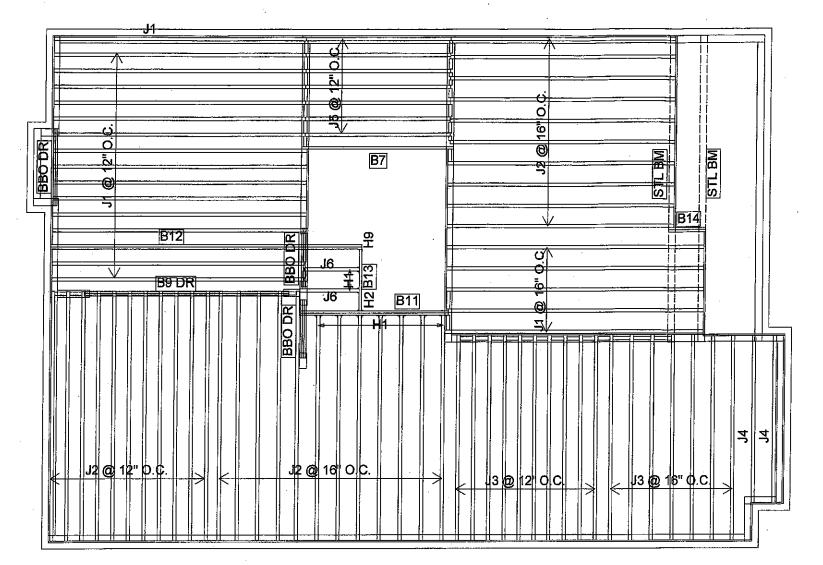
REFER TO THE NORDIC INSTALLATION **GUIDE** FOR PROPER STORAGE AND INSTALLATION. SQUASH BLOCKS OF 2x4. 2x6, 2x8 #2 S.P.F. REQ'D UNDER INTERIOR UNIFORM LOAD BEARING WALLS. MULTIPLE SQUASH BLOCKS REQ'D UNDER CONCENTRATED LOADS, SEE FIGURE 1. CANTILEVERED JOISTS INCLUDING CANT' **OVER BRICK** REQ. I-JOIST 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/ft² DEAD LOAD: 20.0 lb/ft

SUBFLOOR: 5/8" GLUED AND NAILED

FOR CHIEF BUILDING OFFICIAL



Products						
PlotID	Length	Product	Plies	Net Qty	Fab Type	
J1	18-00-00	9 1/2" NI-40x	1	20	MFD	
J2	16-00-00	9 1/2" NI-40x	1	33	MFD	
J3	14-00-00	9 1/2" NI-40x	1	17	MFD	
J4	12-00-00	9 1/2" NI-40x	1	2	MFD	
J5	10-00-00	9 1/2" NI-40x	1	7	MFD	
J6	4-00-00	9 1/2" NI-40x	1	2	MFD	
B12	22-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD	
B9 DR	14-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD	
B7	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD	
B11	10-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD	
B13	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	1	1	MFD	
B14	4-00-00	1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP	2	2	MFD	

Connector Summary					
Qty Manuf Product					
2	H1	IUS2.56/9.5			
7	H1	IUS2.56/9.5			
1	H2	HUS1.81/10			
1	H9	LS90			

Permit No.

187704

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

FOR CHIEF BUILDING OFFICIAL

DATE



FROM PLAN DATED: JAN 2020

BUILDER: GREENPARK HOMES

SITE: RUSSELL GARDENS PH 3

MODEL: VALLEYCREEK 2

ELEVATION: 2,3

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

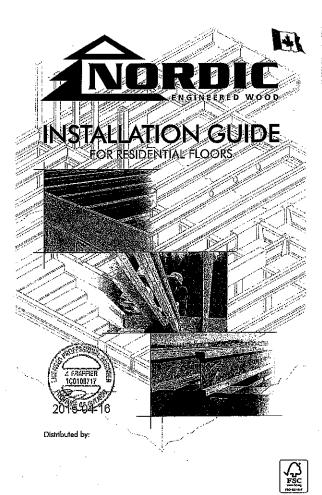
LOADING:

DESIGN LOADS: L/480.000 LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 20.0 lb/ft ²

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 2020-02-12

2nd FLOOR



SAFETY AND CONSTRUCTION PRECAUTIONS



Once sheathed, do no over-stress l-joist with concentrated loads from building materials.

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

Avoid Accidents by Following these Important Guidelines

- Brace and noil each i-joist as it is installed, using hangers, blocking panels, rim board, and/or cross-bridging at jobs ands. When i-joists are applied certinuous ever interior supports and a load-baaring well is planned at that location, blocking will be required at the interior support.
- When the building is completed, the floor sheathing will provide lateral support for the top florage of the I-joint. Unfil this sheathing is applied, temporary bracing, often called struth, or temporary sheathing must be applied to prevent I-joint railover or buckling.
- ** Emporary bracing or strate must be 1x4 inch minimum, at least 8 feet long and spaced no more than 8 feet on contro, and must be secured with a minimum, of how 2-1/2" allot fostered to the top surface of each I-joist. Noti the bracing to a lateral restraint at the end of each boy, top ends of adjoining bracing over at least two 1-joists.
- Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet of I-jaists at the end of the bay.
- 3. For cantilevered !-joists, brace top and bottom flanges, and brace ends with closure panels, rim board, or cross-bidging.
- Install and fully nail permanent sheathing to each I-joist before placing loads on the floor system. Then, stack building materials over beams or walls only. S. Never install a damaged I-joist.

Improper storage or installation, failure to follow applicable building codes, follure to follow span ratings for Nortic Lipists, failure to follow allowable hole sizes and locations, or failure to use web stiffeners when required can result in serious accidents. Follow these installation guidelines carefully.

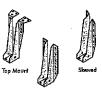
MAXIMUM FLOOR SPANS

- Maximum clear spans applicable to simple-span or multiple-span residential floor construction with a design live load of 10 ps. The utilimate limit status are based on the factored loads of 1.50t. The utilimate limit status are based on the factored loads of 1.50t. The utilimate limit status are based on the factored loads of 1.50t. The utilimate residential process of the consideration for floor vibration and a live load deflection limit of 1/480. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- 2. Spans are based on a composite floor with gloud-mailed oriented strend board (OSB) shoothing with a minimum thickness of S/B inch for a joint speding of 19-2 inches or less, or 3/4 inch for joint spading of 19-2 inches or less, or 3/4 inch for joint spading of 19-2 inches. Adhesive sholl meet the requirement given in COBS-71.2.6 Standard. No concrete topping or bridging element was assumed. Increased spans may be activesed with the used of gypsum and/or a row of blocking at mid-span.
- Minimum bearing length shall be 1-3/4 inches for the end bearings, and 3-1/2 inches for the intermediate bearings.
- Searing stiffeners are not required when 1-joists are used with the spane and spacings given in this table, except as required for hangers.
- This span charl is based on uniform loads. For application with other than uniform loads, on engineering analysis make required hosed on the use of the design properties.
- Tables are based on Limit States Design per CAN/CSA .
 O86-09 Standard, and NBC 2010.

MAXIMUM FLOOR SPANS FOR NORDIC I-JOISTS SIMPLE AND MULTIPLE SPANS 13'-5' 14'-9' 14'-11' 15'-7' 15'-6' 16'-6' 16'-6' 17'-7' 17'-11' 18'-2' 19'-2' 19'-2' 19'-10' 20-10' 21'-2' 21'-6' 21'-16' 16'-3' 17'-5' 18'-7' 18'-7' 18'-7' 18'-10' 20'-3' 21'-5' 22'-2' 22'-7' 22'-7' 24'-7' 26'-5' 26'-5' 26'-5' 26'-5' 26'-5' 26'-5' 26'-7' 27'-3' 14-7 15-5 16-1 16-10 17-0 17-7 17-7 18-1 19-1 19-4 19-4 19-4 19-11 16'-5 16'-7' 17'-4' 17'-10 17'-10' 17'-11' 18'-1' 19'-1' 19'-4' 19'-9 18-9 18-7* 18-11* 20-0* 20-3* 2041* 2142* 2146* 2140* 2242* 21410* 2340* 2344* 2349 2441* 20-1 20-5 21-7 21-11 22-5

I-JOIST HANGERS

- Hangers shown illustrate the three most commonly used metal hangers to support 1-joists.
- 2. All nailing must meet the honger manufacturer's recommendations
- 3. Hangers should be selected based on the joist depth, flange width and load copacity based on the maximum spans.
- Web stiffeners are required when the sides of the hangers do not laterally brace the top flange of the l-joist.



Face Mount

STORAGE AND HANDLING GUIDELINES

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

WEB STIFFENERS

A pearing stiffener is required in all engineered applications with factored reactions genter than shown in the I-joist properties table found of the I-joist Construction Guide (CIOI). The gap between the stiffener and the flange is at the top.

Abaring stiffener is required when the lipist is supported in a honger and the class of the hunger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.

A load stiffener is required at locati at Noad stiffener is required at locations where a factored concentrated load greater than 2,370 lbs is applied to the top Benge between supports, or in the case of a cardilover, argywhere between the cardilever tip and the support. These values are for standard term load durelon, and may be adjusted for other load durelons as permitted by the code. The gap between the stiffener and the flange is at the bottom.

SI units conversion: 1 inch = 25.4 mm

(10)

WEB STIFFENER INSTALLATION DETAILS CONCENTRATED LOAD Approx. 2" I 1/8"-1/4" Gop - (4) 2-1/2" nails, END SEARING (Bearing stiffener No Goo See table below for web stiffener size requirements STIFFENER SIZE REQUIREMENTS | Flange Width | Web Stiffener Size Each Side of Web | 2-1/2" | 1" x 2-5/16" minimum width | 3-1/2" | 1-1/2" x 2-5/16" minimum width |

NORDIC I-JOIST SERIES 5-PF No.2 1950F MSR 2100F MSR 1950F MSR 2100F MSR 2400F MSR 33 pinosa 33 pinosa 33 pinosa 23 pin

crommers - macrograms use, harvests is own trees, which enables blacky product to adhere to strid quality control procedures through the harvest manufacturing process. Every phase of the operation, from chief the finished product, reflects our commitment to quality.

finished product, reflects our commitment to quality

Nordic Engineered Wood Lights use only finger-jointed black of the PEFER lumber in their fitnings, ensuring consistent quality, superprint systems and longer span carrying capacity.

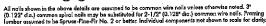
Backer black (use if hunger lead exceeds 360 lbt)
Before instelling a backer black to a double I-joist, drive three
additional 3 rails through the wabs and filer black where the
backer black will fit. Clinch, Install backer light to top flange.
Use twelve 3 rails, clinched when possible. Mostmum factored
resistance for hunger for this datail = 1,620 lbs.

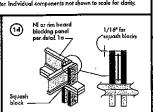
ez block required

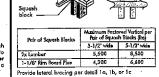
INSTALLING NORDIC I-JOISTS

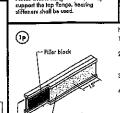
- 1. Before laying out floor system components, verify that I-joist flange widths match hanger widths. If not, system components, verify that I-joist flange widths match hanger widths.
- 2. Except for cutting to length, I-joist flanges should never be out, drilled, or notched 3. Install I-joists so that top and bottom flanges are within 1/2 Inch of true vertical alignment.
- i-joists must be anchored securely to supports before floor sheathing is attached, and supports believed.
- 5. Minimum bearing lengths: 1-3/4 inches for end bearings and 3-1/2 inches for interm
- 6. When using hangers, seat I-foists firmly in hanger bottoms to minimize settlement.
- 7. Leave a 1/16-inch gap between the I-joist end and a header.
- 8. Concentrated loads greater than those that can normally be expected in residential construction should only be applied to the top surface of the top flagges. Normal concentrated loads include track lighting fatures, audio aquipment and security comerats. Never suspand unusual or heavy loads from the Ljoist's bottom flangs. Whenever possible, suspand all concentrated loads from the top of the Ljoist. Or, oftach the load to blocking that has been securely fastened to the Ljoist webs.
- 9. Never install I-joists where they will be permanently exposed to weather, or where they will remain in direct contact with
- 10. Restrain ends of floor joists to prevent rollover. Use rim board, rim joints or I-joist blocking panels.
- For I-joists installed over and beneath bearing walls, use full depth blocking panels, rim board, or squash blocks (cripple members) to transfer gravity loads livrough the floor system to the wall or foundation below.
- 12. Due to shrinkage, common framing lumber set on edge may never be used as blocking ar rim boards. Lijoist blocking panels or other engineered wood products—such as rim board—must be cut to fit between the Lijoists, and an Lijoist-compatible depth selected.
- 13. Provide permanent loteral support of the bottom flenge of all I-joists at interior supports of multiple-span joist. Similarly, support the bottom flenge of all confilerence I-joists of the end support next to the confilerence extension. In the completed structure, the gypsum voliporat celling provides this fateral support. Until the final finished celling is applied, temporary bracing or structure must be support.
- 14. If square-edge panels are weed, edges must be supported between Lipists with 2x4 blocking. Glue panels to block minimize squedce. Recking is not required under structural finish flooring, such as wood strip flooring, or if a septunder downers layer is installed.
- 15. Nail spacing: Space nails installed to the flange's top face in accordance with the applicable building code requirem approved building plans.

TYPICAL NORDIC I-JOIST FLOOR FRAMING AND CONSTRUCTION DETAILS Figures 3, 4 or 5 Holes may be cut in well (1) (b) (B) (E) -(I) (1p)-① (h) (l) (lk) (lm) $\Theta \oplus -$









For nailing schedules for multiple

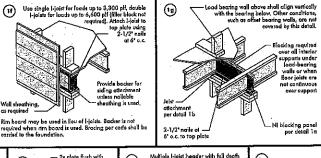
Note: Unless hanger sides laterally

 Leave a 1/8 to 1/4-inch gap between top
 of filler block and bottom of top 1-joist
flange. Filler block is required between joists for full length of span. nul length of spon.

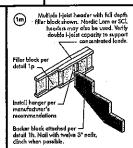
A. Nall joists logether with two rows of 3" nails at 12 inches o.c. (dinched when passible) on each side of the double kjets. Total of four nails par foot required. If nails can be disched, only two nails par foot or required.

(1k)

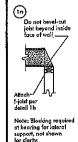
5. The maximum factored load that may be applied to one side of the double joist using this detail is 860 lbf/ft. Verify double I-joist capacity.



oad bearing wall above shall align vertically

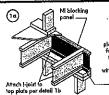


Meximum support capacity = 1,620 lbs



For honger capacity see hanger manufacturer's recomment Verify double I-joist capacity to support concentrated loads. BACKER BLOCKS (Blocks must be long enough to permit required nating without splitting) Flange Width Majorial Thickness Required* 5-1/2" 3-1/2" 1-1/2" 7-1/4"

Minimum grade for backer block material shall be S-P-F No. 2 or better for solid sown lumber and wood structural panels conformin to CAN/CSA-O325 or CAN/CSA-O437 Standard. to LANYUSA-US25 or CAN/CSA-Q437 Standard.
** For face-mount langurs use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges. For 2" thick flanges use net depth minus 4-1/4".



2-1/2' nails at
6' o.c. to top
plate (when used
for lateral shear
transfer, nail to
bearing plate
with same nailing
as required for
decking) Blocking Panel or Rim Joist Maximum Factored Uniform Yerical Load* (pit)

NI Joists 3,300

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

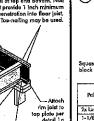


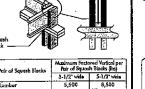
plate using 2-1/2" wire or spiral toe-nails at 6" o.c. To avoid splitting flange, start nails at least 1-1/2" from end of (-joist, Mails may be driven at an angle to id splitting of bearing plate. Minimum bearing length shall be 1-3/4* for the end bearings, and 3-1/2* for the intermediate bearings when applicable. (te)

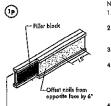
J. PRAFPIER

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1-1/8" Rim Board Plus *The uniform vertical load is limited to a rim board depth of 16 inches or less and is bosed on stendard term load duration. It shall not be used in the dasign of a bending member, such as joist, header, or refler. For concestrated vertical load transfer, see detail 1d.







