

		Products		
PlotID	Length	Product	Plies	Net Qty
J9DJ	18-00-00	9 1/2" NI-40x	2	2
J1	16-00-00	9 1/2" NI-40x	1	22
J1DJ	16-00-00	9 1/2" NI-40x	2	2
J2	14-00-00	9 1/2" NI-40x	1	18
J3	10-00-00	9 1/2" NI-40x	1	4
J4	8-00-00	9 1/2" NI-40x	1	10
J5	6-00-00	9 1/2" NI-40x	1	2
J6	4-00-00	9 1/2" NI-40x	1	1
J7	2-00-00	9 1/2" NI-40x	1	4
J8	18-00-00	9 1/2" NI-80	1	3
B6	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B8	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B14L	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B1	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B10L	10-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B11L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B15L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B2	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B13L	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B5	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B7	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B3	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B9	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4	2-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B12L	2-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

Connector Summary				
Qty	Manuf	Product		
25	H1	IUS2.56/9.5		
11	H1	IUS2.56/9.5		
2	H1	IUS2.56/9.5		
5	H1	IUS2.56/9.5		
6	H1	IUS2.56/9.5		
2	H2	HUS1.81/10		
1	H2	HUS1.81/10		
1	H3	HU310-2		
1	H3	HU310-2		
1	H4	HGUS410		
1	H4	HGUS410		
3	H7	IUS3.56/9.5		

**DATE:** 5/25/23

1st FLOOR FRAMING



FROM PLAN DATED: JULY 2019
BUILDER: BAYVIEW WELLINGTON

SITE: ALCONA SHORES

MODEL: RL-6E ELEVATION: A & B

494014 LOT:

LO1.

CITY: INNISFIL

**SALESMAN:** WILL GARCIA

DESIGNER: AJ REVISION: Ibv

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION. SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 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 6 AND TABLES 6.1/6.2.

CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL CONNECTORS MUST BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS USING THE MANUFACTURER SPECIFIED FASTENERS.
ALL BEAM HANGER FASTENERS INSTALLED INTO THE SUPPORTING MEMBER MUST BE A MINIMUM OF 3.5" IN LENGTH UNLESS OTHERWISE SPECIFIED

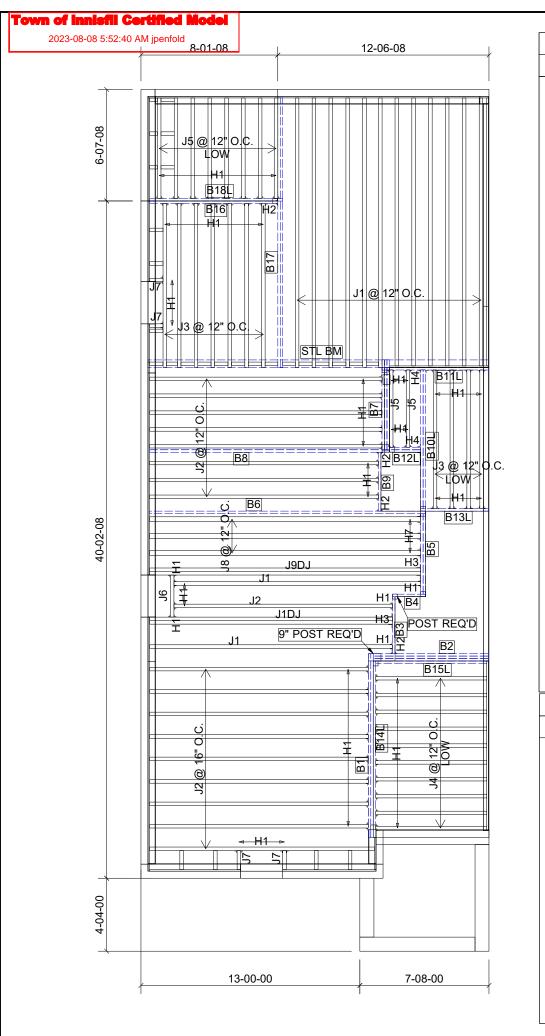
BY THE SUPPORTING MEMBER ENGINEER OF RECORD

LOADING:

LIVE LOAD: 40.0 lb/ft<sup>2</sup> DEAD LOAD: 15.0 lb/ft<sup>2</sup> TILE LOAD: +5.0 lb/ft<sup>2</sup>

JOIST LL DEFLECTION LIMIT: L/480

**SUBFLOOR: 3/4" GLUED AND NAILED** 



Products				
PlotID	Length	Product	Plies	Net Qty
J9DJ	18-00-00	9 1/2" NI-40x	2	2
J1	16-00-00	9 1/2" NI-40x	1	14
J1DJ	16-00-00	9 1/2" NI-40x	2	2
J2	14-00-00	9 1/2" NI-40x	1	18
J3	10-00-00	9 1/2" NI-40x	1	11
J4	8-00-00	9 1/2" NI-40x	1	10
J5	6-00-00	9 1/2" NI-40x	1	10
J6	4-00-00	9 1/2" NI-40x	1	1
J7	2-00-00	9 1/2" NI-40x	1	4
J8	18-00-00	9 1/2" NI-80	1	3
B6	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B8	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B17	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B14L	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B1	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B10L	10-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B11L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B15L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B16	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B18L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B2	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B13L	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B5	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B7	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B3	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B9	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4	2-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B12L	2-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
Connector Summary				

Connector Summary				
Qty	Manuf	Product		
40	H1	IUS2.56/9.5		
11	H1	IUS2.56/9.5		
2	H1	IUS2.56/9.5		
5	H1	IUS2.56/9.5		
6	H1	IUS2.56/9.5		
2	H2	HUS1.81/10		
1	H2	HUS1.81/10		
1	H2	HUS1.81/10		
1	H3	HU310-2		
1	H3	HU310-2		
1	H4	HGUS410		
1	H4	HGUS410		
3	H7	IUS3.56/9.5		

**DATE:** 2023-05-12

1st FLOOR FRAMING

SUNKEN MUDROOM



FROM PLAN DATED: JULY 2019

**BUILDER:** BAYVIEW WELLINGTON

**SITE**: ALCONA SHORES

MODEL: RL-6E **ELEVATION**: A & B

LOT:

CITY: INNISFIL

**SALESMAN:** WILL GARCIA

**DESIGNER:** AJ **REVISION**: lbv

> REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION. SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 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 6 AND TABLES 6.1/6.2. **CERAMIC TILE APPLICATION AS PER OBC 9.30.6.** 

ALL **CONNECTORS** MUST BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS USING THE MANUFACTURER SPECIFIED FASTENERS. ALL BEAM HANGER FASTENERS INSTALLED INTO THE **SUPPORTING** MEMBER **MUST** BE A MINIMUM OF 3.5" IN LENGTH UNLESS OTHERWISE SPECIFIED

BY THE SUPPORTING MEMBER ENGINEER OF RECORD

LOADING:

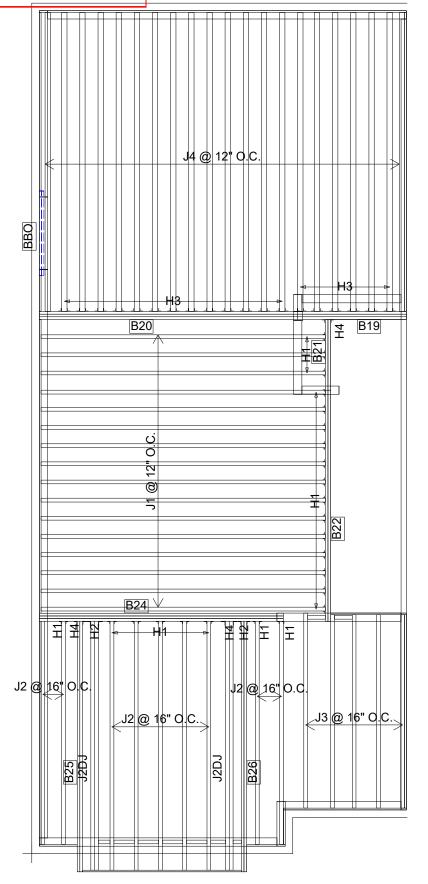
LIVE LOAD: 40.0 lb/ft<sup>2</sup> DEAD LOAD: 15.0 lb/ft<sup>2</sup> TILE LOAD: +5.0 lb/ft<sup>2</sup>

JOIST LL DEFLECTION LIMIT: L/480

**SUBFLOOR: 3/4" GLUED AND NAILED** 

# Town of innisfii Certified Model

2023-08-08 5:52:41 AM jpenfold



		Products		
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	16
J2	14-00-00	9 1/2" NI-40x	1	9
J2DJ	14-00-00	9 1/2" NI-40x	2	4
J3	12-00-00	9 1/2" NI-40x	1	5
J4	18-00-00	9 1/2" NI-80	1	21
B20	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B22	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B25	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B26	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B24	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B19	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B21	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

C	Connector Summary			
Qty	Qty Manuf Product			
16	H1	IUS2.56/9.5		
8	H1	IUS2.56/9.5		
2	H2	HU310-2		
19	H3	IUS3.56/9.5		
3	H4	HGUS410		



FROM PLAN DATED: JULY 2019
BUILDER: BAYVIEW WELLINGTON

**SITE**: ALCONA SHORES

MODEL: RL-6E ELEVATION: A

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: Ibv

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 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 6 AND TABLES 6.1/6.2.