-1/8" to 1/4" gap between top flange and filler block

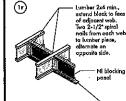
Support back of I-joist web during nailing to prevent damage to web/flange connection. Flunge Joist Filler Size Depth Block Size 2-1/8° x 6" 2-1/8° x 8" 2-1/8° x 10" 2-1/8° x 12" 2-1/2* x 1-1/2* 9-1/2* 3-1/2°x 1-1/2°

3-1/2"× 11-7/8" 3° x 7° 14' 3° x 9° 16° 3° x 11'

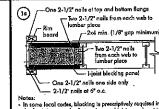
Zx plote flush with inside face of wall or beam. 1/8" overhans allowed past inside face of wall or beam

Top-mount hanger installed per manufacturer's recommendation

Note: Unless hanger sides faterally

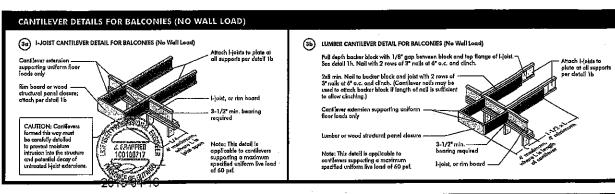


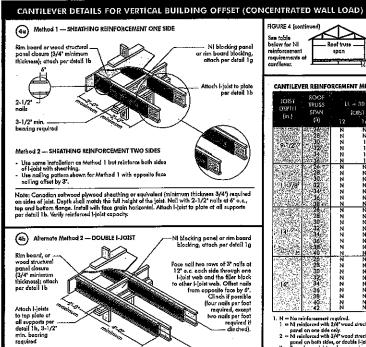
Optlonal: Minimum 1x4 inch : opinital mainten tax inter strop applied to underside of joist at blocking fine or 1/2 inch minimum gypsum ceiling attached to underside of joists.



In some local codes, blacking is prescriptively required in the first joist space (or first and second joist space) next to the starter joist. Where required, see local for spacing of the blocking.

All noils are common spiral in this detail.





Block 1-joists together with filler blocks for the full length of the reinforcement. For 1-joist flonge widths greater than 3 inches place an additional row of 3' nails along the cantalities of the reinforcing panel from each side. Clinch when possible.

For hip roofs with the jack trusses running parallel to the contilevered floor joists, the l-joist reinforcement requirements for a span of 26 ft. shall be permitted to be used. Roof trussas 134-0* maxmum Girder Roof truss Span 12-0* maxmum Roof Irus span CANTILEVER REINFORCEMENT METHODS ALLOWED II = 50 psf, DI = 15 psf U. = 30 psf. Dl = 15 psf 11. = 40 psf, Dt. = 15 psi

- 1. N = No reinforcement required.
 1 = NI reinforced with 3/4" wood directurel panel on one side only.
 2 = NI reinforced with 3/4" wood structurel.

 1. The state of the state panel on both sides, or double l-jaist.

 X = Try a deeper joist or daser spacing.

 Maximum design load shall be: 15 psf roof
- For larger opanings, or multiple 3-0° width openings spaced less than 6-0° o.c., odd-tional loids beauth the opening's cripple stude may be required.

 Table applies to joint 12" to 24° o.c. that must the floor span requirements for a design time lead of 40 pt and deed lead of 15 ptf, and a law lead of 415 ptf, and a law lead defiction limit of 1/40°. Use 12° o.c. requirements for less specing.
- For conventional roof construction using a ridge beam, the Bod Fusus Spara column above is equivalent to the additions between the supporting well and the strige beam. The supporting well and the strige beam the supporting well no cort, the bod Fusus Spara is equivalent to the distance between the supporting wells as if a true is used.

 5. Cardiovarse joints supporting affect russes or real beams may require additional.

BRICK CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET (CONCENTRATED WALL LOAD) Roof trusses Girder Roof trusse russ span 2:-0* -12" minimum length of sheathing reinforcemen elow for NI - Roof truss - 7 2'-0' maxin Roof truss— Provide full depth blocking between requirements for a span of 26 ft, shall be permitted to Noil reinforcement to to and bottom joist flanges with 2-1/2" nails at 6" o.c. (affact apposite face nailing by 3" when using reinforcement on both sides of 1-joist) Note: Canadian softwood plywood sharthing or acquivalent firminum thickness 3/47 majuriad on states of joint. Depth shall match the full height of the joist. Not with 2-1/27 rolls of 5.0.c. to gard bettern flange, Instell with face grain harizontal. Altech I-joist to plate at all supports per detail 1b. Verify cairforced I-joist capacity. BRICK CANTILEVER REINFORCEMENT METHODS ALLOWED LL = 50 pst, DL = 15 psf TRUSS SPAN (fr) JOIST SPACING (in.) 16 19.2 24 12 JOIST SPACING (in) JOIST SPACING (in 16 19.2 3 20002 (5b) SET-BACK DETAIL Notes: • Provide full depth blacking between joists over support (not shown for clarity) • Attach I-joist to plate of all supports per detail 1b. • 3-1/2" minimum I-joist bearing required. 5c SET-BACK CONNECTION Vertical solid sawn blocks (2x6 S-P-F No. 2 or better) noiled through joist web and web of girder using 2-1/2" nails. For larger openings, or multiple 3:0° width opacings spaced lass than 6:0° o.c., and additional joint between the opening's cripple study may be required. The pening's cripple study may be required. The speciment for a design five this floor span requirements for a design five to go to span requirements for a design five to go to span requirements for a design five to go to g N ⇒ No reinforcement required. N ⇒ NI reinforced with 3/4" wood structural. 1 = NI rainforced with 3/4" wood structural pendin one side only. 2 = NI rainforced with 3/4" wood structural pendin only nide, as orderla 1/doi: X = 1/y o despar joint or clear sposing. X = 1/y o despar joint or clear sposing. X = 1/y o despar joint or clear sposing of clear load, 3/doi: Nationtura design load shall be 1.6 per ood deed load, 5/5 per filoso total load, and 80 pel well load. Wall load to buced on 3/d? well load. Wall load to buced on 3/d? musimum width window or door opanings. Notes: - Verify girder joist capacity if the back span truss is used. 5. Camilwered joists supporting girder trusses or roof beams may require additional reinforcing. exceeds the joist spacing. Attach double I-joist per detail 1p, if required.

WEB HOLES

RULES FOR CUTTING HOLES AND DUCT CHASE OPENINGS:

- The distance between the inside edge of the support and the centreline of any hole or duct chase opening shall be in compliance with the requirements of Table 1 or 2, respectively.
- 2. I-joint top and bottom flanges must NEVER be out, notched, or otherwise modified 3. Whenever possible, field-cut holes should be centred on the middle of the web.
- 4. The maximum size hele or the maximum depth of a dust chose opening that con be cut into an fijoid was shall equal the clear distance between the flonges of the I-joist minu. 1/4 inch. A minimum of 1/8 inch should obvoys be maintained between the top or bottom of the hole or opening and the adjacent I-joist flange.
- The sides of square holes or longest sides of reclangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
- Where more then one hole is necessory, the distance between adjacent hole edges shall exceed this other hard between the size of the largest square hole for his continuous the largest round hole or twice the largest record hole or twice the largest record hole or duct chase opening) and each hole and duct chase opening, shall be sized and located in compliance with the requirements of Tables 1 and 2, respectively.
- A knockout is not considered a hole, may be utilized anywhere it occurs, and
 may be ignored for purposes of calculating minimum distances between holes
 and/or duct chase openings.
- Holes measuring 1-1/2 inches or smaller shall be permitted anywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to
- A 1-1/2 inch hale or smaller can be placed onywhere in the web provided that it meets the requirements of rule number 6 above.
- 10. All holes and dud chase openings shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in Figure 7.
- 11. Limit three maximum size holes per span, of which one may be a duct chase
- 12. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

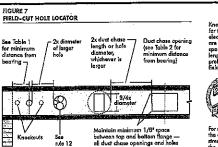
IABLE I LOCATION OF CIRCULAR HOLES IN JOIST WEBS Simple or Multiple Span for Dead Loads up to 15 psf and Live Loads up to 40 psf



Above table may be used for I-joist specing of 24 Inches on contre or less.
 Hole location distance is measured from inside face of supports to centre of hole.
 Distances in this chart are based on uniformly locate joists.

The above table is based on the lights used at their maximum span. If the Lights are placed at less than their full maximum span the minimum distance from the centraline of the hole to the face of any support (D) as given above may be reduced as fall are:



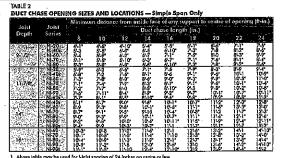


Kneckouts are prescored holes provided for the contractor's convenience to instal electrical or small plumbing lines. They are 1-1/2 inches in diameters and are spaced 15 inches no centre along the length of the i-joist. Winero possible, it is preferable to use kneckouts instead of field-cut holes.



Holes in webs should be cut with a sharp saw.

For redangular hales, avoid over-cuffing the comers, as this can cause unnecessing these contents of the contents of the contents of the contents is recommended. Starling the comers is recommended. Starling the redangular hale in each of the four comers and them needing the cut between the bales is onother good method to minimize domage to the I-plan.



Above loble may be used for Light specing of 24 inches on sanire or law.
 Due to these opening location distance is measure from inside force of supports to centre of opening.
 The obove loble is tracted on implex spen lights only for other opplications, contact your local distributor.
 Distances are based on undomly located floor joint from law laps on equiversants for a during live load of 40 pst and deed load of 15 pst, and a tive local distection limit of U/490. For other opplications, control your local distributor.

INSTALLING THE GLUED FLOOR SYSTEM

- 1. Wipe any mud, dirt, water, or ice from 1-joint flanges before gluing.
- Snap a chalk line across the l-jaiets four feet in from the wall for panel edge dignment and as a boundary for spreading glue.
- 3. Spread only enough glue to lay one or two panels at a time, or follow specific recommendations from the glue manufacturer.
- Lay the first panel with tangue side to the wolf, and nail in place. This protects the tangue of the next panel from damage when tapped into place with a block and sladgehammer.
- Apply a continuous line of glue (about 1/4-inch diameter) to the top flonge of a single (-jaist. Apply
 glue in a winding pattern on wide areas, such as with double i-joists.
- 6. Apply two lines of glue on I-joists where panel ends butt to assure proper gluing of each end. 7. After the first row of panels is in place, spread give in the groove of one or two panels at a time before laying the neat row. Clue line may be continuous or spaced, but avaid equezze-our by applying a thinner line (1/8 incl) than used on 1-joint Hanges.
- R. Then the second row of panels into place, using a block to protect groove edges.
- Stagger end joints in each succeeding row of panels. A 1/8-inch space between all end joints and 1/8-inch at all edges, including T&O edges, is recommended. (Use a spacer tool or on 2-1/2" common noil to assure accurate and consistent spacing.)
- 10. Complete all natiling of each panel before glue sets. Check the manufacturer's recommendation for cure time, (Warm weather accelerates glue setts.) Leck the manufacturer's recommendation for cure time, (Warm weather accelerates glue setting.) Use 2º ring- or screw-shork radio for panels 3/4-inch thick or less, and 2-1/2º ring- or screw-shork nails for thicker panels. Space natile per the table below. Closer nail spacing may be required by some code, or for disphragm construction. The finished dack can be walked on right away and will carry construction loads without damage to the

FASTENERS FOR SHEATHING AND SUBFLOORING(1)

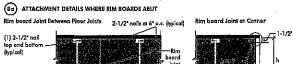
Maximum Joist Spacing (in.)	Minimum Panel Thickness (in.)	Common Wire or Spiral Nails	ail Size and Typ Ring Thread Nails or Screws	Linear de litera		n Specing sleners Intern Supports
16	5/8	2"	1-3/4"	2.	6*	12'
20	5/8	2"	1-3/4"	2'	61	12'
24	3/4	2'	1-3/4"	2.	6*	12'

- 1. Fasteners of sheathing and subflooring shall conform to the above table.
- Stoples shall not be less than 1/16 inch in diameter or thickness, with not less than a 3/8-inch arown driven with the crown parallel to framing.
- 3. Flooring screws shall not be less than 1/8-inch in diameter.
- Special conditions may impose heavy traffic and concentrated loads that require construction in excess
 of the minimums shown.
- 5. Use only adhesives conforming to CAN/CGSB-71.26 Standard, Adherives for Field-Gluing Plywood to Lumber Framing for Floor System, applied in accordance with the monufacturer's recommendation. If OSB penels with seeled surfaces and edges are to be used, use only selvent-based glues, chack with

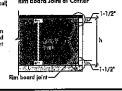
Ref., NRC-CNRC, National Building Code of Canada 2010, Table 9.23.3.5.

IMPORTANT NOTE: Floor sheathing must be field glued to the 1-joist flanges in order to achieve the madmum spans shown in this document. If sheathing is nailed only, 1-joist spans must be varified with your local distributor.

RIM BOARD INSTALLATION DETAILS



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

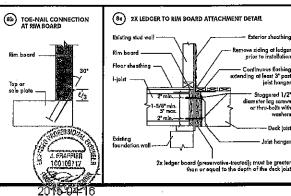


Exterior sheathing Remove siding at ledger prior to installation

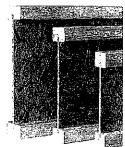
diameter lag screws or thru-bolts with

- Deck tois

Joist hanger

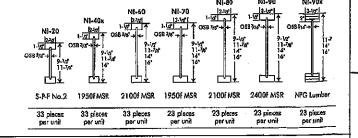












Refer to the Installation Guide for Residential Floors for additional information. CCMC EVALUATION REPORT 13032-R

WEB HOLE SPECIFICATIONS

- The distance between the inside edge of the support and the centreline of any hote or duct chase opening shall be in compliance with the requirements of Table 1 or 2, respectively.

 Lipoist top and bottom flanges must NEVER be cut, notched, or citerwise modified.

 Whenever possible, field-cut hotes should be centred on the middle of the web.

 The maximum size hote or the maximum depth of a duct chase opening that
- can be out into an I-joist web shall equal the clear distance between the flanges of the I-joist minus 1/4 inch. A minimum of 1/8 inch should always be maintained between the lon or bottom of the hale or apening and the adjacent l-joist dange.

LOCATION OF CIRCULAR HOLES IN JOIST WEBS

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

Minimum Distance from Inside Face of Any Support to Centre of Hole (ft - in.) Round Hole Diameter (in.)

6-1/4 7 8 8-5/8 9 10 10-3/4 11 12 12-3/4

. Above table may be used for I-joist spacing of 24 inches on centre or less.
3. Hole location distance is measured from inside face of supports to centre of hole.
5. Distances in this chart are based on uniformly located joists.
5. The above table is based on the I-joists being used at their maximum spans. The minimum distance as given above may be reduced for sharter spans; contact your local distributor.

- The sides of square holes or longest sides of rectangular holes should not exceed 3/4 of the diameter of the maximum round hole permitted at that location.
- the diameter of the maximum round hole permetted at that location.

 6. Where more than one hole is necessory, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole (at twice the length of the longest side of the langest rectangular hole or duct chose opening, and the sized and located in compliance with the requirements of Tables 1 and 2, respectively.

 7. A knockout is not considered a hole, may be utilized anywhere it occurs, and may be increased for converse of challenging mightings between holes and/or duct.
- ignored for purposes of calculating minimum distances between holes and/or duct chass openings. choss openings.

 Notes measuring 1-1/2 inches or smaller are permitted anywhere in a cantilevered section of a joist. Holes of greater size may be permitted subject to verification.
- 9. A 1-1/2 inch hole or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above.

 10. All holes and dust chase openings shall be out in a workman-like manner in accordance with the restrictions listed above and as illustrated in Figure 7.
- 11. Limit three maxim num size holes per span, of which one may be
- a duct chase opening.

 12. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hale circumscribed ground them.

DUCT CHASE OPENING SIZES AND LOCATIONS

		Minimu	əm distan	ce from in	side face	of suppr	orts to ce	intre of c	pening	if - in.)
Jaist Depth	Joist Series				Duct Ch	osa Lang	th (in.)			
Cohiit	36,163	В	10	12	14	16	18	20	22	24
	NI-20	44.14	4'-5"	4510°	5'-4"	5'-8'	6'-1"	6'-6"	7-1	71.5
	NI-40x	5'-3"	5'-8"	640"	6'-5"	6'-10"	7-3"	7-8	8'-2"	8'-6" 8'-9'
9-1/2	NI-60	5'-4"	51.9"	δ'-2"	6'-7"	7'-1"	7'-5"	8'-0"	ğ: 3	81.91
,_	NI-70	51-11	5'-5"	5'-10'	6'-3'	6'-7'	7'-1"	T-6"	8,-1.	8'-4"
	NI-80	51.3*	5'-B"	6:-O"	6'-5"	6'-10"	7-3	7'-8'	8'-2"	8'-6'
	NI-20	5.0*	6'-2"	6'-6"	7-1"	7'-5'	7'-9"	8'-3"	8'-7"	9'-4' 10-9'
i i	NI-40x	6'-8'	7.2	7'-6"	8'-1"	8'-6'	9-11	9'-6"	10-1	1059
	N-60	74.3*	7'-8"	81-CP	B'-6"	9v0	9-3	9'-9"	10-3	11-0
11-7/8°	N-70	7-1"	7-4	7'-9"	8'-3"	8'-7'	9-1-	9'-6"	10-1	10'-4
	NI-80	7.2	7'-7*	8'-0"	8'-5"	8'-10"	9-3	9'-8"	10-2	10,-8,
	NI-90	7-6	7' 11'	8'-4"	8'-9"	9-2	9-7	10'-1"	10-7	to 1
	NJ-90x	7:-7*	8'-1"	8'-5"	8-10	9'-4'	9'- <u>8'</u>	10'-2"	10'-8"	17-2
	NI-40x	8'-1"	8'-7"	9'-0"	9-6	10.1	10-7	1112	12'-0"	12'-8'
	NI 60	8'-9'	91.34	9-8"	10:1*	10-6	11-1	11'-6"	13'-3"	13'-0'
}4°	NI-70	ピーブ	9'-1"	9'-5"	9'-10"	10'-4"	10-8	11-2	11-7	12'-3'
14	NI-80	9'-0'	9· 3·	9-9	10'1'	10.7	11-1	11 -6*	12-1	12'-6'
	NI-90	9'-2"	9-8"	105-01	3076.	10-11		13'-9"	12-4	12-1
	NI-90x	9.4	9.9	10'-3"	30-7	111-1"	11-7	12'-1"	12-7	13-2
	NI-60	10.3	10'-8"	115-25	11'-6"	12-1*	12-6	13'-2'	14-1	14-1
	NI-70	10'-1"	10'-5"	11'-0"	11-4	11-10	12-3	12-8*	13'-3'	14-0
16"	NI-80	10-4*	10:0"	11'-3"	11-9*	12-1	12-7	13-1"	13 8	14.4
	NI-90	10-9	11'-2"	11'-0"	12'-0"	12·6°	13'-0'	13'-6'	14-2	14-1
	NI-90x	[]-]*	11'-5"	117-10.	12-4	12-10	13-2	13-9"	14-4	15'-2'

Simple Span Only

1		Minimu	əm distan	ce from in				intre of	pening	if - in.)
Jaist Depth	Joist Series				Duet Ch	osa Leng	th (in.)			
Рерпт	361163	В	10	12	14	16	18	20	22	24
	NI-20	44.14	4'-5"	4510	5'-4"	5'-8'	6'-1"	6'-6"	7-1	7'-5'
	NI-40x	5'-3"	5'-8"	640	6'-5"	6'-10"	7-3"	7-8	8-2	8'-6"
9-1/2"	NI-60	5'-4"	51.9"	δ'-2"	6'-7"	7-1	7'-5"	8'-0"	8-3	81.91
	NI-70	51-11	5' 5"	5-10	6'-3'	6'-7'	7'-1'	7'-6"	8,-1,	8'-4"
	NI-80	5.3	5'-B"	6:-O	6'-5"	6'-10"	7-3	7'-8'	8'-2"	8'-6'
	NI-20	51.9*	6'2'	6'-6"	7-1"	7'-5'	7'-9"	8'-3"	8'-9"	9'-4"
	N1-40x	6'-8'	7'-2"	7'-6"	8'-1"	8'-6'	9'-1'	9'-6"	10 I	1009
	N-60	74.3*	7'-8"	8′-C*	B'-6"	ያ ላው	9-3	9'-9"	10-3	11-0
11-7/8°	NI-70	7-1"	7-4	7'-9"	8'-3"	81-71	9-1-	9'-6"	10-1	10'-4"
	NI-80	7'-2"	7'-7"	8'-0"	8'-5"	8'-10"	9-3	9'-8"	10-2	10'-8"
- 1	NI-90	7-6	7'-11'	8'-4"	8'-9"	9-2	9-7	10'-1"	10-7	[0-11
- 1	NJ-90x	7*-7*	8'-1"	8'-5"	8-10	9'-4'	9'-8'	10'-2"	10'-8"	1142*
	NI-40x	8'-1"	8'-7"	9'-0"	9-6	10.1	10-7	111.2	12-01	12'-8"
	NI-60	8'-9'	9'-3"	9-8"	10-1*	10-6	11'-1'	11'-6'	13'-3"	13'-0"
}4°	NI-70	6-7	9.1	9'-5"	9'-10"	10'-4"	10-8	11.2	11-7	12-3
14"	NI-80	9'-0'	3° 3°	9-9	10.1	10.7	11-1	11'-6"		12.6
	N1-90	9'-2"	9-8"	105-01	3046"	10-31		13'-9"	12-4	12-11
	NI-90x	9-4	9.9	1053"	30'-7'	11'-1"	11.7	12'-1"	12-7	13-2
	NI-60	10'-3"	10'-8"	111-2"	11'-6"	12-1*	12-6	13'-2'	14-1	14-10
	N-70	10'-1"	10'-5"	11'-0"	11-4	11'-10'		12'-8"	13.3	14-0
16"	NI-80	10-4*	10-9"	11:-3"	11-9*	12-1	12-7	13'-1"	13 8	14.4
	NI-90	10-9	11'-2"	11'-8"	12'-0"	12·6°	13'-0'	13'-6'	14-2	14-10
	NI-90x	[]-]*	11'-5"	117-10	12-4	12-10	13'-2"	13'-9"	14-4	15'-2"

1. Above table may be used for I-joist spacing of 24 inches on centre or less.
2. Duct chase opening location distance is measured from inside face of supports to centre of opening.
3. The obove table is based on simple-span joists only. For other opplications, contact your local distributor.
4. Distances are based on uniformly loaded floor joists that meet the span requirements for a design five load of 40 pst and dead load of 15 pst, and a live load deflection limit of I/480.
5. The above table is based on the I-joints being used of their mostum spans. The minimum distance as given above may be reduced for shorter spans; contact your local distributor.

dinum Factored Unifo Vertical Load* (pif) Blocking Pane or Rim Joist NI Joists 3,300 The uniform vertical load is limited to a joist depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or raffer. For concentrated vertical load

2-1/2* nails at 6* a.c. to top plate (when used for lateral shear transfer, noil to bearing plate with some nailing as required for decking)

(1b) each side at bearing

ximum Factored Unifo Vertical Load* (plf) 1-1/8" Rim Board Plus 8,090

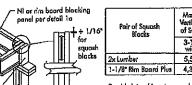
"The uniform vertical load is limited to a rim board depth of 16 inches or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header, or rofter. For concentrated vertical load transfer, see detail 1d.

One 2-1/2' wire or spiral nail at top and bottom flange

Attach rim board to top plote using 2-1/2" wire or spiral toe-nails at 6" o.c.

To avoid splitting flange, start nails at least 1-1/2" from end of I-joist. Nails may be driven at an angle to avoid splitting of bearing plate.

Minimum bearing length shall be 1-3/4" for the end bearings, and 3-1/2" for the intermediate bearings when applicable.



Maximum Factored Vertical Load per Pair of Squash Blocks (lbs 3-1/2" 5-1/2" wide wide 5,500 8,500 -1/8" Rim Board Plus 4.300 6.600 Provide lateral bracing per detail 1a or 1b

bearing belo Install squasi blocks per detail 1 d. Match bearing area of blacks below to post

2-1/2° rails to lop plate

Load bearing wall above shall align vertically as offset bearing walls, are not covered by this detail. with the hearing below. Other conditions, such Blacking required over all interior supports under load-bearing walls ar when floor joists are not ·NI blocking panel per detail 1a

Backer block (use if hanger load exteeds 360 lbs). Before installing a backer block to a double I-joist, drive three additional 3" nails through the wabs and titler block where the backer black will fit. Clinch. Install backer tight to top flange. Use twelve 3* nails, clinched when possible. Maximum factored resistance for hanger for this detail = 1,620 lbs.

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

Flange Width	Material Thickness Required*	Minimum Depth**
2-1/2*	1'	5-1/2"
3-1/2*	1-1/2"	7-1/4*

- * Minimum grade for backer black material shall be S-PF No. 2 or backer for solid sawn lumber and wood structural panels conforming to CAN/CSA-0325 or CAN/CSA-0437 Standard.
 ** For face-mount hangers use net joist depth minus 3-1/4* for joists with 1-1/2* thick flanges.
 For 2* thick flanges use net depth minus 4-1/4*.

2x plate flush with inside face of wall or beam. 1/8' overhang allowed

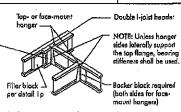
past inside face of wall or beam.

sides laterally support the top flange, bearing stiffeners shall be used.

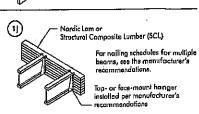
installed per monufactorer's

l-joist to top plate per detail 15

(14)



For hanger capacity see hanger manufacturer's recommendations, Verify double I-joist capacity to suppor



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

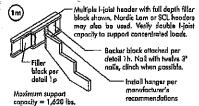
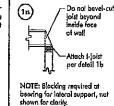
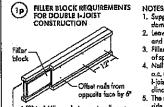
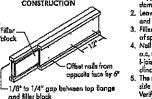


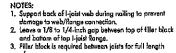
FIGURE 2











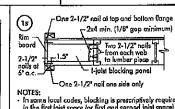
- A nail place is required between jests to toll retrying of span.

 Nail joist together with two rows of 3" nails at 12 inches o.e. (cliniched when possible) on each side of the double 1-joist. Total of four nails per foot required. If nails can be cliniched, only two nails per foot are required.

 The maximum factored load that may be applied to one
- side of the double joist using this detail is 860 lbf/ft.
 Verify double I-joist capacity.

•				Т
	Flange Size	Net Depth	Filier Black Size	
	2-1/2°× 1-1/2°	9-1/2 11-7/8 14 16	2-1/8" x 6" 2-1/8" x 8" 2-1/6" x 10" 2-1/8" x 12"	
;	3-1/2° x 1-1/2"	9-1/2" 11-7/8" 14" 16"	8' x 6' 3' x 8' 3' x 10' 3' x 12'	
	3-1/2° x 2°	11-7/8° 14' 16'	3' x 7' 3' x 9' 3' x 11"	

WEB STIFFENER INSTALLATION DETAILS



RIM BOARD INSTALLATION DETAILS

NOTES:

In some local codes, blocking is prescriptively required in the first joist space (or first and second joist space) next to the starter joist. Where required, see local code requirement for spacing of the blocking.

All nails are common spiral in this detail.

All nails shown in the above details are assumed to be mon wire nails unless otherwise noted. 3° (0.122° dla.) noted, 3° (0,122° dio.) common spiral nalls may be substituted for 2-1/2° (0.128° dio.) common wire nalls. Framing lumber assumed to be Spruce-Pine-Fir No. 2 or better, individual companents not shown to scale for darity.

FIGURE 7

TABLE 1

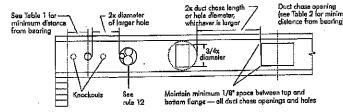
Depth

9-1/2"

11-7/8"

NI-60 NI-70

FIELD-CUT HOLE LOCATOR





Knackouts are prescared holes provided for the contractor's convenience to install electrical or small plumbing lines. They are 1-1/2 inches in diameter, and are spaced 15 inches on cantre along the length of the 1-fais. Where possible, it is preferable to use knackouts instead of field-cut holes.

ver drill, cut or notch the florige, or over-cut the web

Holes in wabs should be cut with a sharp saw.

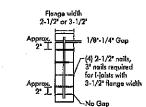
For rectangular hales, avoid over-cutting the corners, as this can cause unnecessory stress concentrations, Slightly rounding the corners is recommended. Starting the rectangular hole by drilling a 1-inch diameter hole in each of the four corners and then making the cuts between the holes is another appd method to minimize damage to the f-joist.

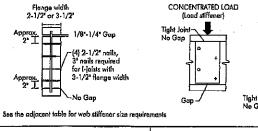
WEB STIFFENERS

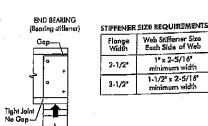
RECOMMENDATIONS:

bearing requires

- A bearing stiffener is required in all engineered applications with factored reactions greater than shown in the 1-joist properties table found at the 1-joist Constitution Guide (C101). The gop between the stiffener and the flange is at
- A bearing stiffener is required when the I-joist is supported in a hanger and the sides of the hanger do not extend up to, and support, the top flange. The gap between the stiffener and flange is at the top.
- A four stiffener is required at locations where a factored concentrated load greater than 2,370 lbs is applied to the top flange between supports, or in the case of a cantilever, anywhere between the contilever fig and the support. These values are for standard term load duration, and may be adjusted for other load durations as permitted by the code. The gap between the stiffener and the flonge is at the bottom.







SAFETY AND CONSTRUCTION PRECAUTIONS



VZ

Never stock building moterials over unsheathed Ligists. Once sheathed, do not aver-stess Ligists with concentrated loads

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

AVOID ACCIDENTS BY FOLLOWING THESE IMPORTANT GUIDELINES:

- AVOID ACCIDENTS BY FOLLOWING THESE IMPORTANT GUIDELINES:

 1. Brace and nail each I-joist as it is installed, using hangers, blacking panels, rim board, and/or cross-bridging at joist ends. When I-joists are applied continuous over interior support.

 2. When the building is completed, the floor streathing will provide lateral support for the top flanges of the I-joists. Until this shealthing is applied, temporary bracing, often called struts, or temporary shealthing must be applied to prevent I-joist rollover or buckling.

 * Temporary bracing or struts must be 1x4 inch minimum, at least 8 feet long and spaced no more than 8 feet on cantre, and must be secred with a minimum of two 2-1/21 nails festened to the top surface of each I-joist. Nail the bracing to a lateral restraint at the end of each box. Lop ends of adjaining bracing over at feast two I-joists.

 **Cor, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet of I-joists at the end of the box.

 5. For cantilevard I-Joists, brace top and bettom flanges, and brace ends with closure panels, tim board, or cross-bridging.

 4. Install and fully nail permanent sheathing to each I-joist before placing loads on the floor system. Then, stock building malerials over beams ar walls only.

 Never install a demonaed I-joist.
- 5. Never install a damaged i-joist.

Improper storage or installation, failure to follow applicable building cades, failure to follow apan ratings for Nordic I-joists, failure to follow allowable hale sizes and locations, or failure to use web stiffeners when required can result in serious accidents. Follow these installation guidelines carefully.



PRODUCT WARRANTY

Chantlers Chibougaman guarantees that, in accordance with our specifications, Nordic product are free from manufacturing defects in material and workmanship.

Fursbermore, Chautiers Chibongamau warrants that our products, m utilized in accordance with our handling and installation instruction will meet or exceed our specifications for the lifetime of the structure.

Karayanan nanan nyanarayan nanan 1977 mm/m



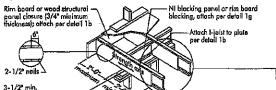
Method 2 — SHEATHING REINFORCEMENT Use same installation as Method but reinforce both sides of l-joist with sheathing.

Rim Board Joint at Corner 2-1/2* 1-1/2

(1) 2-1/2"

Bb TOE-NAIL CONNECTION (84) ATTACHMENT DETAILS WHERE RIM BOARDS ABUT AT RIM BOARD 2-1/2" nails at 6" o.c. (typical) Top or — sole plate \

CANTILEVER DETAILS FOR VERTICAL BUILDING OFFSET Method 1 — SHEATHING REINFORCEMENT ONE SIDE



Rim board loin

NOTE: Canadian softwood plywood sheathing or equivalent (minimum thickness 3/4*) required on sides of jaist. Depth shall match the full height of the loist. Notif with 2-1/2* notifs of 6° a.c., top and bottom flange. Install with face grain horizontal. Attach I-joist to plate at all supports per detail 1b. Verify reinforced I-joist capacity.