**CERAMIC TILE APPLICATION AS PER OBC 9.30.6.** 

ALL CONNECTORS MUST BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS USING THE MANUFACTURER SPECIFIED FASTENERS.

ALL BEAM HANGER FASTENERS INSTALLED INTO THE SUPPORTING MEMBER MUST BE A MINIMUM OF 3.5" IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD

LOADING:

LIVE LOAD: 40.0 lb/ft<sup>2</sup> DEAD LOAD: 15.0 lb/ft<sup>2</sup> TILE LOAD: +5.0 lb/ft<sup>2</sup>

JOIST LL DEFLECTION LIMIT: L/480

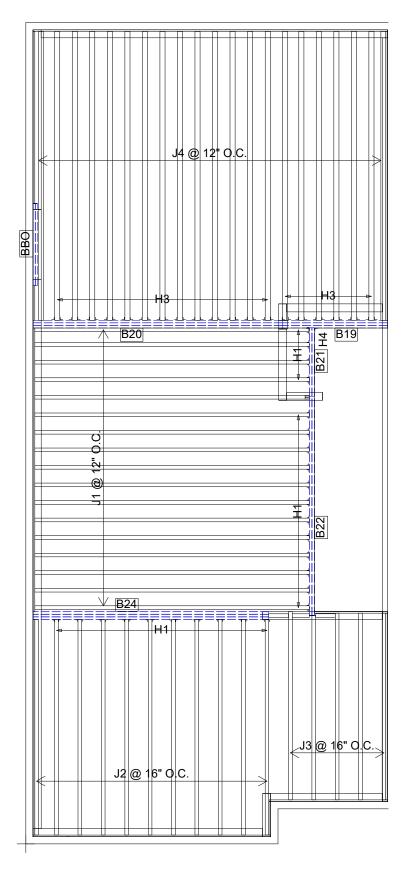
**SUBFLOOR: 5/8" GLUED AND NAILED** 

**DATE:** 5/25/23

2nd FLOOR FRAMING

#### Town of Innisfii Certified Model

2023-08-08 5:52:41 AM jpenfold



		Products		
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	17
J2	14-00-00	9 1/2" NI-40x	1	11
J3	12-00-00	9 1/2" NI-40x	1	5
J4	18-00-00	9 1/2" NI-80	1	21
B20	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B22	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B24	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B19	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B21	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

O	Connector Summary				
Qty	Manuf	Product			
16	H1	IUS2.56/9.5			
10	H1	IUS2.56/9.5			
19	H3	IUS3.56/9.5			
1	H4	HGUS410			



FROM PLAN DATED: JULY 2019
BUILDER: BAYVIEW WELLINGTON

**SITE**: ALCONA SHORES

MODEL: RL-6E ELEVATION: B

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: Ibv

REFER TO THE NORDIC INSTALLATION GUIDE
FOR PROPER STORAGE AND INSTALLATION.
SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 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.

CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL CONNECTORS MUST BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS USING THE MANUFACTURER SPECIFIED FASTENERS.

FOR HOLES INCLUDING DUCT CHASE AND FIELD CUT OPENINGS SEE FIGURE 6 AND TABLES 6.1/6.2.

ALL BEAM HANGER FASTENERS INSTALLED INTO
THE SUPPORTING MEMBER MUST BE A MINIMUM
OF 3.5" IN LENGTH UNLESS OTHERWISE SPECIFIED
BY THE SUPPORTING MEMBER ENGINEER OF RECORD

LOADING:

LIVE LOAD: 40.0 lb/ft<sup>2</sup> DEAD LOAD: 15.0 lb/ft<sup>2</sup> TILE LOAD: +5.0 lb/ft<sup>2</sup>

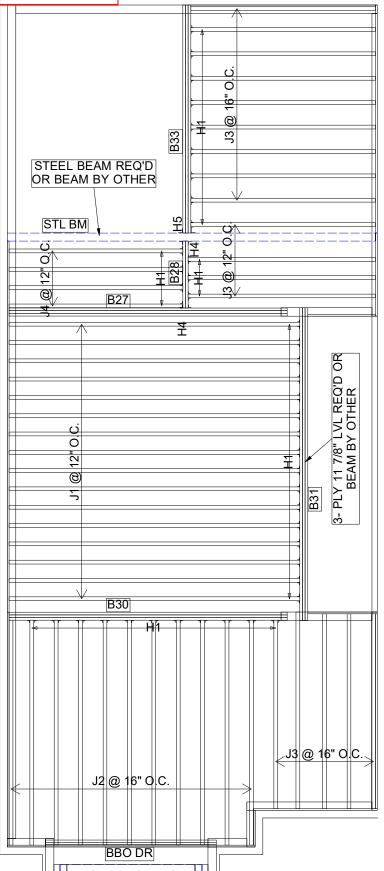
JOIST LL DEFLECTION LIMIT: L/480

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

**DATE:** 2023-05-12

2nd FLOOR FRAMING





Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	16
J2	14-00-00	9 1/2" NI-40x	1	11
J3	12-00-00	9 1/2" NI-40x	1	18
J4	10-00-00	9 1/2" NI-40x	1	4
B27	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B30	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B33	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B28	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B31	18-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	3	3

	Connector Summary			
Qty	Manuf	Product		
7	H1	IUS2.56/9.5		
20	H1	IUS2.56/9.5		
16	H1	IUS2.56/9.5		
1	H4	HGUS410		
1	H4	HGUS410		
1	H5	HGUS5.50/10		



FROM PLAN DATED: JULY 2019
BUILDER: BAYVIEW WELLINGTON

**SITE**: ALCONA SHORES

MODEL: RL-6E ELEVATION: A

LOT:

CITY: INNISFIL

**SALESMAN: WILL GARCIA** 

DESIGNER: AJ REVISION: Ibv

REFER TO THE NORDIC INSTALLATION GUIDE FOR PROPER STORAGE AND INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 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 6 AND TABLES 6.1/6.2. CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL CONNECTORS MUST BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS USING THE MANUFACTURER SPECIFIED FASTENERS.
ALL BEAM HANGER FASTENERS INSTALLED INTO THE SUPPORTING MEMBER MUST BE A MINIMUM

OF **3.5"** IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD

LOADING:

LIVE LOAD: 40.0 lb/ft<sup>2</sup> DEAD LOAD: 15.0 lb/ft<sup>2</sup> TILE LOAD: +5.0 lb/ft<sup>2</sup>

JOIST LL DEFLECTION LIMIT: L/480

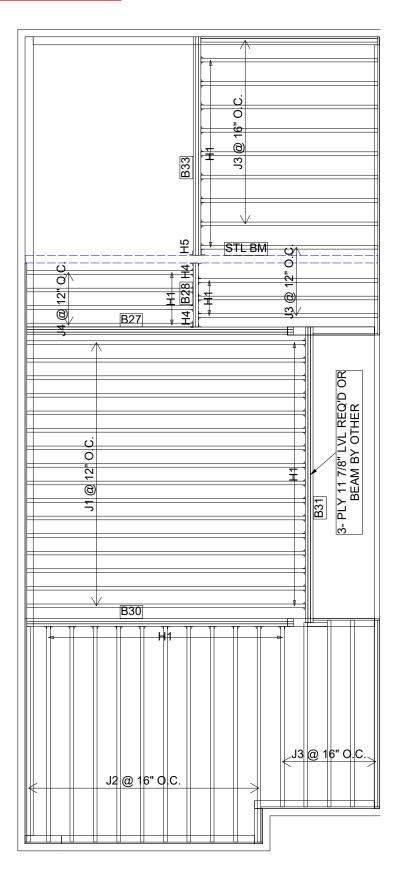
**SUBFLOOR: 5/8" GLUED AND NAILED** 

**DATE:** 5/25/23

3rd FLOOR FRAMING

#### Town of Innisfii Certified Model

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Products				
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	16
J2	14-00-00	9 1/2" NI-40x	1	11
J3	12-00-00	9 1/2" NI-40x	1	18
J4	10-00-00	9 1/2" NI-40x	1	4
B27	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B30	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B33	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B28	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B31	18-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	3	3

	Connector Summary				
Qty	Manuf	Product			
7	H1	IUS2.56/9.5			
20	H1	IUS2.56/9.5			
16	H1	IUS2.56/9.5			
1	H4	HGUS410			
1	H4	HGUS410			
1	H5	HGUS5.50/10			



FROM PLAN DATED: JULY 2019
BUILDER: BAYVIEW WELLINGTON

**SITE**: ALCONA SHORES

MODEL: RL-6E ELEVATION: B

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: Ibv

REFER TO THE NORDIC INSTALLATION GUIDE
FOR PROPER STORAGE AND INSTALLATION.

SQUASH BLOCKS OF 2x4, 2x6, 2x8 SPF #2 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.

CUT OPENINGS SEE FIGURE 6 AND TABLES 6.1/6.2.
CERAMIC TILE APPLICATION AS PER OBC 9.30.6.

ALL CONNECTORS MUST BE INSTALLED AS PER THE

FOR HOLES INCLUDING DUCT CHASE AND FIELD

MANUFACTURER'S SPECIFICATIONS USING THE MANUFACTURER SPECIFIED FASTENERS.