NORDIC **STRUCTURES**

COMPANY Feb. 12, 2020 16:26 **PROJECT** J7 1ST FLOOR.wwb

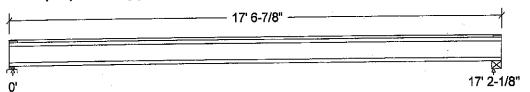
Design Check Calculation Sheet

Nordic Sizer -- Canada 7.2

Loads:

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

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



Unfactored: Dead Live	172 344	172 344
Factored: Total	730	730
Bearing: Capacity Joist Support	1893 5573	18 9 3
Des ratio Joist Support Load case	0.39 0.13 #2	0.39 - #2 4-1/8
Length Min req'd Stiffener	2-3/8 1-3/4 No	1-3/4 No 1.00
KD KB support fcp sup Kzcp sup	1.00 1.00 769 1.09	_ _ _

Nordic Joist 9-1/2" NI-80 Floor joist @ 12" o.c.
Supports: 1 - Lumber Sill plate, No.1/No.2; 2 - Steel Beam, W;
Total length: 17' 6-7/8"; Clear span: 17' 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 = 730	Vr = 1895	lbs	Vf/Vr = 0.39
Moment(+)	Mf = 3135	Mr = 8958	lbs-ft	FESSIDA = 0.35
Perm. Defl'n	0.12 = < L/999	0.57 = L/360	in p	0.21
Live Defl'n	0.24 = L/868	0.43 = L/480	in 🚱	3-420 0.55 0.41
Total Defl'n	0.36 = L/578	0.86 = L/240	سساقية أثا	0.41
Bare Defl'n	0.27 = L/762	0.57 = L/360	in g	KATSOULAKOS 50.47
Vibration	Lmax = 17'-2.1	Lv = 18'-4.9	" الاشتاد . ا	
Defl'n_	= 0.030	= 0.037	in	0.82

46 NO. TAM 5527 -20 STRUCTURAL

COMPONENT ONLY

ONINCE OF ON

WoodWorks® Sizer

for NORDIC STRUCTURES

J7 1ST FLOOR.wwb

Nordic Sizer - Canada 7.2

Page 2

Additional	Data:						•			
FACTORS:	f/E	KD .	KH	KZ	\mathtt{KL}	KT	KS	KN	LC#	
Vr	1895	1.00	1.00	_	_			-	#2	
Mr+	8958	1.00	1.00	-	1.000		-	_	#2	
EI	324.1 m	illion	_		_	-	-	-	#2	
CRITICAL LO						٠				
Shear	: LC #2	= 1.25	5D + 1.51							
Moment (+)	: LC #2	= 1.25	5D + 1.51	<u>.</u>						
Deflection	on: LC #1	= 1.01) (perma	anent)						
DOLLOGO.	LC #2	= 1.00	+1.0L	(live))					
	LC #2	= 1.0E) + 1.0L	(tota)	L)					
	LC #2	= 1.00	+ 1.0L	(bare	joist)					
Bearing	: Suppo	rt 1 - I	C #2 = 1	1.25D +	1.5L					
_	Suppo	rt 2 - I	JC #2 = 1	L.25D +	1.5L					
Load Type	es: D≕dea	d W=wir	nd S=sno	ow H=ea	arth,grou	ndwater	E=ear	chquake		
	L=liv	e(use.oc	cupancy)	Ls=lj	ive(stora	ge, equi	.pment)	f=fire		
Load Pati	rerns: s=	s/2 L=I	.+Ls =	no patte	ern load	in this	span			
All Load	Combinat	ions (LC	ls) are l	Listed i	in the An	alysis	output			
CALCULATION		,	•			-	=	ens	FORMS TO	DRE 2012
Eleff = 3	375 38 1b	-in^2 F	= 4.946	e06 lbs	-			Ե ԱՈ	ILOUNO IO	QDQ 24 12
"Live" de	eflection	is due	to all r	non-dead	l loads (live, w	ind, sno	ow)	AMENDEB	2020
1 == 00 u.										

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. TAM 5527 -20 STRUCTURAL COMPONENT ONLY

NORDIC STRUCTURES

COMPANY Feb. 12, 2020 16:28

PROJECT
J1 1ST FLOOR.wwb

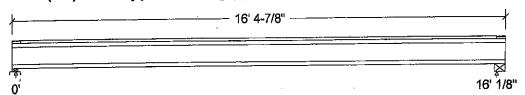
Design Check Calculation Sheet

Nordic Sizer - Canada 7.2

Loads:

Load	Туре	Distribution	Pat-	t- Location [Magnitud	е	Unit
11000	-15-		tern		End	Start	End	
Load1	Dead	Full Area				20.00		psf
Load2	Live	Full Area				40.00		psf

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



		<u> </u>	
Unfactored: Dead Live	160 320		160 320
Factored: Total	680		680
Bearing: Capacity Joist Support Des ratio Joist Support Load case Length Min req'd Stiffener	1865 3981 0.36 0.17 #2 2-3/8 1-3/4 No		1893 - 0.36 - #2 4-1/8 1-3/4 No
KD KB support fcp sup Kzcp sup	1.00 1.00 769 1.09		1.00

Nordic Joist 9-1/2" NI-40x Floor joist @ 12" o.c.

Supports: 1 - Lumber Sill plate, No.1/No.2; 2 - Steel Beam, W;
Total length: 16' 4-7/8"; Clear span: 15' 10-3/8"; 3/4" nailed and glued OSB sheathing
This section PASSES the design code check.

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

	3			
Criterion	Analysis Value	Design Value	Unit	Analysis/Design
Shear	Vf = 680	Vr = 1895	lbs	Vf/Vr = 0.36
Moment(+)	Mf = 2723	Mr = 4824	lbs-ft	0.56
Perm. Defl'n	0.12 = < L/999	0.53 = L/360	in 🖋	O.23
Live Defl'n	0.25 = L/775	0.40 = L/480	in 🖋 🤇	20.62
Total Defl'n	0.37 = L/516	0.80 = L/240	in /5	31610 2 46
1	0.37 = L/649	0.53 = L/360	in 3	6.155
	Lmax = 16'-0.1	Lv = 17' - 1.8	ft 🥞	S. KATSOULAKOS 5.55
Vibration	= 0.032	= 0.040	in	0.80
Defl'n	- 0.032	0.010		

OUNCE OF ONE STRUCTURAL

COMPONENT ONLY

WoodWorks® Sizer

for NORDIC STRUCTURES

J1 1ST FLOOR.wwb

Nordic Sizer - Canada 7.2

Page 2

Additiona					727	72M		KN	LC#	
FACTORS:	f/E	KD		ΚŹ	KL	KT	KS	ĽΝ	#2	
Vr	1895		1.00	-	_	-	-	_		
Mr+	4824		1.00	- '	1.000	-	-	-	#2	
EI		illion		_		_	-	-	#2	
CRITICAL LO	DAD COMB	INATIONS	3:							-
Shear		= 1.2	5D + 1.5L							
Moment (+) : LC #2		5D + 1.5L			•				
Deflection	on: LC #1	= 1.01	D (perma	nent)						
	LC #2	= 1.01	D + 1.0L	(live)	1					
	LC #2	= 1.01	D + 1.0L	(total	L)					
	LC #2	= 1.01	D + 1.0L	(bare	joist)					
Bearing	: Suppo	rt 1 - 3	LC #2 = 1	.25D +	1.5L					
_	Suppo	rt 2 - 1	LC #2 = 1	.25D +	1.5L					
Load Type	es. D=dea	d W=win	nd S=sno	w H=ea	arth,grou	ndwate	r E=ear	thquake		
	T.=liv	e (use, o	ccupancy)	Ls≔li	ive(stora	ge,equ:	rbment)	f=fire		
Load Pati	terns: s=	S/2 L=	L+Ls =n	o patte	ern load	in this	s span			
All Load	Combinat	ions (Lo	Cs) are l	isted i	n the An	alysis	output			
CALCULATI		-						CA	NFORMS TO	OBC 2012
ETAff = 1	265, 29 1b	-in^2 1	K= 4.94e	06 lbs						0000
	eflection		+0 all n	on-dead	l loads (live. v	wind, sne	ow)	AMENDED	2 U 2 U

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.



OWG NO. YAN 5528-20 STRUCTURAL COMPONENT ONLY





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

PASSED

2ND FLR FRAMING\Dropped Beams\B9(i1603) (Dropped Beam)

Dry | 1 span | No cant.

February 12, 2020 16:12:50

BC CALC® Member Report Build 7239

Job name: Address:

City, Province, Postal Code:

Customer:

Code reports:

CCMC 12472-R

File name:

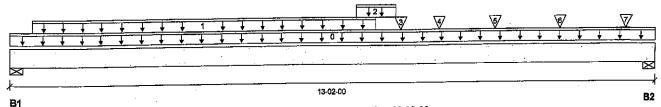
VALLEYCREEK 2 EL 1.mmdl

Wind

Description: 2ND FLR FRAMING\Dropped Beams\B9(i1603)

Specifier: Designer:

Company:



Total Horizontal Product Length = 13-02-00

Snow

Reaction Summary (Down / Uplift) (lbs)

Meachon onthings (Bount about 1.									
Bearing	Live	Dead							
B1, 4"	1950 / 0	1036 / 0							
B2 4"	2107 / 0	1116 / 0							

1	oad Summary						Live
	ag Description	Load Type	Ref.	Start	End	Loc.	1.00
7		Unf. Lin. (lb/ft)	L	00-00-00	13-02-00	Top	
1	Smoothed Load	Unf. Lin. (lb/ft)	L	00-05-06	07-05-06	Top	307
2		Unf. Lin. (lb/ft)	L	07-00-10	07-10-02	Top	151
3		Conc. Pt. (lbs)	L	07-11-06	07-11-06	Тор	277
2		Conc. Pt. (lbs)	L	08-09-00	08-09-00	Top	302
Ę	• • •	Conc. Pt. (lbs)	· Ē	09-11-00	09-11-00	Top	384
	· ,	Conc. Pt. (lbs)	ī	11-03-00	11-03-00	Top	409
6	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Conc. Pt. (lbs)		12-07-00	12-07-00	Top	384
7	7 J2(i1467)	CONC. Pt. (IDS)	_	15-01-00	.2 37-00	مات.	30 1

Controls Summary	Factored Demand	Factored Resistance	Demand <i>i</i> Resistance	Case	Location
Pos. Moment	14192 ft-lbs	23220 ft-lbs	61.1%	1	06-11-06
End Shear	4059 lbs	11571 lbs	35.1%	1	01-01-08
Total Load Deflection	L/266 (0.57")	n\a	90.2%	4	06-08-06
Live Load Deflection	L/406 (0.373")	n\a	88.6%	5	06-08-06
Max Defl.	0.57"	n\a	n\a	4	06-08-06
Span / Depth	15.9				

Bearin	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	4" x 3-1/2"	4219 lbs	22.6%	24.7%	Spruce-Pine-Fir
B2	Wall/Plate	4" x 3-1/2"	4554 lbs	24.4%	26.7%	Spruce-Pine-Fir

Notes

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

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

CONFORMS TO OBC 2012

Calculations assume unbraced length of Top: 00-01-15, Bottom: 00-01-15.

Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

PROVIDE 3 ROWS OF 3½" ARDOX SPIRAL NAILS @ 8 " 0/C FOR MULTI-PLY NAILING, MAINTAIN A MIN.Z" LUMBER EDGE/END DISTANCE, DO NOT USE AIR HAILS



988 NO. PAN 552 STRUCTURAL COMPONENT ONLY

Disclosure

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

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





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

2ND FLR FRAMING\Flush Beams\B11(i1679) (Flush Beam)

Dry | 1 span | No cant.

February 12, 2020 16:12:50

PASSED

Tributary

00-00-00 n\a n\a

n\a

Wind

1.15

EROPESSION OF

Snow

1,00

Dead

Live

BC CALC® Member Report Build 7239

Job name:

Address: City, Province, Postal Code:

Customer:

Code reports:

VALLEYCREEK 2 EL 1.mmdl

File name: Description: 2ND FLR FRAMING\Flush Beams\B11(i1679)

Wind

Specifier:

Designer:

Company:

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+ + + + + +		1 1 1 1 0 1	++++	 	+ + +
		09-05-12			B2
D4 .					

Total Horizontal Product Length = 09-05-12

Snow

Reaction Summary (Down / Uplift) (lbs)

CCMC 12472-R

Dead Live Bearing 722 / 0 1340 / 0 B1, 4-1/2" 782 / 0 1465 / 0 B2, 2-3/4"

Loa	ad Summary	1 Time	Ref.	Start	End	Loc.	1.00	0.65
Tag	Description	Load Type	NGI-	00-00-00	09-05-12			10
0	Self-Weight	Unf. Lin. (lb/ft)	L .		05-02-00	•	6	3
1	FC3 Floor Material	Unf. Lin. (lib/ft)	L	00-00-00		•	000	144
2	Smoothed Load	Unf. Lin. (lb/ft)	L	00-06-00	08-06-00	•	288	
_	= -	Conc. Pt. (lbs)	L	09-02-00	09-02-00	Тор	331	166
3	J2(i1475)		1	03-10-02	03-10-02	Top	143	81
4	B13(i1650)	Conc. Pt. (lbs)	-	00 .0 0=		•		
				_				

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
	6932 ft-lbs	23220 ft-lbs	29.9%	1	05-02-00
Pos. Moment	2884 lbs	11571 lbs	24.9%	1	01-02-00
End Shear	L/759 (0.142")	n\a	31.6%	4	04-10-04
Total Load Deflection	L/999 (0.093")	n\a	n\a	5	04-10-04
Live Load Deflection Max Defl.	0.142"	n\a	n\a	4	04-10-04
Span / Depth	11.4				

Bearing Sup	ports Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1 Beam B2 Wall/F	4-1/2" x 3-1/2"	2913 lbs	30.1% 53.6%	15.2% 27.0%	Spruce-Pine-Fir 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.

AMENDEB 2020 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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

046 NO. TAN 5530-20 STRUCTURAL Disclosure ONLY

POLYNCE OF ONT

Use of the Bolse Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate CONFORMS TO OBC 2012 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®,





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 2ND FLR FRAMING\Flush Beams\B12(i1447) (Flush Beam)

PASSED

February 12, 2020 16:12:50

BC CALC® Member Report

Build 7239

Job name:

Address: **Customer:**

City, Province, Postal Code:

Code reports:

CCMC 12472-R

Dry | 2 spans | R cant.

VALLEYCREEK 2 EL 1.mmdl

Wind

File name:

Description: 2ND FLR FRAMING\Flush Beams\B12(i1447)

Specifier:

Designer:

Company:

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	\bowtie																									Ц	Ų.						<u>.</u>
16-04-12	*											16.	04-12	,												7			03	-08-04	,		4
B1 B2	B1																									В	2						

Total Horizontal Product Length ≈ 20-01-00

Snow

Reaction Summary (Down / Uplift) (lbs)

Dead Live Bearing 230 / 0 350 / 87 B1, 5-1/2" 1057 / 0 657 / 0 B2, 4-1/2"

د ا	ad Summary						Live
	Description	Load Type	Ref.	Start	End	Loc.	1.00
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	20-01-00	Top	
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	16-07-00	Тор	21
2	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	16-04-12	Тор	21
3	STAIR	Unf. Lin. (lb/ft)	L	16-07-00	20-01-00	Тор	120
4	FC3 Floor Material	Unf. Lin. (lb/ft)	L	16-07-00	20-01-00	Тор	31
5	B13(i1650)	Conc. Pt. (lbs)	L	20-00-02	20-00-02	Top	103
6	E25(i1220)	Conc. Pt. (lbs)	Ľ		00-02-12	Тор	

Controls Summary	Factored Demand	Factored Resistance	Demand <i>i</i> Resistance	Case	Location
Pos. Moment	2738 ft-lbs	23220 ft-lbs	11.8%	2	07-08-01
Neg. Moment	-3096 ft-lbs	-23220 ft-lbs	13.3%	1	16-04-12
End Shear	656 lbs	11571 lbs	5,7%	2	01-03-00
Cont. Shear	1134 lbs	11571 lbs	9.8%	1	17-04-08
Total Load Deflection	L/1138 (0.169")	n\a	21.1%	9	08-01-06
Live Load Deflection	L/999 (0.123")	n\a	n\a	12	08-04-00
Total Neg. Defl.	2xL/1998 (-0.092")	n\a	n\a	9	20-01-00
Max Defl.	0.169"	n\a	n\a	9	08-01-06
Span / Depth	20.2		•		

Bearin	a Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	5-1/2" x 3-1/2"	812 lbs	6.9%	3.5%	Spruce-Pine-Fir
B2	Beam	4-1/2" x 3-1/2"	2407 lbs	24.8%	12.5%	Spruce-Pine-Fir

Notes

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

CONFORMS TO OBC 2012

Calculations assume member is fully braced.

AMENDED 2020 Resistance Factor phi has been applied to all presented results per CSA O86. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA 086.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

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

PROVIDE3 ROWS OF 3½"

SPIRAL NAILS @ 12-" O/C FOR VERSA-LAM®, VERSA-RIM PLUS®, MULTI-PLY HAILING, MAINTAIN A MIN.2" LUMBER EDGE/END DISTANCE BONOTUSE AIR NALLS



046 HO. TAW 5*53* / -20 STRUCTURAL Disciosure ONLY

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™ AR DOX ALLJOIST®, BC RIM BOARD™, BCI®,
BOISE GLULAM™, BC FloorValue®,





Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 2ND FLR FRAMING\Flush Beams\B13(i1650) (Flush Beam)

PASSED

February 12, 2020 16:12:50

BC CALC® Member Report

Build 7239

Job name:

Address:

City, Province, Postal Code: Customer:

Code reports:

CCMC 12472-R

Dry | 1 span | No cant.

File name:

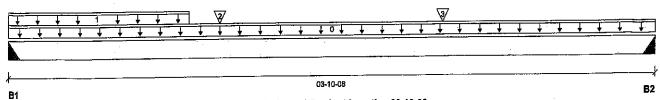
VALLEYCREEK 2 EL 1.mmdl

Description: 2ND FLR FRAMING\Flush Beams\B13(i1650)

Specifier:

Designer:

Company:



Total Horizontal Product Length = 03-10-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow
B1, 2"	147 / 0	83 / 0	
B2, 2"	100 / 0	59 / 0	

1 64	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	03-10-08	Тор		5			00-00-00
1	FC3 Floor Material	Unf. Lin. (lb/ft)	Ł	00-00-00	01-01-00	Тор	82	41			n\a
ว่	J7(i1463)	Conc. Pt. (lbs)	L	01-03-04	01-03-04	Top	51	26			n∖a
3	J7(i1525)	Conc. Pt. (lbs)	L	02-07-04	02-07-04	Тор	107	53	و مواد المام	on an area of the same	n∖a
									أغول التحك	ESSIDE.	_38F

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	256 ft-lbs	11610 ft-lbs	2.2%	1	02-07-04
End Shear	218 lbs	5785 lbs	3.8%	1	02-11-00
Total Load Deflection	L/999 (0.002")	n\a	n\a	4	01-11-04
Live Load Deflection	L/999 (0.001")	n\a	n\a	5	01-11-04
Max Defl.	0.002"	n\a	n\a	4	01-11-04
Span / Depth	4.6				

В	searing Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
B.		2" x 1-3/4"	323 lbs	n\a	7.6%	HUS1.81/10	
B	2 Hanger	2" x 1-3/4"	224 lbs	n\a	5.2%	LS90	

Cautions

Header for the hanger HUS1.81/10 at B1 is a Double 1-3/4" x 9-1/2" 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 LS90 at B2 is a Double 1-3/4" x 9-1/2" 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
Resistance Factor phi has been applied to all presented results per CSA O86.

AMENDED 2020

CAMPORMS TO OBC 2012

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



DWB NO.TAM 5532-20 STRUCTURAL COMPONENT ONLY

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





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 2ND FLR FRAMING\Flush Beams\B14(i1377) (Flush Beam)

PASSED

BC CALC® Member Report

Build 7239

Job name: Address:

Customer: Code reports:

B1

City, Province, Postal Code:

CCMC 12472-R

Dry | 1 span | No cant.

February 12, 2020 16:12:50

File name:

VALLEYCREEK 2 EL 1.mmdl

Description: 2ND FLR FRAMING\Flush Beams\B14(i1377)

Specifier:

Designer:

Company:

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 	+ +	+	Ţ	+	Į.	+	+	¥	+	↓ c) ↓	+	¥	Ť.	¥	Ψ	¥	+	¥_	+	+	·-\	Ţ	+		¥
	٠.								- 1						-											
										02-05	5-04															

Total Horizontal Product Length = 02-05-04

Reaction Sur	mmary (Down / C	Shiiis) (ing)			
Bearing	Live	Dead	Snow	Wind	
B1, 5-1/4"	72 / 0	165 / 0	78 / 0		
B2, 5-1/4"	70/0	162 / 0	77 / 0		

Los	ad Summary						Live	Dead	Snow	Wind	Tributary
	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	02-05-04	Тор		10	,		00-00-00
1	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	00-05-04	Тор	27	13			n\a
2	E28(i1210)	Unf. Lin. (lb/ft)	L	00-05-04	02-05-04	Top	33	111	63		n\a
3	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-05-04	02-05-04	Тор	25	12			n\a
4	E27(i1214)	Conc. Pt. (lbs)	L	00-02-08	00-02-08	Тор	15	51	29	ESSION	n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	113 ft-lbs	23220 ft-lbs	0.5%	13	01-02-12
End Shear	2 lbs	7521 lbs	n\a	0	01-02-12
Total Load Deflection	L/999 (0")	n\a	n\a	35	01-02-12
Live Load Deflection	L/999 (O")	n\a	n\a	51	01-02-12
Max Defl.	0"	n\a	n\a	35	01-02-12
Span / Depth	2.1				

Bear	ring Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
B1	Beam	5-1/4" x 3-1/2"	395 lbs	4.0%	1.8%	Unspecified	
B2	Beam	5-1/4" x 3-1/2"	387 lbs	3.9%	1.7%	Unspecified	

Notes

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

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

Calculations assume member is fully braced.

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

PROVIDE3 ROWS OF 31/2" ARDOX SPIRAL NAILS @ & "O/C FOR MULTI-PLY NAILING, MAINTAIN A MIN 24 LUMBER EDGE/END DISTANCE. DO NOT USE AIR NAILS BC CALCO, BC FRAMERO, AJSTM,

986 NO. PAN 5533 -20

DUNCE OF O

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 CONFORMS TO OBC 2012 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.

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



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 2ND FLR FRAMING\Flush Beams\B15(i1206) (Flush Beam)

PASSED

February 12, 2020 16:12:50

BC CALC® Member Report

Build 7239 Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports:

Dry | 1 span | No cant.

File name:

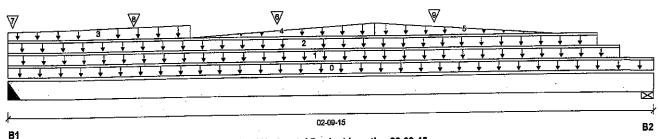
VALLEYCREEK 2 EL 1.mmdl

Description: 2ND FLR FRAMING\Flush Beams\B15(i1206)

Specifier:

Designer:

Company:



Total Horizontal Product Length = 02-09-15

CCMC 12472-R

Reaction Sur	mmary (Down 7 o	pinty (iba)	_	\$40
Bearing	Live	Dead	Snow	Wind
B1. 3"	226 / 1	254 / 0	146 / 0	
B2, 7-3/4"	213 / 0	273/0	149 / 0	

	I O						Live	Dead	Snow	Wind	Tributary
	ad Summary	Load Type	Ref.	Start	End	Loc.	1.00	0,65	1.00	1.15	
	Description Self Weight	Unf. Lin. (lb/ft)	L	00-00-00	02-09-15	Тор		10			00-00-00
. 0	Self-Weight	Unf. Lin. (lb/ft)	Ē	00-00-00	02-08-03	Тор		81			n\a
n -	E32(i1209) E32(i1209)	Unf. Lin. (lb/ft)	Ī.	00-00-00	02-07-01	Top	33	30	63		n\a
2 3	FC3 Floor Material	Trapezoidal (lb/ft)	Ĺ	00-00-00		Top	20	10			n\a
3	FC3 FIOOI Waterial	Hapozoidai (io.iv)	_		00-09-09	•	32	16			
4	FC3 Floor Material	Trapezoidal (lb/ft)	L	00-09-09		Top	0				n\a
4	LOS LIDOL Misterial				01-07-03		16				•
5	FC3 Floor Material	Trapezoidal (lb/ft)	L	01-07-03		Top	32	16			n\a
5	1 CO 1 IOO; Material	inahaman (m)			02-04-13		0	0			-
6	J5(i1485)	Conc. Pt. (lbs)	L	01-02-02	01-02-02	Тор	243	122			n\a
7	E32(i1209)	Conc. Pt. (lbs)	L	00-00-04	00-00-04	Тор			6		n\a
8	WINDOW	Conc. Pt. (lbs)	L	00-06-10	00-06-10	Тор	33	30	63		n\a
9	WINDOW	Conc. Pt. (lbs)	Ĺ	01-10-06	01-10-06	Тор	33	30	63		n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	476 ft-lbs	23220 ft-lbs	2.0%	1	01-02-02
End Shear	410 lbs	11571 lbs	3.5%	1	01-00-08
Total Load Deflection	L/999 (0.001")	n\a	n\a	58	01-02-07
	L/999 (0")	n\a	n\a	85	01-02-07
Live Load Deflection Max Defl.	0.001"	n\a	n\a	58	01-02-07
Span / Depth	2,6				

Bearing	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demandi Resistance Member	Material	
B1	Hanger	3" x 3-1/2"	802 lbs	n∖a	6.3%	LSSR410Z	
B2	Wall/Plate	7-3/4" x 3-1/2"	809 lbs	4.8%	2.4%	Spruce-Pine-Fir	

Cautions

Hanger model LSSR410Z and seat length were input by the user. Hanger has not been analyzed for adequate capacity.



998 NO. TAM 5534 -28 STRUCTURAL COMPONENT ONLY





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 2ND FLR FRAMING\Flush Beams\B15(i1206) (Flush Beam)

PASSED

February 12, 2020 16:12:50

BC CALC® Member Report

Build 7239

Job name: Address:

City, Province, Postal Code:

Customer: Code reports: Dry | 1 span | No cant.

File name:

VALLEYCREEK 2 EL 1.mmdl

Specifier:

Designer:

Company:

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: 00-03-08, Bottom: 00-03-08.

CCMC 12472-R

CAMPARMS TO OBC 2012

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.

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

2 # # #2" (MIM) #2" (B"(148) PROVIDE 3 ROWS OF 3½" ARDOX
SPIRAL NAILS @ 8 "O/C FOR
MULTI-PLY NAILING, MAINTAIN
A MIN. 2"LUMBER EDGE/END
DISTANCE. DO NOT USE AIR NAILS



NO. YAM \$539 =20 Structural Component only

Disclosure

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





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

PASSED

2ND FLR FRAMING\Flush Beams\B16(i1207) (Flush Beam)

Dry | 2 spans | No cant.

February 12, 2020 16:12:50

BC CALC® Member Report Build 7239

Job name: Address:

City, Province, Postal Code:

Customer:

Code reports:

File name:

VALLEYCREEK 2 EL 1 mmd

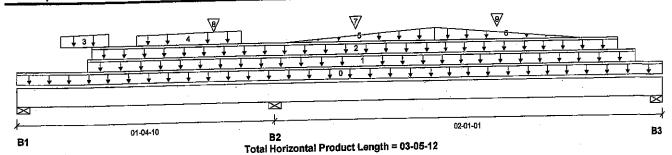
Description: 2ND FLR FRAMING\Flush Beams\B16(i1207)

Wind

Specifier:

Designer:

Company:



	Live	Dead	Snow
Bearing	44 / 63	33/0	48/0
B1, 7-3/4"	* * *	349 / 0	142 / 0
B2, 7-3/4"	355 / 0	¥	123 / 0
B3. 7-3/4"	119/2	181 / 0	12370

CCMC 12472-R

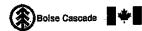
							Live	Dead	Snow	Wind	Tributary
Loa	ad Summary		Ref.	Start	End	Loc.	1,00	0.65	1.00	1.15	
Tag	Description	Load Type	Kei.	00-00-00	03-05-12	Тор		10			00-00-00
0	Self-Weight	Unf. Lin. (lb/ft)	L			_ •		81			n\a
1	E34(i1216)	Unf. Lin. (lb/ft)	L	00-04-09	03-04-00	Тор			00		n\a
2	E34(i1216)	Unf. Lin. (lb/ft)	L	00-04-14	03-02-13	Тор	33	30	63		
_		Trapezoidal (lb/ft)	L	00-02-13		Тор	19				n\a
3	FC3 Floor Material	Trapezoidai (iii/ii)	_		00-06-00		22				
		Trapezoidal (lb/ft)	. 1	00-07-12		Тор	24	12			n\a
4	FC3 Floor Material	(rapezoldai (lb/it)	_	00 01 1-	01-02-08	•	30	15			
_		Trapezoidal (lb/ft)	L	01-05-05		Top	0				n\a
5	FC3 Floor Material	Trapezoidai (ibrid)	_	• • • • • • • • • • • • • • • • • • • •	02-02-13	·	16				
		Trapezoidal (lb/ft)	1	02-02-13		Тор	32	16			n\a
6	FC3 Floor Material	Habezologi (Inni)	_		03-00-08	·	0	0			
		Conc. Pt. (lbs)	1	01-09-13	01-09-13	Top	251	122			n\a
7	-		-	01-00-12	01-00-12	Top	33	30	63		n\a
8	WINDOW	Conc. Pt. (lbs)	L	*	-		33	30	63		n\a
9	WINDOW	Conc. Pt. (ibs)	L	02-07-00	02-07-00	Тор	33	50	00		,,,,,

Controls Summary	Factored Demand	Factored Resistance	Resistance	Case	Location
	124 ft-lbs	23220 ft-lbs	0.5%	18	01-11-13
Pos. Moment		-23220 ft-lbs	0.7%	19	01-04-10
Neg. Moment	-161 ft-lbs	11571 lbs	0.9%	45	00-07-12
End Shear	101 lbs	•	1.1%	45	00-03-04
Cont. Shear	133 lbs	11571 lbs		126	02-01-10
Total Load Deflection	L/999 (0")	n\a	n\a		
Live Load Deflection	L/999 (0")	n\a	n\a	178	02-01-10
Max Defl.	0"	n\a	n\a	126	02-01-10
Span / Depth	1.9				

Bearing	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
Dearing			450 lba	0.9%	0.5%	Spruce-Pine-Fir
B1	Wall/Plate	7-3/4" x 3-1/2"	158 lbs	0.870		-1
		7-3/4" x 3-1/2"	1112 lbs	6.6%	3.3%	Spruce-Pine-Fir
B2	Wall/Plate	1-314" X 3-112			4.00/	Comuna Dina Eir
B3	Wall/Plate	7-3/4" x 3-1/2"	529 lbs	3.2%	1.6%	Spruce-Pine-Fir



BWG NO. TAM 5535 -20 STRUCTURAL COMPONENT ONLY





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 2ND FLR FRAMING\Flush Beams\B16(i1207) (Flush Beam)

PASSED

February 12, 2020 16:12:50

BC CALC® Member Report

Build 7239

Job name: Address:

City, Province, Postal Code:

Customer: Code reports:

CCMC 12472-R

Dry | 2 spans | No cant.

VALLEYCREEK 2 EL 1.mmdl

Description: 2ND FLR FRAMING\Flush Beams\B16(i1207)

Specifier:

Designer: Company:

Cautions

Uplift of 65 lbs found at bearing B1. (SIMPSON 2-1254@0.31)

Notes

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

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

CONFORMS TO OBC 2012

Calculations assume unbraced length of Top: 00-03-08, Bottom: 00-03-08. 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.

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

PROVIDE3 ROWS OF 31/2" ARDOX SPIRAL NAILS @ 8 " 0/C FOR MULTI-PLY NAILING, MAINTAIN A MIN. 2" LUMBER EDGE/END DISTANCE, DO NOT USE AIR NAILS



owe No. Pam 5535-20 STRUCTURAL COMPONENT ONLY

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





Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 2ND FLR FRAMING\Flush Beams\B7(i1225) (Flush Beam)

PASSED

BC CALC® Member Report

CCMC 12472-R

Dry | 1 span | No cant.