ALL BEAM HANGER FASTENERS INSTALLED INTO THE SUPPORTING MEMBER MUST BE A MINIMUM OF 3.5" IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE SUPPORTING MEMBER ENGINEER OF RECORD

LOADING:

LIVE LOAD: 40.0 lb/ft<sup>2</sup> DEAD LOAD: 15.0 lb/ft<sup>2</sup> TILE LOAD: +5.0 lb/ft<sup>2</sup>

JOIST LL DEFLECTION LIMIT: L/480

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

**DATE:** 5/25/23

3rd FLOOR FRAMING

2023-08-08 5:52:41 AM jpenfold

# NORDIC

INSTALLATION GUIDE NORDIC JOIST

NS-GI33 **■**◆■

VERSION 2020-10-01

**Engineered Wood Products** 

BASIC INSTALLATION **GUIDE FOR RESIDENTIAL FLOORS** 

NORDIC **"**JOIST

NORDIC **STRUCTURES** 

WEB STIFFENERS

nordic.ca

#### **INSTALLING NORDIC I-JOISTS**

- Except for cutting to length, I-joist flanges should never be cut, drilled or notched
- Install I-joists so that top and bottom flanges are within 1/2 inch of true vertical alignment
- Concentrated loads should only be applied to the top surface of the top flange. Concentrated loads should not be suspended from the bottom flange with the exception of light loads, such as ceiling fans or light fixtures.
- I-joists must be protected from the weather prior to installation.
- I-joists must not be used in applications where they will be permanently exposed to weather, or will reach a moisture content of 15 percent or greater, such as in swimming pool or hot tub areas. They must not be installed where they will remain in direct contact with
- End bearing length must be at least 1-3/4 inch. For multiple-span joists, intermediate bearing length must be at least 3-1/2 inches.
- I-joists installed beneath bearing walls perpendicular to the joists shall have full-depth blocking panels, rim board, or squash blocks (cripple blocks) to transfer gravity loads from above the floor system to the wall or foundation below.
- For I-ioists installed directly beneath bearing walls parallel to the joists or used as rim board or blocking panels, the m using a single I-joist is 3,300 plf, and 6,600 plf if double I-joists are used.
- . Continuous lateral support of the I-joist's compression flange is required to prevent rotation and buckling. In simple span uses, lateral support of the top flange is normally supplied by the floor sheathing. In multiple-span or cantilever applications, bracing of the I-joist's bottom flange is also required at interior supports of multiple-span joists, and at the end support next to the cantilever extension. The ends of all cantilever extensions must be laterally braced as shown in details 3, 4, or 5.
- . Nails installed in flange face or edge shall be spaced in accordance

with the applicable building code requirements or approved building plans, but should not be closer than those specified on page 3.3 of the Nordic Joist Technical Guide (NS-GT3).

1b

1

- B. Details 1 show only I-joist-specific fastener requirements. For other fastener requirements, see the applicable building code
- 4. For proper temporary bracing of wood I-joists and placement of temporary construction loads, see APA Technical Note: Temporary Construction Loads over I-Joist Roofs and Floors, Form J735.

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 I-JOIST SERIES RESIDENTIAL SERIES



2x3 1950f MSR 3/8 in. web 33 pieces per unit



1d

1k

1p

and sheathed

2×4 2100f MSR 23 pieces per

SAFETY AND CONSTRUCTION PRECAUTIONS

Avoid Accidents by Following these Important Guidelines

of I-ioists at the end of the bay.

rim board, or cross-bridging.

5. Never install a damaged I-ioist

-joists are not stable until completely installed, and will not carry any load until fully brace

I. Brace and nail each I-joist as it is installed, using hangers, blocking panels, rim board, and/

or cross-bridging at joist ends. When I-joists are applied continuous over interior supports

and a load-bearing wall is planned at that location, blocking will be required at the interior

2. When the building is completed, the floor sheathing will provide lateral support for the top

no more than 8 feet on centre, and must be secured with a minimum of two 2-1/2-inch nails fastened to the top surface of each I-joist. Nail the bracing to a lateral restraint at the end of each bay. Lap ends of adjoining bracing over at least two I-joists.

Or, sheathing (temporary or permanent) can be nailed to the top flange of the first 4 feet

3. For cantilevered I-joists, brace top and bottom flanges, and brace ends with closure panels

Improper storage or installation, failure to follow applicable building codes, failure to follow span ratings for Nordic I-joists, failure to follow allowable hole sizes and locations, or failure

to use web stiffeners when required can result in serious accidents. Follow these installation

or temporary sheathing must be applied to prevent I-joist rollover or buckling. Temporary bracing or struts must be 1x4 inch minimum, at least 8 feet long and spaced

system. Then, stack building materials over beams or walls only.

flanges of the I-joists. Until this sheathing is applied, temporary bracing, often called struts,

NI-90 2x4 2400f MSR 7/16 in. web

Width 1-1/8 in. APA Rim Board Plu

RIM BOARDS

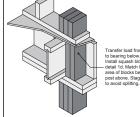
Do not walk on I-joist

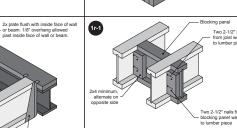
Never stack building

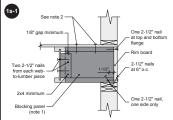
braced or serious

until fully fastened an

# 23 pieces per unit







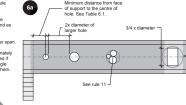
#### WEB HOLES AND OPENINGS

#### WEB HOLES IN I-JOISTS

- Rules for Cutting Holes in I-Joists
- The distance between the inside edge of the support and the centreline of any hole shall be in compliance with the requirement of Table 6.1.
- Whenever possible, field-cut holes should be centred on the middle of the web.

- A 1-1/2 inch hole or smaller can be placed anywhere in the web provide that it meets the requirements of rule number 6 above.
- materials over unsheathed I-joists All holes shall be cut in acc with the restrictions listed a illustrated in detail 6a. Once sheathed, do no overstress I-joist with

TABLE 6.1 - LOCATION OF WEB HOLES



#### DUCT CHASE OPENINGS

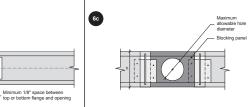
The distance between the inside edge of the support and the co duct chase opening shall be in compliance with the requiremen

Rules for Cutting Duct Chase Openings in I-joists

- . I-joist top and bottom flanges must never be cut, notched or otherwise modi
- The maximum depth of a duct chase opening that can be cut 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 top or bottom of the opening and the adjacent I-joist flange. Holes cut into the blocking panels are subject to the following limitations: The top and bottom flanges of an I-joist blocking panel must never be cut, notched or otherwise modified
- All openings shall be cut in accordance with the restrictions listed above and as illustrated in detail 6b.

Allowable Hole Size in Lateral-restraint-only Blocking Panels

HOLES IN BLOCKING PANELS



blocking depth (in.)	hole diameter (in.) (a)
9-1/2	6-1/4
11-7/8	7-3/4
14	9-1/4
16	10-1/2









8-5/8

11-7/8

# imple or multiple spar

6b

Minimum o	Minimum distance from inside face of any support to centre of hole (ft-in.)															
Joist	Joist		Round hole diameter (in.)													
depth	series						6-1/4			8-5/8		10	10-3/4		12	12-3/4
	NI-20	0'-7"	1'-6"	2'-10"	4'-3"	5'-8"	6'-0"	-	-	-	-	-	-	-	-	-
0.4/07	NI-40x	0'-7"	1'-6"	3'-0"	4'-4"	6'-0"	6'-4"	-	-	-	-	-	-	-	-	-
9-1/2"	NI-60	1'-3"	2'-6"	4'-0"	5'-4"	7'-0"	7'-5"	-	-	-	-	-	-	-	-	-
	NI-80	2'-3"	3'-6"	5'-0"	6'-6"	8'-2"	8'-8"	-	-	-	-	-	-	-	-	-
	NI-20	0'-7"	0'-8"	1'-0"	2'-4"	3'-8"	4'-0"	5'-0"	6'-6"	7'-9"	-	-	-	-	-	-
	NI-40x	0'-7"	0'-8"	1'-3"	2'-8"	4'-0"	4'-4"	5'-5"	7'-0"	8'-4"	-	-	-	-	-	-
11-7/8"	NI-60	0'-7"	1'-8"	3"-0"	4'-3"	5'-9"	6'-0"	7'-3"	8'-10"	10'-0"	-	-	-	-	-	-
	NI-80	1'-6"	2'-10"	4'-2"	5'-6"	7'-0"	7'-5"	8'-6"	10'-3"	11'-4"	-	-	-	-	-	-
	NI-90	0'-7"	0'-8"	1'-5"	3'-2"	4"-10"	5'-4"	6'-9"	8'-9"	10'-2"	-	-	-	-	-	-
	NI-40x	0'-7"	0"-8"	0"-8"	1'-0"	2'-4"	2'-9"	3'-9"	5'-2"	6'-0"	6'-6"	8'-3"	10'-2"	-	-	-
14"	NI-60	0'-7"	0"-8"	1'-8"	3'-0"	4'-3"	4'-8"	5'-8"	7'-2"	8'-0"	8'-8"	10'-4"	11'-9"	-	-	-
144	NI-80	0'-10"	2"-0"	3'-4"	4'-9"	6'-2"	6'-5"	7'-6"	9'-0"	10'-0"	10'-8"	12'-4"	13'-9"	-	-	-
	NI-90	0'-7"	0'-8"	0'-10"	2'-5"	4'-0"	4'-5"	5'-9"	7'-5"	8'-8"	9'-4"	11'-4"	12'-11"	-	-	-
	NI-60	0'-7"	0'-8"	0'-8"	1'-6"	2'-10"	3'-2"	4'-2"	5'-6"	6'-4"	7'-0"	8'-5"	9'-8"	10'-2"	12'-2"	13'-9"

No	otes:
1.	Tabulated values are applicable to residential floor construction meeting the
	above design criteria.