February 12, 2020 16:12:50

Build 7239

Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports:

File name:

VALLEYCREEK 2 EL 1.mmdl

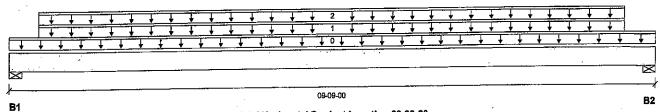
Description: 2ND FLR FRAMING\Flush Beams\B7(i1225)

Wind

Specifier:

Designer.

Company:



Total Horizontal Product Length = 09-09-00

Snow

Reaction Summary (Down / Uplift) (lbs)

Live 81/0 329 / 0 B1, 5-1/2" 81/0 329 / 0 B2, 5-1/2"

	ad Cumamami					•	Live	Dead	Snow	Wind	Tributary
	ad Summary Description	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
100	Self-Weight	Unf. Lin. (lb/ft)	L.	00-00-00	09-09-00	Тор		5			00-00-00
1	WALL	Unf. Lin. (lb/ft)	L	00-05-08	09-03-08	Top		60			n ∖a
ģ	FC3 Floor Material	Unf. Lin. (lb/ft)	L	00-05-08	09-03-08	Top	18	9			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1037 ft-lbs	7546 ft-lbs	13.7%	0	04-10-08
End Shear	375 lbs	3761 lbs	10.0%	0	01-03-00
Total Load Deflection	L/999 (0.053")	n\a	n\a	4	04-10-08
Live Load Deflection	L/999 (0.011")	n\a	n\a	5	04-10-08
Max Defl.	0.053"	n\a	n\a	4	04-10-08
Span / Depth	11.3				

Rearin	na Supports	Dim, (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	5-1/2" x 1-3/4"	460 lbs	12.0%	6.0%	Spruce-Pine-Fir
B2	Wall/Plate	5-1/2" x 1-3/4"	460 lbs	12.0%	6.0%	Spruce-Pine-Fir

Notes

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

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

CANFORMS TO OBC 2012

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86. AMENDED 2020 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



owa no . Tam 5536 -20 STRUCTURAL COMPONENT ONLY

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





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

1ST FLR FRAMING\Flush Beams\B1(i1242) (Flush Beam)

Dry | 1 span | No cant.

February 12, 2020 16:12:50

PASSED

BC CALC® Member Report Build 7239

Job name: Address:

City, Province, Postal Code:

Customer: Code reports:

CCMC 12472-R

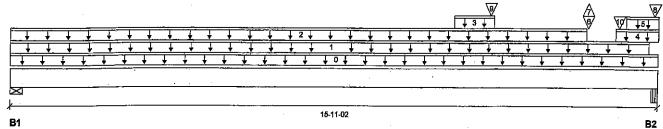
VALLEYCREEK 2 EL 1.mmdi

File name:

1ST FLR FRAMING\Flush Beams\B1(i1242) Description:

Specifier:

Designer: Company:



Total Horizontal Product Length = 15-11-02

Reaction Summary (Down / Uplift) (lbs) Live Bearing Snow 415/4 351 / 0 B1, 1-7/8'

2290 / 44 1478 / 0 B2, 5-3/8"

Lo	ad Summary						Live	Dead	Snow	Wind	Tributary
Tag		Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
Ō,	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	15-11-02	Тор		14			00-00-00
1.	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	15-08-06	Тор	. 8	4			n\a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	14-02-06	Top	26	13			n\a
3	13(i545)	Unf. Lin. (lb/ft)	L	10-10-14	11-10-14	Тор		81	Service C	fessic	n\a
4	10(i539)	Unf. Lin. (lb/ft)	L	14-10-14	15-11-02	Тор		81 .	O		7/
5	10(i539)	Unf. Lin. (lb/ft)	L	15-01-14	15-11-02	Тор	38	3	S 12	M	0 0
6	• ` '	Conc. Pt. (lbs)	L	14-02-15	14-02-15	Тор	665	330	g (carees	There was no disease	wos s
7	-	Conc. Pt. (lbs)	L	14-02-15	14-02-15	Тор	-48	19	SKA	TSOUL	WOS
8	-	Conc. Pt. (lbs)	L	15-10-00	15-10-00	Тор	193	97 🖁			n\a
9	13(i545)	Conc. Pt. (lbs)	L	11-09-14	11-09-14	Top	245	149			
10	10(i539)	Conc. Pt. (lbs)	L	14-11-14	14-11-14	Тор	1085	601	NO.		ON TOPINA
			Eastored	Dom	and!		٠.		BANN SA	FOF	ON

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	6180 ft-lbs	36222 ft-lbs	17.1%	1	11-04-06
End Shear	3841 lbs	17356 lbs	22.1%	1	14-08-04
Total Load Deflection	L/758 (0.244")	n\a	31.6%	6	08-05-00
Live Load Deflection	L/1359 (0.136")	n\a	26.5%	8	08-05-00
Max Defl.	0.244"	n\a	n\a	6	08-05-00
Span / Depth	19.5			2	

Bearing	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	1-7/8" x 5-1/4"	1061 lbs	17.5%	8.8%	Spruce-Pine-Fir
B2	Beam	5-3/8" x 5-1/4"	5282 lbs	35.1%	15.3%	Unspecified

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

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

Calculations assume member is fully braced.

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

AMENDED 2020

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition. Importance Factor: Normal Part code: Part 9

STAGGER HAILS 64 BETWEEN

PROVIDE 3 ROWS OF 31/2" ARDOX SPIRAL NAILS @ 12" 0/C FOR MULTI-PLY NAILING, MAINTAIN A MIN. 2"LUMBER EDGE/END DISTANCE, DO NOT USE AIR NAILS

ere no. Tan 5537 -20 STRUCTURAL Disclosure ONENT

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 记录引用 Till OBC 2012Guide 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®,





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

PASSED

1ST FLR FRAMING\Flush Beams\B1A(i1665) (Flush Beam)

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

February 12, 2020 16:12:50

Build 7239

Job name:

Address:

City, Province, Postal Code:

Customer:

CCMC 12472-R Code reports:

VALLEYCREEK 2 EL 1.mmdi

File name: Description: 1ST FLR FRAMING\Flush Beams\B1A(i1665)

Specifier: Designer:

Company:

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Total Horizontal Product Length = 03-02-00

(Down / Unliff) (lbc)

Reaction Sun	Reaction Summary (Down / Opinity (ibs)										
Bearing	Live	Dead	Snow	V							
B1, 3-7/16"	87 / 0	323 / 0		,							
DO 2 7/464	97 / A	323 / 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		10			00-00-00
1	E13(i513)	Unf. Lin. (lb/ft)	L	00-00-00	03-02-00	Тор	28	181			n\a
2	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	03-02-00	Тор	27	13			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand <i>i</i> Resistance	Case	Location
Pos. Moment	264 ft-lbs	15093 ft-lbs	1.7%	0	01-07-00
End Shear	144 lbs	7521 lbs	1.9%	0	01-00-15
Total Load Deflection	L/999 (0.001")	n\a	n\a	4	01-07-00
Live Load Deflection	L/999 (0")	n\a	n\a	5	01-07-00
Max Defl.	0.001"	n∖a .	n\a	4	01-07-00
Span / Depth	3.4				

Bearing	Supports	Dim, (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
B1	Wall/Plate	3-7/16" x 3-1/2"	452 lbs	9.4%	4.7%	Spruce-Pine-Fir	_
B2	Wall/Plate	3-7/16" x 3-1/2"	452 lbs	9.4%	4.7%	Spruce-Pine-Fir	

Notes

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

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

Calculations assume member is fully braced.

Resistance Factor phi has been applied to all presented results per CSA O86. 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 BROWS OF 3½" ARDOX SPIRAL NAILS @ 8 " 0/C FOR MULTI-PLY NAILING, MAINTAIN A MIN. 2" LUMBER EDGE/END DISTANCE, BONOTUSE AIR NAILS



DWG NU. TAM 5538 -20 STRUCTURAL COMPONENT ONLY

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). CONFORMS TO DBC 2012 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 Gulde 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®,





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

PASSED

1ST FLR FRAMING\Flush Beams\B2(i1234) (Flush Beam)

Dry | 2 spans | No cant.

February 12, 2020 16:12:50

BC CALC® Member Report **Build 7239**

Job name:

Address:

Customer: Code reports:

City, Province, Postal Code:

CCMC 12472-R

File name:

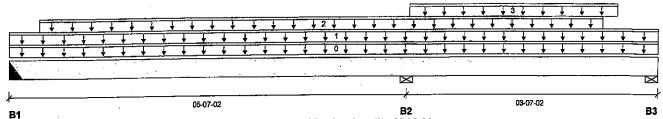
VALLEYCREEK 2 EL 1.mmdl

Wind

Description: 1ST FLR FRAMING\Flush Beams\B2(i1234)

Specifier: Designer:

Company:



Total Horizontal Product Length = 09-02-04

Snow

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead
B1, 4"	609 / 52	301 / 0
B2, 3-1/2"	2089 / 0	1097 / 0
B3, 4-3/8"	605 / 199	214 / 0

Load 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	09-02-04	Тор		10			00-00-00
1	FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	09-02-04	Тор	6	3			n\a
2	Smoothed Load	Unf. Lin. (lb/ft)	L	00-05-00	08-05-00	Top	285	142			n∖a
3	STAIR	Unf. Lin. (lb/ft)	· L	05-07-09	08-07-06	Тор	240	120			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1632 ft-lbs	23220 ft-lbs	7.0%	2	02-05-00
Neg. Moment	-2011 ft-lbs	-23220 ft-lbs	8.7%	1	05-07-02
End Shear	1220 lbs -	11571 lbs	10.5%	2	01-01-08
Cont. Shear	1753 lbs	11571 lbs	15.1%	1	06-06-06
Total Load Deflection	L/999 (0.01")	n\a	n\a	9	02-08-00
Live Load Deflection	L/999 (0.007")	n\a	n\a	12	02-09-00
Total Neg. Defl.	L/999 (-0.001")	n\a	n\a	9	06-08-11
Max Defl.	0.01"	n\a	n\a	9	02-08-00
Span / Depth	6.7				•

Beari	ng Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material	
B1	Hanger	4" x 3-1/2"	1290 lbs	n\a	7.6%	HGUS410	
B2	Wall/Plate	3-1/2" x 3-1/2"	4504 lbs	59.8%	30.1%	Spruce-Pine-Fir	
B3	Wall/Plate	4-3/8" x 3-1/2"	1174 lbs	12.5%	6.3%	Spruce-Pine-Fir	
B3	Uplift		106 lbs		•		

Cautions

Uplift of 106 lbs found at bearing B3. (SIMPSON 2-H2SA CAT B3).

Header for the hanger HGUS410 at B1 is a Triple 1-3/4" x 9-1/2" 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.



two No. TAN 5539 -20 STRUCTURAL SOMPONENT ONLY



Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1ST FLR FRAMING\Flush Beams\B2(i1234) (Flush Beam)

PASSED

February 12, 2020 16:12:50

BC CALC® Member Report

Build 7239

Job name:

Address: City, Province, Postal Code:

Customer:

Code reports:

Dry | 2 spans | No cant.

VALLEYCREEK 2 EL 1.mmdl

Description: 1ST FLR FRAMING\Flush Beams\B2(i1234)

Specifier:

Designer:

File name:

Company:

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

CONFORMS TO OBC 2012

Resistance Factor phi has been applied to all presented results per CSA 086.

CCMC 12472-R

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

PROVIDE3 ROWS OF 31/2" ARBOX SPIRAL NAILS @ /2 0/C FOR MULTI-PLY NAILING, MAINTAIN MIN. Z'LUMBER EDGE/END DISTANCE DO NOT USE AIR NAILS



984 Nd . TAN 5539 -20 STRUCTURAL COMPONENT ONLY

Disclosure

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





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

PASSED

1ST FLR FRAMING\Flush Beams\B3(i1239) (Flush Beam)

Dry | 1 span | No cant.

February 12, 2020 16:12:50

BC CALC® Member Report Build 7239

Job name: Address:

City, Province, Postal Code:

Customer:

Code reports:

File name:

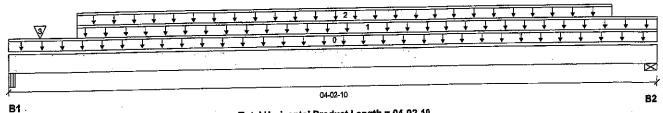
VALLEYCREEK 2 EL 1.mmdl

Description: 15

1ST FLR FRAMING\Flush Beams\B3(i1239)

Specifier: Designer:

CCMC 12472-R Company:



Total Horizontal Product Length = 04-02-10

	nmary (Down / ປ ^{Live}	plift) (lbs) Dead	Snow	Wind	
Bearing B1, 5-1/4"	277 / 0	160 / 0			
B2, 3-1/2"	265 / 0	142 / 0			

_							Live	Dead	Snow	Wind	Tributary
	ad Summary	Load Type	Ref.	Start	End	Loc.	1.00	0.65	1.00	1.15	
Tag				00-00-00	04-02-10	Top		5			00-00-00
0	Self-Weight	Unf. Lin. (lb/ft)	-			Top	120	60			n\a
1	STAIR	Unf. Lin. (lb/ft)	L	00-05-04	04-02-10		•	-			
À	—	Unf. Lin. (lb/ft)	L.	00-05-04	03-11-02	Top	10	5			n\a
2	FC1 Floor Material	•		00-02-06	00-02-06	Top	49	36			n\a
3	9(i538)	Conc. Pt. (lbs)	L	UU-UZ-UU	00-02-00	TOP	70	-	***	A 3 . 62 64 5	

Controls Summary_	Factored Demand	Factored Resistance	Demand <i>l</i> Resistance	Case	Location
Pos. Moment	462 ft-lbs	11610 ft-lbs	4.0%	1	02-02-03
	270 lbs	5785 lbs	4.7%	1	01-02-12
End Shear	L/999 (0.003")	n\a	n\a	4	02-02-03
Total Load Deflection		n\a	n\a	5	02-02-03
Live Load Deflection Max Defl.	L/999 (0.002") 0.003"	n\a	n\a	4	02-02-03
Span / Depth	4.6				

Possino	ı Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Beam	5-1/4" x 1-3/4"	615 lbs	12.5%	5.5%	Unspecified
B2	Wall/Plate	3-1/2" x 1-3/4"	576 lbs	15.3%	7.7%	Spruce-Pine-Fir

Notes

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

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

Calculations assume member is fully braced.

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

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



DWB NO.TAM 5540-20 STRUCTURAL COMPONENT ONLY

Disclosure

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



Single 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1ST FLR FRAMING\Flush Beams\B4(i1200) (Flush Beam)

PASSED

Dry | 1 span | No cant.

February 12, 2020 16:12:50

BC CALC® Member Report Build 7239

Job name:

Address: City, Province, Postal Code:

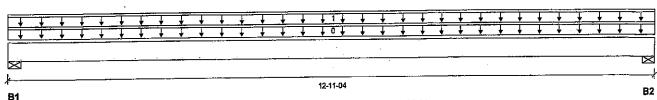
Customer: Code reports: File name:

VALLEYCREEK 2 EL 1.mmdl

Description: 1STFLR FRAMING\Flush Beams\B4(i1200)

Specifier: Designer: Company:

CC	ОМС	12472-R	



Total Horizontal Product Length = 12-11-04

Snow

Reaction Summary (Down / Uplift) (lbs)

I (Cachon)	ounnary (=one , =p.,	
Bearing	Live	Dead
B1, 1-7/8"	167 / 0	114 / 0
B2, 4-3/8"	173 / 0	118 / 0

Load 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	12-11-04	Тор		5			00-00-00
1 FC1 Floor Material	Unf. Lin. (lb/ft)	L	00-00-00	12-11 <i>-</i> 04	Top	26	13			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1215 ft-lbs	11610 ft-lbs	10.5%	1	06-05-04
End Shear	335 lbs	5785 lbs	5.8%	· 1	00-11-06
Total Load Deflection	L/999 (0.098")	n\a	n\a	4	06-05-04
Live Load Deflection	L/999 (0.058")	n\a	n\a	5	06-05-04
Max Defl.	0.098"	n\a	n\a	4	06-05-04
Span / Depth	15.8				

Beari	ing Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	1-7/8" x 1-3/4"	393 lbs	19.5%	9.8%	Spruce-Pine-Fir
B2	Wall/Plate	4-3/8" x 1-3/4"	406 lbs	8.6%	4.3%	Spruce-Pine-Fir

Notes

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

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

Calculations assume member is fully braced.

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



DWG NO. TAM 5541 -20 STRUCTURAL COMPONENT ONLY

Disclosure

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





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

PASSED

1ST FLR FRAMING\Flush Beams\B1B(i1796) (Flush Beam)

Dry | 1 span | No cant.

February 12, 2020 16:24:09

Build 7239

Job name:

Address:

City, Province, Postal Code: WATERDOWN

Customer:

CCMC 12472-R Code reports:

BC CALC® Member Report

VALLEYCREEK 2 EL 1.mmdl

Wind

File name: Description:

1ST FLR FRAMING\Flush Beams\B1B(i1796)

Specifier:

Designer:

Company:

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																																 -	
B1															03	3-01-1	4																В

Total Horizontal Product Length = 03-01-14

Snow

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead
B1, 3-7/16"	849 / 0	695 / 0
B2 3-7/16"	686 / 0	613 / 0

Lo	ad Summary						Live	Dead	Snow	Wind
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	03-01-14	Top		10		
1	E24(i516)	Unf. Lin. (lb/ft)	L	00-00-00	03-01-14	Top	266	294		
,	J3(i1718)	Conc. Pt. (lbs)	L.	00-07-02	00-07-02	Тор	348	174		
3	J3(i1709)	Conc. Pt. (lbs)	L	01-11-02	01-11-02	Top	348	174	355 Mg	MOFES.
	•		Cactored	Dem	and/				19	ROFES

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1244 ft-lbs	23220 ft-lbs	5.4%	1	01-09-08
End Shear	1563 lbs	11571 lbs	13.5%	. 1	02-00-15
Total Load Deflection	L/999 (0.002")	n\a	n\a	4	01-07-00
Live Load Deflection	L/999 (0.001")	n\a	n\a	5	01-07-00
Max Defl.	0.002"	n\a	n\a	4	01-07-00
Span / Depth	3.4				

Bearing	ı Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	3-7/16" x 3-1/2"	2142 lbs	29.0%	14.6%	Spruce-Pine-Fir
B2	Wall/Plate	3-7/16" x 3-1/2"	1795 lbs	24.3%	12.3%	Spruce-Pine-Fir

Notes

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

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

Calculations assume member is fully braced.

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

@ 8 " 0/C FOR MIN. 2" LUMBER EDGE/END TANGE, DO NOT USE AIR NAILS



Tributary

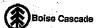
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EWE HO. TAM 5542-28 STRUCTURAL COMPONENT ONLY

Disclosure

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





Double 1-3/4" x 9-1/2" VERSA-LAM® 2.0 3100 SP 1ST FLR FRAMING\Flush Beams\B20(i1830) (Flush Beam)

PASSED

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:

March 24, 2020 15:13:31

VALLEYCREEK 2 EL 1 DECK CONDITION.mmdl 1ST FLR FRAMING\Flush Beams\B20(i1830)

Description: Specifier:

Designer: ΑJ

Company:

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1						•	10-cu											ı

Total Horizontal Product Length = 03-01-00

	Annialy (DOWEL) C	piiit) (ibs)				÷
Bearing	Live	Dead	Snow	Wind	`.	
B1, 3"	84/0	314 / 0				
B2, 3"	84 / 0	314 / 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	····outary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Top		10	1.00	11.10	00-00-00
1	E13(i513)	Unf. Lin. (lb/ft)	L	00-00-00	03-01-00	Top	28	181			
2	FC1 Floor Material	Unf. Lin, (lb/ft)	L.	00-00-00	03-01-00	Тор	27	13		,	n\a
						٠.٠٢	21	10			n\a

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	262 ft-lbs	15093 ft-lbs	1,7%	0	01-06-08
End Shear	143 lbs	7521 lbs	1.9%	0	01-00-08
Total Load Deflection	L/999 (0.001")	. n\a	n\a	4	01-06-08
Live Load Deflection	L/999.(0")	n\a	п\а	5	01-06-08
Max Defl.	0.001"	n\a	n\a	4	01-06-08
Span / Depth	3.4			•	0.00-00

Bearing	g Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	3" x 3-1/2"	440 lbs	10.5%	5.3%	Spruce-Pine-Fir
B2	Wall/Plate	3" x 3-1/2"	440 lbs	10.5%	5.3%	Spruce-Pine-Fir

Notes

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

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

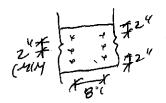
Calculations assume member is fully braced.

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

AMENDED 2020 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9



PROVIDE 3 ROWS OF 3½" ARDOX RAL NAILS @8 "O/C FOR MULTI-PLY NAILING, MAINTAIN MIN. 2"LUMBER EDGE/END TANGE, DO NOT USE AIR NAILS



DWG NO. TAM5543 -20 STRUCTURAL COMPONENT ONLY

Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User CONFORMS TO OBC 2012 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 BOARDTM, BCI®. BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®



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

PASSED

1ST FLR FRAMING\Flush Beams\B21(i1833) (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.

March 24, 2020 15:13:31

VALLEYCREEK 2 EL 1 DECK CONDITION.mmdl

Description: 1ST FLR FRAMING\Flush Beams\B21(i1833)

Specifier:

File name:

Designer: ΑJ

Wind

Company:

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+ + + + +		<u> </u>	
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			<u> </u>
×			
<u>к</u> В1		03-02-12	В

Total Horizontal Product Length = 03-02-12

Snow

Reaction Summary (Down / Uplift) (lbs)

Live Bearing 905 / 0 B1, 4-1/2" 1237 / 0 1159 / 0 845 / 0 B2, 3"

Lo	ad Summary						Live	Dead
	Description	Load Type	Ref.	Start	End	Loc.	1.00	0.65
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	03-02-12	Top		10
1	E17(i517)	Unf. Lin. (lb/ft)	<u>L</u>	00-00-00	03-02-12	Тор	332	328
2	J1(i1805)	Conc. Pt. (lbs)	L	00-01-04	00-01-04	Тор	330	165
3	J1(i1746)	Conc. Pt. (lbs)	L.	01-01-04	01-01-04	Top	331	165
-	J1(i1737)	Conc. Pt. (lbs)	Ľ	02-01-04	02-01-04	Top	331	165
4 . 5	J1(i1740)	Conc. Pt. (lbs)	Ĺ	03-01-04	03-01-04	Тор	331	165

Controls Summary	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1464 ft-lbs	23220 ft-lbs	6.3%	1	01-08-11
End Shear	1155 lbs	11571 lbs	10.0%	1	01-02-00
Total Load Deflection	L/999 (0.003")	n\a	n\a	4	01-08-00
Live Load Deflection	L/999 (0.002")	n\a	n\a	5	01-08-00
Max Defl.	0.003"	n\a	n\a	4	01-08-00
Span / Depth	3.4				

Bearing	Supports	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate	4-1/2" x 3-1/2"	2987 lbs	30.8%	15.5%	Spruce-Pine-Fir
B2	Wall/Plate	3" x 3-1/2"	2795 lbs	43.3%	21.8%	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 086. BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor: Normal Part code: Part 9

PROVIDE3 ROWS OF 3%" ARDOX SPIRAL NAILS @ 8 "O/C FOR MULTI-PLY HAILING, MAINTAIN A MIN. 2" LUMBER EDGE/END DISTANCE, DO NOT USE AIR NAILS DWG NO. PANSS44 -20 STRUCTURAL GOMENT ONLY

OLINCE OF ONTER

Disclosure

Snow

1.00

Wind

1.15

Tributary

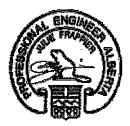
00-00-00 n\a n\a n∖a n\a

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 CONFORMS TO OBC 2012 anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design properties and analysis methods. Installation of 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®



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







		Ва	are		1	1/2" Gyp:	sum Ceiling	
Series		On Centr	e Spacing			On Centi	re 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"
	17'-0"	16'-0"	15'-1"	13'-11"	17'-5"	16'-1"	15'-1"	13'-11"
	17'-2"	16'-2"	15'-5"	14'-3"	17'-6"	16'-5"	15'-5"	14'-3"
		16'-11"	16'-3"	15'-6"	18'-5"	17'-3"	16'-7"	15'-6"
		17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16′-9"	15'-10"
		16'-10"	16'-0"	14'-10"	18'-6"	17'-1"	16'-0"	14'-10"
			17'-3"	15'-10"	19'-11"	18'-5"	17'-9"	15'-10"
			17'-5"	16'-9"	20'-2"	18 ' -9"	17'-11"	17'-1"
				17'-5"	21'-4"	19'-9"	18'-10"	17'-10"
				17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
			19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"
			18'-11"	17'-5"	22'-1"	20'-6"	19'-6"	17'-5"
				18'-2"	22'-5"	20'-10"	19'-11"	18'-10"
					23'-8"	21 -11	20'-10"	19'-9"
					24'-0"	22'-3"	21'-2"	20'-0"
					24'-8"	22'-10"	21'-9"	20'-7"
					24'-6"	22'-9"	21'-8"	20'-6"
					L	23'-10"	22'-9"	21'-6"
						24'-2"	23'-1"	21'-10"
					L			22'-5"
	Series NI-20 NI-40x NI-60 NI-70 NI-80 NI-20 NI-40x NI-60 NI-70 NI-80 NI-90x	NI-20 15'-7" NI-40x 17'-0" NI-60 17'-2" NI-70 18'-0" NI-80 18'-3" NI-20 17'-10" NI-80 19'-4" NI-60 19'-7" NI-70 20'-9" NI-80 21'-1" NI-90x 21'-8" NI-90x 21'-15" NI-70 23'-0" NI-80 23'-5" NI-90x 24'-11" NI-60 23'-9" NI-60 23'-9" NI-60 23'-9" NI-70 23'-9" NI-80 23'-5" NI-90x 24'-11" NI-60 23'-9" NI-70 25'-1" NI-80 25'-6"	Series On Centr 12" 16" NI-20 15'.7" 14'.2" NI-40x 17'.0" 16'.0" NI-60 17'.2" 16'.2" NI-70 18'-0" 16'.11" NI-80 18'.3" 17'.1" NI-20 17'.10" 16'.20" NI-40x 19'.4" 17'.11" NI-60 19'.7" 18'.2" NI-70 20'.9" 19'.2" NI-80 21'.1" 19'.5" NI-90x 21'.4" 20'.0" NI-40x 21'.5" 19'-10" NI-60 21'.10" 20'.2" NI-70 23'.0" 21'.3" NI-80 23'.5" 21'.7" NI-90x 24'-1" 22'.3" NI-60 23'.9" 22'.0" NI-70 25'.1" 23'.2" NI-70 25'.6" 23'.6"	12" 16" 19.2"	Series On Centre Spacing NI-20 15'-7" 16''-2" 13'-4" 12'-4" NI-40x 17'-0" 16'-0" 15'-1" 13'-11" NI-60 17'-2" 16'-2" 15'-5" 14'-3" NI-70 18'-0" 16'-11" 16'-3" 15'-6" NI-70 18'-0" 16'-11" 16'-3" 15'-6" NI-80 18'-3" 17'-1" 16'-5" 15'-9" NI-20 17'-10" 16'-10" 16'-0" 14'-10" NI-40x 19'-4" 17'-11" 17'-3" 15'-10" NI-60 19'-7" 18'-2" 17'-5" 16'-9" NI-70 20'-9" 19'-2" 18'-3" 17'-5" NI-80 21'-1" 19'-5" 18'-6" 17'-7" NI-90x 21'-8" 20'-0" 19'-1" 18'-0" NI-40x 21'-5" 19'-10" 18'-11" 17'-5" NI-60 21'-10" 20'-2" 19'-3" 18'-2" <	Series On Centre Spacing NI-20 15'-7" 14'-2" 13'-4" 12'-4" 15'-7" NI-40x 17'-0" 16'-0" 15'-1" 13'-11" 17'-5" NI-60 17'-2" 16'-2" 15'-5" 14'-3" 17'-6" NI-70 18'-0" 16'-11" 16'-3" 15'-6" 18'-5" NI-80 18'-3" 17'-1" 16'-5" 15'-5" 18'-5" NI-80 18'-3" 17'-1" 16'-5" 15'-6" 18'-5" NI-20 17'-10" 16'-10" 16'-0" 14'-10" 18'-6" NI-20 17'-11" 17'-3" 15'-10" 19'-11" NI-60 19'-7" 18'-2" 17'-5" 15'-0" 20'-2" NI-70 20'-9" 19'-2" 18'-3" 17'-5" 21'-4" NI-80 21'-1" 19'-5" 18'-6" 17'-7" 21'-7" NI-90x 21'-5" 19'-10" 18'-11" 18'-0" 22'-2" NI-60	Ni-20	Ni-20 15'-7" 14'-2" 13'-4" 12'-4" 15'-7" 14'-2" 13'-4" 12'-4" 15'-7" 14'-2" 13'-4" 12'-4" 15'-7" 14'-2" 13'-4" 12'-4" 15'-7" 14'-2" 13'-4" 12'-4" 15'-7" 14'-2" 13'-4" 13'-4" 12'-4" 15'-7" 14'-2" 13'-4" 13'-4" 15'-7" 14'-2" 13'-4" 15'-1" 16'-2" 15'-1" 13'-11" 17'-5" 16'-1" 15'-1" 15'-1" 16'-2" 15'-5" 14'-3" 17'-6" 16'-5" 15'-5" 15'-5" 14'-3" 17'-6" 16'-5" 15'-5" 16'-7" 18'-6" 17'-3" 16'-7" 18'-6" 17'-3" 16'-7" 18'-8" 17'-3" 16'-7" 18'-8" 17'-5" 16'-9" 18'-8" 17'-5" 16'-9" 18'-8" 17'-5" 16'-9" 18'-6" 17'-1" 16'-0" 18'-6" 17'-1" 16'-0" 18'-6" 17'-1" 16'-0" 18'-6" 17'-9" 18'-9" 17'-11" 18'-6" 17'-9" 18'-9" 17'-11" 18'-6" 17'-9" 18'-9" 17'-11" 18'-6" 17'-9" 18'-9" 17'-11" 18'-6" 17'-9" 18'-10"

			Mid-Spar	a Blocking		Mid-S	pan Blocking an	nd 1/2" Gγps <u>um</u>	Ceiling		
Depth	Series			e Spacing		On Centre Spacing					
осри	300	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"	Nt-60	18'-1"	16'-5"	15'-5"	14'-3"	18'-1"	16'-5"	15'-5"	14'-3"		
3-1/2	NI-70	19'-10"	17'-11"	16'-9"	15'-6"	19'-10"	17'-11"	16'-9"	15'-6"		
	NI-80	20'-2"	18'-3"	17'-1"	15'-10"	20'-2"	18'-3"	17'-1"	15'-10		
	N1-20	18'-10"	17'-1"	16'-0"	14'-10"	18'-10"	17'-1"	16'-0"	14'-10		
	NI-40x	21'-3"	19'-3"	17'-9"	15'-10"	21'-3"	19'-3"	17'-9"	15'-10		
		21'-9"	19'-8"	18'-5"	17'-1"	21'-9"	19'-8"	18'-5"	17'-1"		
11-7/8"	N1-60	23'-4"	21'-5"	20'-1"	18'-6"	23'-8"	21'-5"	20'-1"	18'-6"		
,	NI-70	23'-7"	21'-10"	20'-5"	18'-11"	24'-1"	21'-10"	20'-5"	18'-11		
	NI-80		22'-6"	21'-3"	19'-7"	24'-8"	22'-7"	21'-3"	19'-7"		
	N1-90x	24'-3"	21'-5"	19'-6"	17'-5"	24'-2"	21'-5"	19'-6"	17'-5"		
	NI-40x	24'-2"		21'-0"	19'-6"	24'-9"	22'-5"	21'-0"	19'-6"		
	NI-60	24'-9"	22'-5"		21'-0"	26'-8"	24'-3"	22'-9"	21'-0"		
14"	· NI-70	26'-1"	24'-3"	22'-9"		20-8	24'-10"	23'-3"	21'-6"		
	NI-80	26'-6"	24'-7"	23'-3"	21'-6"			23 -3 24'-3"	22'-4"		
	NI-90x	27'-3"	25'-4"	24'-1"	22'-4"	27'-9"	25'-10"		21'-7"		
	NI-60	27'-3"	24'-11"	23'-5"	21'-7"	27'-6"	24'-11"	23'-5"			
4511	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'-6"	24'-10"	30'-6"	28'-5"	26'-11"	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-joists are used with the spans and spacings given in this table, except as required for hangers.