Design Criteria	
Joist spacing	Up to 24 inches
Loads	Live load = 40 psf and dead load = 15 psf
Defination finite	1 (400 4 1) 1 4 41 (0.40 4 4-14-11 4

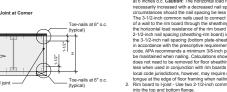
	NI-40x	5'-3"	5'-8"	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	-	
9-1/2"	NI-60	5'-4"	5'-9"	6'-2"	6'-7"	7'-1"	7'-5"	8'-0"	-	
	NI-80	5'-3"	5'-8"	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	8'-2"	8
	NI-20	5'-9"	6'-2"	6'-6"	-	-	-	-	-	
	NI-40x	6'-8"	7'-2"	7'-6"	8'-1"	8'-6"	9'-1"	9'-6"	-	
11-7/8"	NI-60	7'-3"	7'-8"	8'-0"	8'-6"	9'-0"	9'-3"	9'-9"	-	
	NI-80	7'-2"	7'-7"	8'-0"	8'-5"	8'-10"	9'-3"	9'-8"	10'-2"	1
	NI-90	7'-6"	7'-11"	8'-4"	8'-9"	9'-2"	9'-7"	10'-1"	10'-7"	1
	NI-40x	8'-1"	8'-7"	9'-0"	9'-6"	10'-1"	10'-7"	11'-2"	-	П
14"	NI-60	8'-9"	9'-3"	9'-8"	10'-11"	10'-6"	11'-1"	11'-6"	-	
14	NI-80	9'-0"	9'-3"	9'-9"	10'-1"	10'-7"	11'-1"	11'-6"	12'-1"	1
	NI-90	9'-2"	9'-8"	10'-0"	10'-6"	10'-11"	11'-5"	11'-9"	12'-4"	1.
	NI-60	10'-3"	10'-8"	11'-2"	11'-6"	12'-1"	12'-6"	13'-2"	-	
16"	NI-80	10'-4"	10'-9"	11'-3"	11'-9"	12'-1"	12'-7"	13'-1"	13'-8"	1-
	NI-90	10'-9"	11'-2"	11'-8"	12'-0"	12'-6"	13'-0"	13'-6"	14'-2"	1

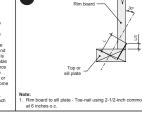
Design Criteria	
Joist spacing	Up to 24 inches
Loads	Live load = 40 psf and dead load = 15 psf
Deflection limits	1 /480 under live load and 1 /240 under total load

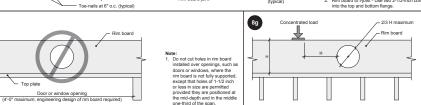
# RIM BOARDS 8a

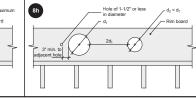
8f

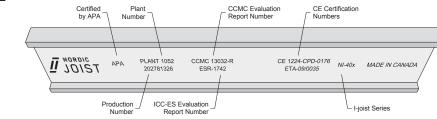








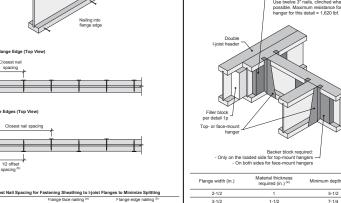




# -JOIST MARKING

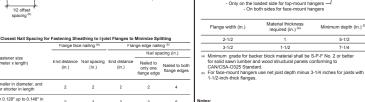


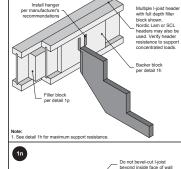
# 1 x 2-5/16 Minimum width 1-1/2 x 2-5/16 Minimum width NAIL SPACING 1h

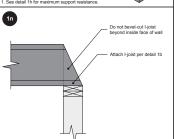


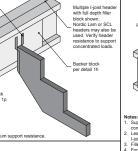
1g

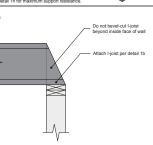
2-1/2" nails at 6" o.c.

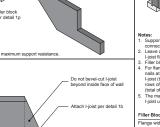


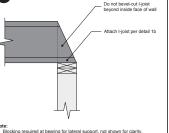


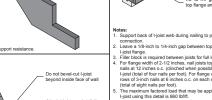


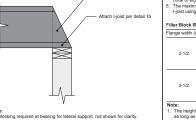














2-1/8 to 2-1/4 x 6 2x6 + 5/8" or 3/4" she 2-1/8 to 2-1/4 x 8 2x8 + 5/8" or 3/4" she 2-1/8 to 2-1/4 x 10 2x10 + 5/8" or 3/4" she 2-1/8 to 2-1/4 x 12 2x12 + 5/8" or 3/4" sheathing 2 x 2x10 2 x 2x12

BUILDER: BAYVIEW WELLINGTON SITE

ALCONA SHORES

MODEL: RL-6E CITY: INNISFIL Job Name: RL-6E

Level: **1ST FLR FRAMING** 

Label: B1 - i6467 Type: **Beam** 

2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

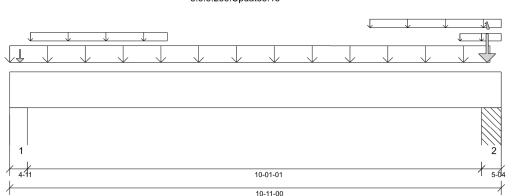
Report Version: 2021.03.26

Status: Design Passed

05/25/2023 12:59

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12

8.5.3.233.Update5.15



#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Bottom: 1'- 1 1/2" Top: 0'

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3 11/16"
- 615 psi Column @ 10'- 6 3/4"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.

PROFESSIONAL
5/25/23 C. M. HEYENS
C. M. HEYENS 第
100505065
POLINCE OF ONTARIO
NCE OF ONLY
STRUCTURAL COMPONENT ONLY

DWG # TF23051700

	ANALYSIS RESULTS						
	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
	Factored Pos. Moment:	6'	1.25D + 1.5L	1.00	7778 lb ft	23299 lb ft	Passed - 33%
	Factored Neg. Moment:	10'- 6 3/4"	1.25D + 1.5L	1.00	182 lb ft	23299 lb ft	Passed - 1%
	Factored Shear:	1'- 2 3/16"	1.25D + 1.5L	1.00	3282 lb	11052 lb	Passed - 30%
	Live Load (LL) Pos. Defl.:	5'- 5 3/16"	L		0.134"	L/360	Passed - L/901
	Total Load (TL) Pos. Defl.:	5'- 5 1/8"	D + L		0.217"	L/240	Passed - L/558
ı	CURRORT AND BEACT	TION INFORM	AATION				

SUI	SUPPORT AND REACTION INFORMATION										
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result			
1	4-11	1.25D + 1.5L	1.00	4519 lb		17160 lb	10151 lb	Passed - 45%			
2	5-04	1.25D + 1.5L	1.00	7474 lb		19110 lb	11301 lb	Passed - 66%			
SPE	SPECIFIED LOADS										

Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	10'- 11"	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	0'- 5 1/2"	3'- 6"	User Load	Тор	60 lb/ft	-	-	-
Uniform	8'	10'- 11"	User Load	Top	60 lb/ft	-	-	-
Uniform	10'	10'- 5 3/4"	FC4 Floor Decking (Plan View Fill)	Тор	3 lb/ft	6 lb/ft	-	-
Uniform	10'- 5 3/4"	10'- 11"	FC4 Floor Decking (Plan View Fill)	Тор	6 lb/ft	11 lb/ft	-	-
Tapered	0'	10'- 8"	Smoothed Load	Back	134 To 133 lb/ft	268 To 264 lb/ft	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E5(i210)	Top	320 lb	512 lb	-	-
Point	10'- 7 1/4"	10'- 7 1/4"	1(i213)	Тор	1309 lb	1710/-72 lb	-	-

UNFAC	CTORED R	EACTIONS					
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4 11/16"	W8(i8)	1276 lb	1968 lb	-	-
2	10'- 5 3/4"	10'- 11"	PBO5(i28)	2240 lb	3098/-72 lb	-	-

#### **DESIGN NOTES**

- · The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- · Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.
- Bearing capacity of member at support 1, 2 was verified for the effect of concentrated load applied near the support. At support 2. Required Load Area: L=1.500", W=3.500". LDF=1.00, Pf=4093 lb, Q'r=5460 lb, Result=74.97%

#### PLY TO PLY CONNECTION

CITY:

BUILDER: BAYVIEW WELLINGTON ALCONA SHORES SITE

RL-6E INNISFIL Job Name: RL-6E

Level: **1ST FLR FRAMING** 

Label: B2 - i6480 Type: **Beam** 

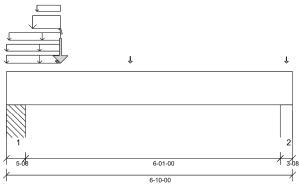
3 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Status: Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version

Report Version: 2021.03.26 05/25/2023 12:59 8.5.3.233.Update5.15



#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 5'- 3" Bottom: 5'- 3"

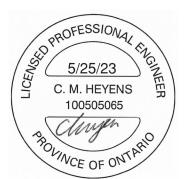
#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 4 1/2"
- 615 psi Column @ 0'- 4 1/2"
- 615 psi Wall @ 6'- 7 1/2"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 6" O/C

NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051701

ANALYSIS RESULTS										
Design Criteria	Location	<b>Load Combination</b>	LDF	Design	Limit	Result				
Factored Pos. Moment:	1'- 3 1/2"	1.25D + 1.5L	1.00	15126 lb ft	34949 lb ft	Passed - 43%				
Factored Shear:	1'- 3"	1.25D + 1.5L	1.00	16370 lb	16578 lb	Passed - 99%				
Live Load (LL) Pos. Defl.:	3'- 15/16"	L		0.044"	L/360	Passed - L/999				
Total Load (TL) Pos. Defl.:	3'- 15/16"	D + L		0.076"	L/240	Passed - L/956				

SUP	PORT AND	REACTION INFORM	ATION					
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-08	1.25D + 1.5L	1.00	16941 lb		30030 lb	17758 lb	Passed - 95%
1	5-08	1.25D + 1.5L	1.00	16941 lb		30030 lb	17758 lb	Passed - 95%
2	2 3-08 1.25D + 1.5L		1.00	3274 lb		19110 lb	11304 lb	Passed - 29%

3F LOII	ILD LOAL	,5						
Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 10"	Self Weight	Тор	14 lb/ft	-	-	-
Uniform	-0'	1'- 3 1/2"	1(i213)	Top	81 lb/ft	-	-	-
Uniform	0'	1'- 3 1/2"	FC4 Floor Decking (Plan View Fill)	Тор	8 lb/ft	17 lb/ft	-	-
Uniform	0'- 3/4"	1'- 3 1/2"	1(i213)	Тор	60 lb/ft	-	-	-
Uniform	0'- 7 1/2"	1'- 3 1/2"	1(i213)	Top	108 lb/ft	215 lb/ft	-	-
Uniform	0'- 8 3/4"	1'- 3 1/2"	1(i213)	Тор	0 lb/ft	1 lb/ft	-	-
Point	1'- 2 5/8"	1'- 2 5/8"	B3(i6670)	Back	372 lb	730 lb	-	-
Point	1'- 2 5/8"	1'- 2 5/8"	FC4 Floor Decking (Plan View Fill)	Тор	6 lb	12 lb	-	-
Point	1'- 3 1/2"	1'- 3 1/2"	1(i213)	Тор	5215 lb	7119/0 lb	-	-
Point	2'- 11 1/2"	2'- 11 1/2"	User Load	Тор	120 lb	240 lb	-	-
Point	6'- 8 1/4"	6'- 8 1/4"	E50(i6393)	Тор	139 lb	34 lb	-	-
LINEAC	TODED D	FACTIONS	•					

	UNFAC	JOKED KI	EACTIONS					
	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
Г	1	0'	0'- 5 1/2"	PBO5(i28)	5139 lb	6999 lb	-	-
	2	6'- 6 1/2"	6'- 10"	W15(i34)	1072 lb	1302 lb	-	-

#### **DESIGN NOTES**

SPECIFIED I OADS

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

Town of Innisfil Certified Model

**10.3**-08-0

BUILDER: BAYVIEW WELLINGTON 5:52:42 AM jpenfold

ALCONA SHORES

MODEL: RL-6E
CITY: INNISFIL

Job Name: RL-6E

Level: 1ST FLR FRAMING

Label: **B3 - i6670** Type: **Beam** 

1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Report Version: 2021.03.26

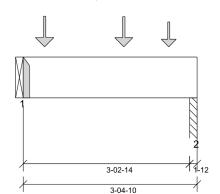
Status:

Design
Passed

05/25/2023 12:59

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 2 3/4"

#### Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Column @ 3'- 3 7/8"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 11 1/2"	1.25D + 1.5L	1.00	1336 lb ft	11650 lb ft	Passed - 11%
Factored Shear:	0'- 9 1/2"	1.25D + 1.5L	1.00	1575 lb	5526 lb	Passed - 28%

SUF	SUPPORT AND REACTION INFORMATION												
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result					
1	1-08	1.25D + 1.5L	1.00	1579 lb		2730 lb	-	Passed - 58%					
2	1-12	1.25D + 1.5L	1.00	1526 lb		3185 lb	1883 lb	Passed - 81%					

#### **CONNECTOR INFORMATION**

ID	Part No.	Manufacturer	Na	iling Requirem	ents	Other Information or Requirement for	
			Тор	Face	Member	Reinforcement Accessories	
1	HUS1.81/10		-	-	-	Connector manually specified by the user.	

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIFIED LOADS											
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)			
Self Weight	0'	3'- 4 5/8"	Self Weight	Тор	5 lb/ft	-	-	-			
Point	0'- 5"	0'- 5"	J1(i6893)	Back	266 lb	533 lb	-	-			
Point	1'- 11 1/2"	1'- 11 1/2"	J1DJ(i6921)	Back	261 lb	521 lb	-	-			
Point	2'- 10"	2'- 10"	J2(i6894)	Back	199 lb	398 lb	-	-			
UNFAC	TORED R	EACTIONS									
ID Start Loc End Loc Source Dead (D) Live (L) Snow (S) Wind (W)											
1	0'	0'	B2(i6480)		372 lb	730 lb	-	-			
2	3'- 2 7/8"	3'- 4 5/8"	PBO4(i27)		370 lb	722 lb	-	-			

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the
  default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY DWG # TF23051702

CITY:

BUILDER: BAYVIEW WELLINGTON **ALCONA SHORES** 

RL-6E

**INNISFIL** 

Job Name: RL-6E

Level: **1ST FLR FRAMING** 

Label: B4 - i6533 Type: **Beam** 

1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

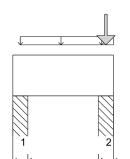
Report Version: 2021.03.26

Status: Design Passed

05/25/2023 12:59

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15



1-04-08 1-11-08

#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Bottom: 1'- 6 1/4" Top: 0'

#### Factored Resistance of Support Material:

• 615 psi Column @ 1'- 9"

ANALYSIS RESULTS						
Design Criteria	Location	<b>Load Combination</b>	LDF	Design	Limit	Result
Factored Neg. Moment:	1'- 9"	1.25D + 1.5L	1.00	94 lb ft	11650 lb ft	Passed - 1%
Factored Moment:	1'- 9"	1.25D + 1.5L	1.00	94 lb ft	11650 lb ft	Passed - 1%
Factored Moment:				0 lb ft	0 lb ft	
Factored Moment:				0 lb ft	0 lb ft	
Factored Shear:	1'- 1"	1.25D + 1.5L	1.00	65 lb	5526 lb	Passed - 1%
Live Load (LL) Deflection:	1'- 1 1/2"	L		0.000"	L/360	Passed - L/999
Total Load (TL) Deflection:	1'- 1 9/16"	D + L		0.000"	L/240	Passed - L/999
SUPPORT AND REACT	TION INFORM	MATION				

	Input Bearing Length	Controlling Combina		Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result				
1	3-08	1.25D +	1.5L 1.00		-27 lb	-	-					
2	3-08	1.25D +	1.5L 1.00	1587 lb		6370 lb	3767 lb	Passed - 42%				
SPECIFIED LOADS												
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)				
Self Weight	0'	1'- 11 1/2"	Self Weight	Тор	5 lb/ft	-	-	-				
Uniform	0'- 1 3/4"	1'- 11 1/2"	FC4 Floor Decking (Plan View Fill)	Тор	8 lb/ft	16 lb/ft	-	-				
Point	1'- 9 3/4"	1'- 9 3/4"	User Load	Тор	350 lb	700 lb	-	-				
UNFAC	CTORED R	EACTIONS										
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	0'	0'- 3 1/2"	PBO4(i27)		11 lb	13 lb	-	-				
2	1'- 8"	1'- 11 1/2"	PBO3(i26)		362 lb	716 lb	-	-				

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY DWG # TF23051703

Town of Inniefil Certified Model

MODEL:

CITY:

**MITOK**®

BUILDER: BAYVIEW WELLINGTON 5:52:42 AM jpenfold SITE: ALCONA SHORES

RL-6E INNISFIL Job Name: **RL-6E** 

Level: 1ST FLR FRAMING

Label: **B5 - i6657**Type: **Beam** 

2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL Status:

Design
Passed

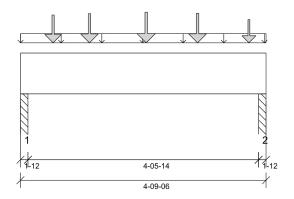
Result

Passed - 10%

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:59



Location

2'- 5 3/8"

#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 3/4"
- 615 psi Column @ 4'- 8 5/8"

#### PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 6" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.

ı	Factored	Factored Shear: 0'- 11 1/4"		1.2	25D + 1.5L	1.00	1771 lb	11052 lb	Passed - 16%	
ı	Total Lo	ad (TL) Pos. D	Defl.: 2'- 4	9/16"		D + L		0.013"	L/240	Passed - L/999
ı	SUPP	ORT AND R	EACTION I	NFORM	ATION					
	ID	Input Bearing Length		ontrolling Load Combination		Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
l	1	1-12	1.25D + 1	.5L	1.00	1852 lb		6370 lb	3767 lb	Passed - 49%
ı	2	1-12	1.25D + 1	.5L	1.00	1831 lb		6370 lb	3767 lb	Passed - 49%
l	SPEC	IFIED LOAD	S							
١	Туре	Start Loc	End Loc	Source	Э	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
l	Self Weight	0'	4'- 9 3/8"	Self We	ight	Тор	9 lb/ft	-	-	-
ı	Uniform	0'	4'- 9 3/8"	User Lo	oad	Тор	60 lb/ft	-	-	-
ı	Point	0'- 7 5/8"	0'- 7 5/8"	J1(i689	95)	Back	152 lb	304 lb	-	-
ı	Point	1'- 4 1/8"	1'- 4 1/8"	J9DJ(i69	920)	Back	162 lb	325 lb	-	-
ı	Point	2'- 5 3/8"	2'- 5 3/8"	J8(i693	35)	Back	173 lb	346 lb	-	-
ı	Point	3'- 5 3/8"	3'- 5 3/8"	J8(i693	36)	Back	164 lb	329 lb	-	-
ı	Point	4'- 5 3/8"	4'- 5 3/8"	J8(i693	37)	Back	117 lb	235 lb	-	-
l	UNFA	CTORED RI	EACTIONS							
	ID	Start Loc	End Loc	S	ource		Dead (D)	Live (L)	Snow (S)	Wind (W)
	1	0'	0'- 1 3/4"	PB	O3(i26)		535 lb	746 lb	-	-
	2	4'- 7 5/8"	4'- 9 3/8"	PB	O2(i25)		565 lb	793 lb	-	-

**Load Combination** 

1.25D + 1.5L

LDF

1.00

Design

2226 lb ft

Limit

23299 lb ft

#### **DESIGN NOTES**

**ANALYSIS RESULTS** 

Design Criteria

Factored Pos. Moment:

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the
  default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

 Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



STRUCTURAL COMPONENT ONLY DWG # TF23051704

BUILDER:

BAYVIEW WELLINGTON **ALCONA SHORES** MODEL:

RL-6E **INNISFIL**  Job Name: RL-6E

Level: **1ST FLR FRAMING** 

Label: B6 - i6475 Type: **Beam** 

1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status: Design Passed

CITY: Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 12:59 8.5.3.233.Update5.15 15-09-04

16-04-10

Controlling Load

#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 13'- 3 1/4"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 7/8"
- 615 psi Column @ 16'- 2 1/8"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 8 1/16"	1.25D + 1.5L	0.98	4886 lb ft	11374 lb ft	Passed - 43%
Factored Shear:	15'- 3 5/8"	1.25D + 1.5L	0.98	1611 lb	5395 lb	Passed - 30%
Live Load (LL) Pos. Defl.:	8'- 8 7/8"	L		0.313"	L/360	Passed - L/603
Total Load (TL) Pos. Defl.:	8'- 4 11/16"	D + L		0.703"	L/240	Passed - L/269
Permanent Deflection:	8'- 1 7/16"			-	L/360	Passed - L/499

Factored

Factored

Factored

Factored

s	ID	Bearing Length	Combination		Downw Reaction		Resistance of Member	Resistance of Support	Result
١	1	3-14	1.40	0.65	792 II	o	4584 lb	2712 lb	Passed - 29%
١	2	3-08	1.25D +	1.5L 0.98	1640	b	6219 lb	3678 lb	Passed - 45%
١	SPEC	IFIED LOAD	S						
١	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
١	Self Weight	0'	16'- 4 5/8"	Self Weight	Тор	5 lb/ft	-	-	-
١	Uniform	0'	13'- 8 7/8"	FC4 Floor Decking (Plan View Fill)	Тор	13 lb/ft	27 lb/ft	-	-
1	Uniform	0'- 4 3/8"	8'- 10 7/8"	User Load	Top	60 lb/ft	-	-	-
ı	Uniform	13'- 8 7/8"	16'- 4 5/8"	FC4 Floor Decking (Plan View Fill)	Тор	5 lb/ft	10 lb/ft	-	-
1	Point	13'- 8"	13'- 8"	B9(i6649)	Back	296 lb	577 lb	-	-
١	UNFA	CTORED R	EACTIONS						
ı	ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	1	0'	0'- 3 7/8"	W25(i4419	)	566 lb	307 lb	-	-
ı	2	16'- 1 1/8"	16'- 4 5/8"	PBO2(i25)		517 lb	665 lb	-	-

#### **DESIGN NOTES**

Input

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY DWG # TF23051705

Town of Inniefil Certified Model

**20.3**-08-0

BUILDER: BAYVIEW WELLINGTON

ALCONA SHORES RL-6E

MODEL: RL-6E
CITY: INNISFIL

Job Name: **RL-6E** 

Level: 1ST FLR FRAMING

Label: **B7 - i6555**Type: **Beam** 

3 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Report Version: 2021.03.26

Status:

Design
Passed

05/25/2023 12:59

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

1 2 3-08 4-05-04 7-04

5-04-00

#### **DESIGN INFORMATION**

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

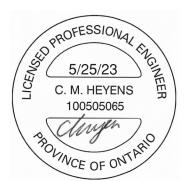
#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Beam @ 4'- 9 3/4"

### PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 6" O/C

NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051706

I	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
ı	Factored Pos. Moment:	4'- 2"	1.25D + 1.5L	1.00	9659 lb ft	34949 lb ft	Passed - 28%
l	Factored Shear:	3'- 11 1/4"	1.25D + 1.5L	1.00	10437 lb	16578 lb	Passed - 63%
l	Live Load (LL) Pos. Defl.:	2'- 9 3/16"	L		0.018"	L/360	Passed - L/999
ı	Total Load (TL) Pos. Defl.:	2'- 9 1/8"	D + L		0.030"	L/240	Passed - L/999

П	SUP	PORT AND	REACTION INFORM	IATION					
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
Ш	1	3-08	1.25D + 1.5L	1.00	4006 lb		19110 lb	11301 lb	Passed - 35%
П	2	7-04	1.25D + 1.5L	1.00	15134 lb		39585 lb	23408 lb	Passed - 65%

SPECIF	IED LOAL	JS						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 4"	Self Weight	Тор	14 lb/ft	-	-	-
Uniform	-0'	3'- 11"	9(i1768)	Top	81 lb/ft	-	-	-
Uniform	0'- 8 1/2"	3'- 8 1/2"	Smoothed Load	Back	144 lb/ft	289 lb/ft	-	-
Uniform	4'- 2 1/2"	4'- 10 5/8"	FC4 Floor Decking (Plan View Fill)	Тор	4 lb/ft	9 lb/ft	-	-
Uniform	4'- 5"	5'- 4"	3(i215)	Тор	81 lb/ft	-	-	-
Point	0'- 2 1/2"	0'- 2 1/2"	J2(i6879)	Back	93 lb	186 lb	-	-
Point	4'- 2 1/2"	4'- 2 1/2"	J2(i6883)	Back	132 lb	264 lb	-	-
Point	4'- 2"	4'- 2"	PBO12(i1776)	Тор	4404 lb	6820 lb	-	-
Point	4'- 10 5/8"	4'- 10 5/8"	FC4 Floor Decking (Plan View Fill)	Тор	2 lb	5 lb	-	-

UNFAC	UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 3 1/2"	PBO1(i24)	1454 lb	2063 lb	-	-					
2	4'- 8 3/4"	5'- 4"	-	4081 lb	6085 lb	-	-					
++>	4'- 9 5/8"	4'- 9 5/8"	PBO13(i2894)	985 lb	1469 lb	-	-					
++>	5'- 1 1/4"	5'- 1 1/4"	STL BM(i13)	3096 lb	4616 lb	-	-					

#### **DESIGN NOTES**

CDECIFIED LOAD

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the
  default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.
- User loads assume a bearing length of 3.5" in determining member capacity for loads near supports.
- Bearing capacity of member at support 1, 2 was verified for the effect of concentrated load applied near the support.
   At support 2. Required Load Area: L=3.500", W=5.250". LDF=1.00, Pf=15735 lb, Q'r=19110 lb, Result=82.34%.

#### **PLY TO PLY CONNECTION**

CITY

BAYVIEW WELLINGTON BUILDER: 5:52:43 AM i ALCONA SHORES

RL-6E **INNISFIL** 

Job Name: RL-6E

Level: **1ST FLR FRAMING** 

Label: B8 - i6483 Type: **Beam** 

1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status: Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 12:59 8.5.3.233.Update5.15 3114 13-05-12 14-02-14

#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment) Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360,

#### Lateral Restraint Requirements:

TL Deflection Limit:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

L/240.