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

^{6.} Joists shall be laterally supported at supports and continuously along the compression edge. Refer to technical documentation for installation guidelines and construction details. Nordic I-joists are listed in CCMC evaluation report 13032-R and APA Product Report PR-L274C.



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







			В	are		1	1/2" Gyp:	sum Ceiling			
14°	Series		On Centi	re Spacing	***	On Centre Spacing					
2cha1		12"	16"	19.2"	24"	12"	16"	19.2"	24"		
	NJ-20	15'-1"	14'-2"	13'-9"	N/A	15'-7"	14'-8"	14'-2"	N/A		
	NI-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A		
1_1 <i>/</i> 2"	NI-60	16'-3"	15'-4"	14'-10"	N/A	16'-8"	15'-9"	15'-3"	N/A		
-1/2	NI-70	17'-1"	16'-1"	15'-6"	N/A	17'-5"	16'-5"	15'-10"	N/A		
	NI-80	17'-3"	16'-3"	15'-8"	N/A	17'-8"	16'-7"	16'-0"	N/A		
	NI-20	16'-11"	16'-0"	15'-5"	N/A	17'-6"	16'-6"	16'-0"	N/A		
	NI-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A		
	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"	18'-7"	17'-9"	N/A		
	NI-80	19'-9"	18'-3"	17'-6"	N/A	20'-4"	18'-10"	17'-11"	N/A		
	NI-90x	20'-4"	18'-9"	17'-11"	N/A	20'-10"	19'-3"	18'-5"	N/A		
	NI-40x	20'-1"	18'-7"	17'-10"	N/A	20'-10"	19'-4"	18'-6"	N/A		
	NI-60	20'-5"	18'-11"	18'-1"	N/A	21'-2"	19'-7"	18'-9"	N/A		
. 49	NI-70	21'-7"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A		
14	NI-80	21'-11"	20'-3"	19'-4"	N/A	22'-7"	20'-11"	20'-0"	N/A		
	N!-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A		
	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A		
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A		
16"	NI-80	23'-11"	22'-1"	21'-1"	N/A	24'-8"	22'-10"	21'-9"	N/A		
	NI-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A		

			Mid-Spar	n Blocking		Mid-S	ipan Blocking ar		Ceiling	
Depth 9-1/2" 11-7/8"	Series		On Centr	e Spacing		On Centre Spacing				
DEPtil	33.1	12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-8"	15'-3"	14'-5"	N/A	16'-8"	15'-3"	14'-5"	N/A	
	NI-40x	17'-11"	15'-11"	16'-1"	N/A	18'-5"	17'-1"	16'-1"	N/A	
g_1/2"	NI-60	18'-2"	17'-1"	16'-4"	N/A	18'-7"	17'-4"	16'-4"	N/A	
J-1/2	NI-70	19'-2"	17'-10"	17'-2"	N/A	19'-7"	18'-3"	17'-7"	N/A	
	NI-80	19'-5"	18'-0"	17'-4"	N/A	19'-10"	18'-5"	17'-8"	N/A	
	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"	19'-2"	N/A	
11-7/8"	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	
	NI-80	22'-9"	21'-1"	20'-1"	N/A	23'-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	
	NI-60	24'-0"	22'-3"	21'-3"	N/A	24'-8"	22'-11"	21'-11"	N/A	
1.4"	NI-70	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'-11"	N/A	
14	NI-80	25'-7"	23'-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	
	N!-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	
	N!-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 15 psf. The ultimate limit states are based on the factored loads of 1.50L + 1.25D. The serviceability limit states include the consideration for floor vibration, a live load deflection limit of L/480 and a total load deflection limit of L/240.

^{2.} Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist spacing of 19.2 Inches or less. The composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Strapping shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum ceiling attached to joists.

^{3.} Minimum bearing length shall be 1-3/4 inches for the end bearings. 4. Bearing stiffeners are not required when I-joists are used with the spans and spacings given in this table, except as required for hangers.

^{5.} This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required

based on the use of the design properties. Tables are based on Limit States Design per CSA 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 3/4" OSB G&N Sheathing







			Ва	are		1	1/2" Gyp:	sum Ceiling	
Ozneh	Series		On Centr	e Spacing			On Cent	re Spacing	
Depth	351103	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"
3-1/2	NI-70	18'-0"	16'-11"	16'-3"	15'-7"	18'-5"	17'-3"	16'-7"	15'-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"	15'-1"
	NI-20 NI-40x	19'-4"	17'-11"	17'-3"	16'-6"	19'-11"	18'-6"	17'-9"	17'-0"
	N1-60	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"	17'-5"	21'-4"	19'-9"	18'-10"	17'-10"
	N1-80	21'-1"	19'-5"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
	N1-90x	21'-8"	20'-0"	19'-1"	18'-0"	22'-2"	20'-6"	19'-6"	18'-6"
	N1-40x	21'-5"	19'-10"	18'-11"	17'-11"	22'-1"	20'-6"	19'-7"	18'-7"
	NI-40X	21'-10"	20'-2"	19'-3"	18'-2"	22'-5"	20'-10"	19'-11"	18'-10"
4 411	NI-70	23'-0"	21'-3"	20'-3"	19'-2"	23'-8"	21'-11"	. 20'-10"	19'-9"
14"	NI-70 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"
		25'-1"	23'-2"	22'-0"	20'-10"	25'-9"	23'-10"	22'-9"	21'-6"
16"	NI-70 NI-80	25'-6"	23'-6"	22'-4"	21'-2"	26'-1"	24'-2"	23'-1"	21'-10"
	NI-80 NI-90x	26'-4"	24'-3"	23'-1"	21'-10"	26'-11"	24'-11"	23'-8"	22'-5"

	Series	Mid-Span Blocking On Centre Spacing				Mid-Span Blocking and 1/2" Gypsum Ceiling On Centre Spacing				
Depth										
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
9-1/2"	N1-20	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'-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'	
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"	
	N1-40x	21'-10"	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-8"	
	NI-60	22'-1"	20'-7"	19'-7"	18 ¹ -4"	22'-8"	20'-10"	19'-8"	18'-4"	
	NI-70	23'-4"	21'-8"	20'-8"	19'-7"	23'-10"	22'-3"	21'-2"	19'-9"	
	N(-80	231-7"	21'-11"	20'-11"	19'-9"	24'-1"	22'-6"	21'-5"	20'-0"	
	N1-90x	24'-3"	221-6"	21'-6"	20'-4"	24'-8"	23'-0"	22'-0"	20'-9"	
	N1-40x	24'-5"	22'-9"	21'-8"	19'-5"	25'-1"	23'-2"	21'-9"	19'-5"	
	NI-60	24'-10"	23'-1"	22'-0"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10'	
4.48	NI-70	26'-1"	24'-3"	23'-2"	21'-10"	26'-8"	24'-11"	23'-9"	22'-4"	
14"	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"	
16"	NI-70	28'-8"	26'-8"	25'-4"	23'-11"	29'-3"	27'-4"	26'-1"	24'-8"	
	NI-20	29'-1"	27'-0"	25'-9"	24'-4"	29'-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"	

^{1.} Maximum clear span applicable to simple-span residential floor construction with a design live load of 40 psf and dead load of 15 psf. The ultimate limit states are based on the factored loads of 1.50t. + 1.25D. The serviceability limit states include the consideration for floor vibration, a live 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.

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

^{4.} Bearing stimeners are not required when reposts are obtained with the theory of the span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required 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 = 30 psf Simple Spans, L/480 Deflection Limit 5/8" OSB G&N Sheathing







Depth	Series	Bare On Centre Spacing				1/2" Gypsum Ceiling			
						On Centre Spacing			
		12"	15"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	15'-1"	14'-1"	13'-3"	N/A	15'-7"	14'-1"	13'-3"	N/A
9-1/2"	N1-40x	16'-1"	15'-2"	14'-8"	N/A	16'-7"	15'-7"	15'-1"	N/A
	N1-60	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"	1.6'-5"	15'-10"	N/A
	NI-80	17'-3"	16'-3"	15'-8"	N/A	17'-8"	16'-7"	16'-0"	N/A
11-7/8"	NI-20	16'-11"	16'-0"	15'-5"	N/A	17'-6"	16'-6"	16'-0"	N/A
	NI-40x	18'-1"	17'-0"	16'-5"	N/A	18'-9"	17'-6"	16'-11"	N/A
	NI-60	18'-4"	17'-3"	16'-7"	N/A	19'-0"	17'-8"	17'-1"	N/A
	NI-70	19'-6"	18'-0"	17'-4"	N/A	20'-1"	18'-7"	17'-9"	N/A
	NI-8D	19'-9"	18'-3"	17'-6"	N/A	20'-4"	18'-10"	17'-11"	N/A
	N1-90x	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
14"	NI-50	20'-5"	18'-11"	18'-1"	N/A	21'-2"	19'-7"	18'-9"	N/A
	NI-70	21'-7"	20'-0"	19'-1"	N/A	22'-3"	20'-7"	19'-8"	N/A
14	NI-80	21'-11"	20'-3"	19'-4"	N/A	22'-7"	20'-11"	20'-0"	N/A
	NI-90x	22'-7"	20'-11"	19'-11"	N/A	23'-3"	21'-6"	20'-6"	N/A
16"	NI-60	22'-3"	20'-8"	19'-9"	N/A	23'-1"	21'-5"	20'-6"	N/A
	NI-70	23'-6"	21'-9"	20'-9"	N/A	24'-3"	22'-5"	21'-5"	N/A
	NI-70	23'-11"	22'-1"	21'-1"	N/A	24'-8"	22'-10"	21'-9"	N/A
	NI-90x	24'-8"	22'-9"	21'-9"	N/A	25'-4"	23'-5"	22'-4"	N/A

Depth	Series	Mid-Span Blocking On Centre Spacing				Mid-Span Blocking and 1/2" Gypsum Ceiling			
						On Centre Spacing			
		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
9-1/2"	NI-40x	17'-9"	16'-1"	15'-1"	N/A	17'-9"	16'-1"	15'-1"	N/A
	N!-60	18'-1"	16'-4"	15'-4"	N/A	18'-1"	16'-4"	15'-4"	N/A
	NI-70	19'-2"	17'-10"	16'-9"	N/A	19'-7"	17'-10"	16'-9"	N/A
	NI-80	19'-5"	18'-0"	17'-1"	N/A	19'-10"	18'-3"	17'-1"	N/A
	NI-20	18'-9"	17'-0"	16'-0"	N/A	18'-9"	17'-0"	16'-0"	N/A
	NI-20 NI-40x	21'-0"	19'-3"	17'-9"	N/A	21'-3"	19'-3"	17'-9"	N/A
	NI-40X NI-60	21'-4"	19'-8"	18'-5"	N/A	21'-8"	19'-8"	18'-5"	N/A
11-7/8"		22'-6"	20'-10"	19'-11"	N/A	23'-0"	21'-4"	20'-0"	N/A
	N1-70	22'-9"	21'-1"	20'-1"	N/A	23'-3"	21'-7"	. 20'-5"	N/A
	NI-80	23'-4"	21'-8"	20'-8"	N/A	23'-10"	22'-2"	21'-2"	N/A
	NI-90x	23'-7"	21'-5"	19'-6"	N/A	24'-1"	21'-5"	19'-5"	N/A
14"	NI-40x	24'-0"	22'-3"	21'-0"	N/A	24'-8"	22'-5"	21'-0".	N/A
	NI-60	25'-3"	23'-4"	22'-3"	N/A	25'-10"	24'-0"	22'- 9 "	N/A
	NI-70	25 -3 25'-7"	23' 8"	22'-7"	N/A	26'-2"	24'-4"	23'-2"	N/A
	N1-80	25 -7 26'-4"	24'-4"	23'-3"	N/A	26'-10"	24'-11"	23'-9"	N/A
	NI-90x	26'-5"	24'-6"	23'-4"	N/A	27'-2"	24'-10"	23'-4"	N/A
16"	NI-60	26"-5" 27'-9"	25'-8"	24'-6"	N/A	28'-5"	26'-5"	25'-2"	N/A
	NI-70	27'-9" 28'-2"	25 -6 26'-1"	24'-10"	N/A	28'-10"	26'-9"	25'-6"	N/A
	NI-80		26'-10"	25'-7"	N/A	29'-7"	27'-5"	26'-2"	N/A
	N1-90x	29'-0"	20-10	43-1	1975	23 /			

^{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.

a aversar unnecessary and a second supposite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist 2. Spans are based on a composite floor with glued-nailed oriented strand board (OSB) sheathing with a minimum thickness of 5/8 inch for a joist 2. spains are pased on a composite floor may include 1/2 inch gypsum ceiling and/or one row of blocking at mid-span with strapping. Spacing of 13.2 micros of 1833. The Component for they make a particular paper shall be minimum 1x4 inch strap applied to underside of joists at blocking line or 1/2 inch gypsum celling attached to joists. 3. Minimum bearing length shall be 1-3/4 inches for the end bearings,

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

5. This span chart is based on uniform loads. For applications with other than uniformly distributed loads, an engineering analysis may be required. based on the use of the design properties. Tables are based on Limit States Design per CSA OB6-09, 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.

Construction Detail



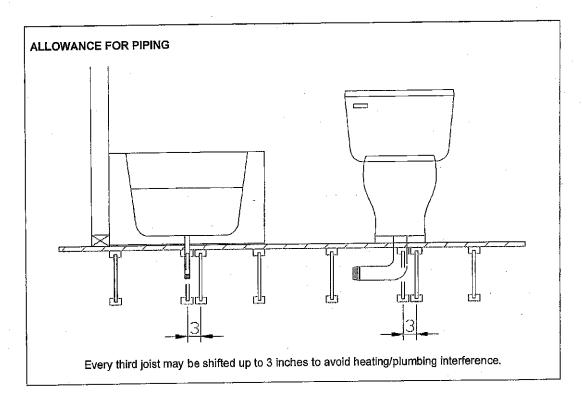
Limit States Design

Allowance for Piping (Installation Notes)

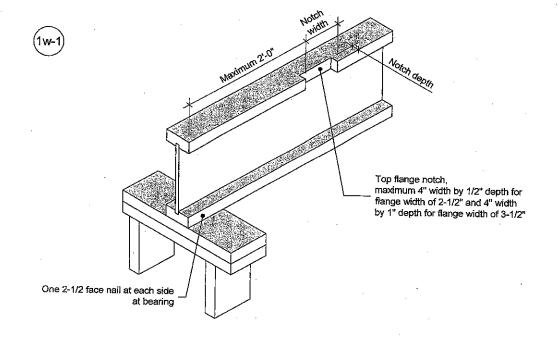
The floor layouts have usually not been checked for heating and/or plumbing interference. On-site adjustment of joists of up to 3 inches is permitted to avoid interferences. When moving a joist, the subfloor thickness shall be checked with code requirements when the joist spacing exceeds 19.2 inches.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

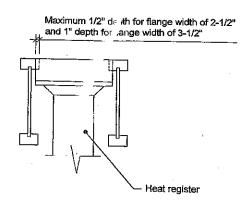
Installation of Nordic I-joists shall be as per *Nordic Joist Installation Guide for Residential Floors*. Refer to Tables 1 and 2 for maximum web hole and duct chase openings, respectively. These tables are based on the I-joists being used at their maximum spans. The minimum distance given may be reduced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





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

2. The maximum dimensions for a notch on the side of the top flange are 4-inch width by 1/2-inch depth for flange width of 2-1/2 inches, and 4-inch width by 1-inch depth for flange width of 3-1/2 inches.

3. This detail applies to simple-span joists and multiple-span joists where the notch is located at the end half-span

4. For other applications, contact Nordic Structures.

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

NORDIC **STRUCTURES**

T 514-871-8526 1 866 817-3418

nordic.ca

Notch in I-joist for Heat Register

I-joist - Typical Floor Framing and Construction Details

DOCUMENT

DATE

2018-04-10