Bottom: 13'- 3 1/4" Top: 0'

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 7/8"
- 615 psi Column @ 13'- 10 5/8"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 5 5/8"	1.25D + 1.5L	1.00	1263 lb ft	11650 lb ft	Passed - 11%
Factored Shear:	13'- 1/8"	1.25D + 1.5L	1.00	1513 lb	5526 lb	Passed - 27%
Live Load (LL) Pos. Defl.:	7'- 2 3/8"	L		0.075"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	7'- 2 3/16"	D + L		0.127"	L/240	Passed - L/999
SUPPORT AND REACT	TION INFORM	MATION				

001									
ID	Input Bearing Length	Controlling Combina		DF D	actored ownward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1 1	3-14	1.25D +	1.5L 1	.00	366 lb		7053 lb	4172 lb	Passed - 9%
2	5-04	1.25D +	1.5L 1	.00	1574 lb		9555 lb	5650 lb	Passed - 28%
SPE	CIFIED LOAD	os							
Тур	e Start Loc	End Loc	Source	Fa	ace [	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weigl		14'- 2 7/8"	Self Weigh	t T	ор	5 lb/ft	-	-	-
Unifor	m 0'	13'- 8 7/8"	FC4 Floor Dec (Plan View F		ор	10 lb/ft	20 lb/ft	-	-
Unifor	m 13'- 8 7/8"	14'- 2 7/8"	FC4 Floor Dec (Plan View F		ор	3 lb/ft	7 lb/ft	-	-
Poin	t 13'- 8"	13'- 8"	B9(i6649)	Fr	ont	299 lb	581 lb	-	-
Poin	t 14'- 1 5/8"	14'- 1 5/8"	9(i1768)	Т	ор	12 lb	-	-	-
UNF	ACTORED R	EACTIONS							
ID	Start Loc	End Loc	Sour	се	ı	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 7/8"	W25(i	1419)		104 lb	142 lb	-	-
2	13'- 9 5/8"	14'- 2 7/8"	PBO1	(i24)		414 lb	719 lb	-	-

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY DWG # TF23051707

CITY:

BUILDER: BAYVIEW WELLINGTON

ALCONA SHORES

MODEL: RL-6E **INNISFIL**  Job Name: RL-6E

Level: **1ST FLR FRAMING** 

Label: B9 - i6649 Type: **Beam** 

1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

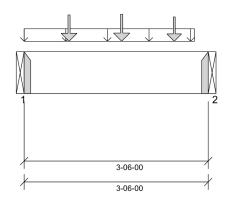
WestFraser LVL

Status: Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:59



#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Bottom: 0'- 9 1/2" Top: 0'

#### Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Beam @ 3'- 6"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 10 1/4"	1.25D + 1.5L	1.00	1293 lb ft	11650 lb ft	Passed - 11%
Factored Shear:	0'- 9 1/2"	1.25D + 1.5L	1.00	1034 lb	5526 lb	Passed - 19%

Ш	SUP	PORT AND	REACTION INFORM	MATION					
	ID	Input Controlling Load Dearing Combination		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
l	1	1-08	1.25D + 1.5L	1.00	1240 lb		2730 lb	-	Passed - 45%
П	2	1-08	1.25D + 1.5L	1.00	1241 lb		2730 lb	-	Passed - 45%

COI	NNECTOR II	NFORMATION				
ID	Part No.	Manufacturer	Na	iling Requirem	ents	Other Information or Requirement for
טו	Fait No.	wanulacturer	Тор	Face	Member	Reinforcement Accessories
1	HUS1.81/10		-	-	-	Connector manually specified by the user.
2	HIIC1 91/10					Connector manually execified by the user

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIF	FIED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 6"	Self Weight	Тор	5 lb/ft	-	-	-
Uniform	0'	3'- 2 7/8"	User Load	Тор	60 lb/ft	120 lb/ft	-	-
Point	0'- 10 1/4"	0'- 10 1/4"	J2(i6876)	Back	131 lb	263 lb	-	-
Point	1'- 10 1/4"	1'- 10 1/4"	J2(i6877)	Back	136 lb	273 lb	-	-
Point	2'- 10 1/4"	2'- 10 1/4"	J2(i6878)	Back	117 lb	234 lb	-	-
UNFAC	TORED RI	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B6(i6475)		296 lb	577 lb	-	-
2	3'- 6"	3'- 6"	B8(i6483)		299 lb	581 lb	-	-
DECIC	LNOTES							

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



DWG # TF23051708

CITY:

BUILDER: BAYVIEW WELLINGTON

RL-6E

ALCONA SHORES INNISFIL

Job Name: RL-6E

Level: **1ST FLR FRAMING** 

Label: B10L - i6696 Type: **Beam** 

2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status: Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 12:59 8.5.3.233.Update5.15 8-00-02 8-02-14

#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

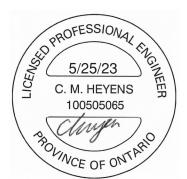
Bottom: 4'- 7 1/8" Top: 0'

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 1 3/4"
- 615 psi Beam @ 8'- 2 7/8"

#### PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051709

l	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	3'- 6"	1.25D + 1.5L	1.00	14681 lb ft	23299 lb ft	Passed - 63%
l	Factored Shear:	1'- 1/4"	1.25D + 1.5L	1.00	4621 lb	11052 lb	Passed - 42%
l	Live Load (LL) Pos. Defl.:	3'- 11 13/16"	L		0.131"	L/360	Passed - L/736
l	Total Load (TL) Pos. Defl.:	3'- 11 7/8"	D + L		0.205"	L/240	Passed - L/468

SUF	SUPPORT AND REACTION INFORMATION										
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result			
1	2-12	1.25D + 1.5L	1.00	4935 lb		10010 lb	5919 lb	Passed - 83%			
2	1-08	1.25D + 1.5L	1.00	3306 lb		5460 lb	-	Passed - 61%			

#### **CONNECTOR INFORMATION**

ID	Part No.	Manufacturer	Nai	ling Requirem	ents	Other Information or Requirement for
			Тор	Face	Member	Reinforcement Accessories
2	HGUS410		-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIFIED LOADS											
Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)			
Self Weight	0'	8'- 2 7/8"	Self Weight	Тор	9 lb/ft	-	-	-			
Uniform	0'	3'- 4 1/4"	User Load	Top	60 lb/ft	120 lb/ft	-	-			
Uniform	0'	3'- 4 1/4"	FC2 Floor Decking (Plan View Fill)	Тор	8 lb/ft	17 lb/ft	-	-			
Uniform	3'- 4 1/4"	8'- 2 7/8"	FC2 Floor Decking (Plan View Fill)	Тор	16 lb/ft	32 lb/ft	-	-			
Point	3'- 6"	3'- 6"	B12L(i6503)	Back	1590 lb	2864 lb	-	-			
Point	3'- 7"	3'- 7"	4(i214)	Тор	150 lb	232 lb	-	-			
UNFAC	TORED R	EACTIONS	S								
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)			
1	0'	0'- 2 3/4"	PBO8(i37)		1301 lb	2292 lb	-	-			
2	8'- 2 7/8"	8'- 2 7/8"	B11L(i6463)		828 lb	1428 lb	-	-			

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- · Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

Town of Inniefii Certified Model

MODEL:

CITY:

**10:3**-08-08

BUILDER: BAYVIEW WELLINGTON
5:52:44 AM jpenfold
SITE: ALCONA SHORES

RL-6E INNISFIL Job Name: RL-6E

Level: 1ST FLR FRAMING
Label: B11L - i6463

Type: Beam

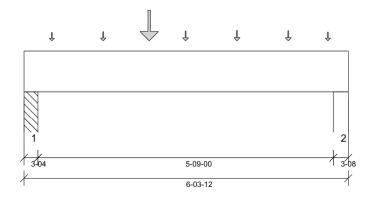
1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL Status:

Design
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:59



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0'- 5 1/4" Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/4"
- 615 psi Wall @ 6'- 1 1/4"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 5 1/4"	1.25D + 1.5L	1.00	5413 lb ft	11650 lb ft	Passed - 46%
Factored Shear:	1'- 3/4"	1.25D + 1.5L	1.00	2587 lb	5526 lb	Passed - 47%
Live Load (LL) Pos. Defl.:	3'- 3/16"	L		0.054"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 3/16"	D + L		0.085"	L/240	Passed - L/810

Total Lo	oad (TL) Pos. I	Defl.: 3'-3	3/16"	D + L		0.085"	L/240	Passed - L/810		
SUPP	PORT AND F	REACTION	NFORMATION	NC						
ID	Input Bearing Length	Controlling Combina		Factor F Downw Reacti	ard Uplift	Resistance	Factored Resistance of Support	Result		
1	3-04	1.25D + 1	1.5L 1.0	00 2593	lb	5915 lb	3498 lb	Passed - 74%		
2	3-08	1.25D + 1	1.5L 1.0	00 2120	lb	6370 lb	3767 lb	Passed - 56%		
SPECIFIED LOADS										
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)		
Self Weight	0'	6'- 3 3/4"	Self Weight	Тор	5 lb/ft	-	-	-		
Point	0'- 6 1/2"	0'- 6 1/2"	J5(i6702)	Front	27 lb	54 lb	-	-		
Point	1'- 6 1/2"	1'- 6 1/2"	J5(i6703)	Front	49 lb	98 lb	-	-		
Point	2'- 5 1/4"	2'- 5 1/4"	B10L(i6696)	Front	828 lb	1428 lb	-	-		
Point	3'- 1 3/4"	3'- 1 3/4"	J3(i6704)	Front	74 lb	148 lb	=	=		
Point	4'- 1 3/4"	4'- 1 3/4"	J3(i6805)	Front	85 lb	171 lb	-	-		
Daint	E! 4 0/4"	E! 4 2/4"	12(:6706)	Frant	00 16	100 lb				

Point	5'- 1 3/4"	5'- 1 3/4"	J3(i6706)	Front	80 lb	160 lb	-	-				
Point	5'- 11"	5'- 11"	J3(i6707)	Front	37 lb	75 lb	-	-				
UNFAC	UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	0'	0'- 3 1/4"	PBO6(i35)		669 lb	1168 lb	-	-				
2	6'- 1/4"	6'- 3 3/4"	W14(i30)		541 lb	966 lb	-	-				
550101												

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the
  default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- · Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY DWG # TF23051710

Town of Inniefil Certified Model

MODEL:

CITY:

**V20-8**-08-0

BUILDER: BAYVIEW WELLINGTON
5:52:44 AM jpenfold

" ALCONA SHORES RL-6E INNISFIL Job Name: **RL-6E** 

Level: 1ST FLR FRAMING

Label: B12L - i6503 Type: Beam 2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Report Version: 2021.03.26

Status:

Design
Passed

05/25/2023 12:59

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

1-06-12

DESIGN INFORMATIO
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Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Beam @ 1'- 10 1/4"

#### PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 4" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



DWG # TF23051711

ı	ANALYSIS RESULTS										
7	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result				
ı	Factored Pos. Moment:	1'- 6 3/4"	1.25D + 1.5L	1.00	1507 lb ft	23299 lb ft	Passed - 6%				
ı	Factored Shear:	1'- 3/4"	1.25D + 1.5L	1.00	1169 lb	11052 lb	Passed - 11%				

SUP	SUPPORT AND REACTION INFORMATION												
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result					
1	3-08	1.25D + 1.5L	1.00	1706 lb		12740 lb	7534 lb	Passed - 23%					
2	1-08	1.25D + 1.5L	1.00	5428 lb		5460 lb	-	Passed - 99%					

	MATION

ID	Part No.	Manufacturer	Na	iling Requirem	ents	Other Information or Requirement for
			Тор	Face	Member	Reinforcement Accessories
2	HGUS410		-	_	_	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIF	SPECIFIED LOADS											
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)				
Self Weight	0,	1'- 10 1/4"	Self Weight	Тор	9 lb/ft	-	-	-				
Uniform	0'- 1 1/2"	1'- 10 1/4"	4(i214)	Top	101 lb/ft	-	-	-				
Uniform	0'- 10 3/4"	1'- 10 1/4"	4(i214)	Top	412 lb/ft	795 lb/ft	-	-				
Point	0'- 1 1/4"	0'- 1 1/4"	J5(i6702)	Back	29 lb	57 lb	-	-				
Point	1'- 1 1/4"	1'- 1 1/4"	J5(i6703)	Back	52 lb	104 lb	-	-				
Point	1'- 6 3/4"	1'- 6 3/4"	4(i214)	Top	1195 lb	2281 lb	-	-				
UNFAC	TORED RI	EACTIONS										
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	0'	0'- 3 1/2"	PBO7(i36)		273 lb	339 lb	-	-				
2	1'- 10 1/4"	1'- 10 1/4"	B10L(I6696	B10L(l6696)		2864 lb	-	-				
DECIC	LNOTEC											

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

CITY:

PULDER: BAYVIEW WELLINGTON ALCONA SHORES

RL-6E **INNISFIL**  Job Name: RL-6E

Level: **1ST FLR FRAMING** B13L - i6568

Label: Type: **Beam** 

1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

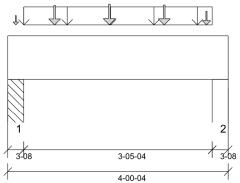
Report Version: 2021.03.26

Status: Design Passed

05/25/2023 12:59

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15



#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Wall @ 3'- 9 3/4"

ANA	ALYSIS RESULT	rs					
	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Facto	red Pos. Moment:	1'- 10 1/4"	1.25D + 1.5L	1.00	1430 lb ft	11650 lb ft	Passed - 12%
Facto	red Shear:	2'- 11 1/4"	1.25D + 1.5L	1.00	1387 lb	5526 lb	Passed - 25%
Total I	Load (TL) Pos. De	fl.: 2'- 1/8"	D + L		0.010"	L/240	Passed - L/999
SUF	PPORT AND RE	<b>ACTION INFORM</b>	IATION				
ID	Input Bearing Length	Controlling Load Combination	Factored LDF Downward Reaction	Factored Uplift Reaction	Resistance		Result

II	ID	Bearing Length	Combination		Downwar Reaction		Resistance of Member	Resistance of Support	Result
Ш	1	3-08	1.25D + 1	.5L 1.00	1491 lb		6370 lb	3767 lb	Passed - 40%
s	2	3-08	1.25D + 1	.5L 1.00	) 1512 lb		6370 lb	3767 lb	Passed - 40%
Ш	SPEC	IFIED LOAD	)S						
Ш	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
II	Self Weight	0'	4'- 1/4"	Self Weight	Тор	5 lb/ft	-	-	-
Ш	Uniform	0'- 3 1/2"	3'- 8 3/4"	User Load	Front	120 lb/ft	240 lb/ft	-	-
Ш	Point	0'- 10 1/4"	0'- 10 1/4"	J3(i6704)	Back	77 lb	154 lb	-	-
Ш	Point	1'- 10 1/4"	1'- 10 1/4"	J3(i6805)	Back	85 lb	171 lb	-	-
Ш	Point	2'- 10 1/4"	2'- 10 1/4"	J3(i6706)	Back	80 lb	160 lb	-	-
Ш	Point	3'- 7 1/2"	3'- 7 1/2"	J3(i6707)	Back	37 lb	75 lb	-	-
Ш	Point	0'- 1 3/4"	0'- 1 3/4"	User Load	Тор	9 lb	18 lb	-	-
IJ	UNFA	CTORED RI	EACTIONS						
Ш	ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
Ш	1	0'	0'- 3 1/2"	PBO8(i37	7)	355 lb	692 lb	-	-
Ш	2	3'- 8 3/4"	4'- 1/4"	W14(i30	)	364 lb	710 lb	-	-

# **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY DWG # TF23051712

Town of Inniefil Certified Model

BUILDER: BAYVIEW WELLINGTON

CITY:

SITE: ALCONA SHORES
MODEL: RL-6E

RL-6E INNISFIL Job Name: RL-6E

Level: 1ST FLR FRAMING Label: B14L - i6484

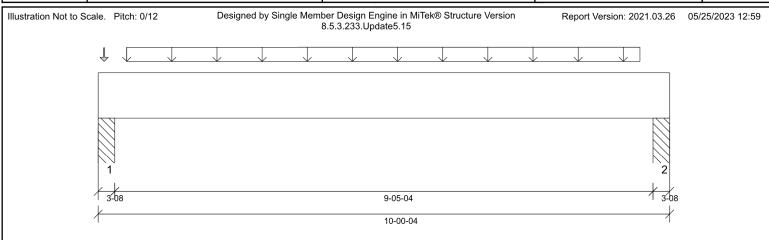
Type: **B14L - I** 

1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status:

Design
Passed



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Column @ 9'- 9 3/4"

ANALYSIS RESULTS						
Design Criteria	Location	<b>Load Combination</b>	LDF	Design	Limit	Result
Factored Pos. Moment:	5'	1.25D + 1.5L	1.00	3399 lb ft	11650 lb ft	Passed - 29%
Factored Shear:	1'- 1"	1.25D + 1.5L	1.00	1322 lb	5526 lb	Passed - 24%
Live Load (LL) Pos. Defl.:	5'- 1/8"	L		0.106"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 1/8"	D + L		0.163"	L/240	Passed - L/693
CURRORT AND DEACT	ION INCOR	ATION				

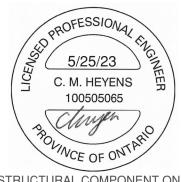
l	SUP	PORT AND	REACTION INFORM	ATION					
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
l	1	3-08	1.25D + 1.5L	1.00	1472 lb		6370 lb	3767 lb	Passed - 39%
l	2	3-08	1.25D + 1.5L	1.00	1322 lb		6370 lb	3767 lb	Passed - 35%
ı	CDE	CIFIED I O	ADC						

SPECIF	IED LOAL	Jo						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	10'- 1/4"	Self Weight	Тор	5 lb/ft	-	-	-
Tapered	0'- 6"	9'- 6"	Smoothed Load	Front	68 lb/ft	134 To 136 lb/ft	-	-
Point	0'- 1 1/4"	0'- 1 1/4"	J4(i6821)	Front	34 lb	68 lb	-	-

UNFAC	CTORED RE	EACTIONS					
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBO9(i41)	365 lb	678 lb	-	-
2	9'- 8 3/4"	10'- 1/4"	PBO10(i42)	328 lb	607 lb	-	-

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY DWG # TF23051713

BUILDER: 5:52:45 AM i

MODEL: CITY:

BAYVIEW WELLINGTON

**ALCONA SHORES** 

RL-6E **INNISFIL**  Job Name: RL-6E

Level: **1ST FLR FRAMING** 

Label: B15L - i6481 Type: **Beam** 

1 Ply Member

1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Status: Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 12:59 8.5.3.233.Update5.15 6-03-00 6-07-02

#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 6'- 4 3/4"

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 3/4"
- 615 psi Wall @ 6'- 5 3/4"

ANAL	YSIS RESUL	TS							
D	esign Criteria	Loc	cation	Load	Combinati	on LDF	Design	Limit	Result
Factored	d Pos. Moment	: 3'-	3 1/4"	1.2	25D + 1.5L	1.00	253 lb ft	11650 lb ft	Passed - 2%
Factored	d Shear:	5'-	7 1/4"	1.2	25D + 1.5L	1.00	115 lb	5526 lb	Passed - 2%
SUPP	ORT AND RE	EACTION	INFORMA	TION					
ID	Input Bearing Length	Controlling Combina		LDF	Factored Downwar Reaction	d Uplift	Factored Resistance of Member		Result
1	1-12	1.25D +	1.5L	1.00	168 lb		3185 lb	1883 lb	Passed - 9%
2	2 2-06		1.5L	1.00	168 lb		4322 lb	2557 lb	Passed - 7%
SPEC	IFIED LOAD	S							
Туре	Start Loc	End Loc	Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 7 1/8"	Self Wei	ght	Тор	5 lb/ft	-	-	-
Uniform	0'	6'- 7 1/8"	FC1 Floor D (Plan View		Тор	10 lb/ft	20 lb/ft	-	-
UNFA	CTORED RE	ACTIONS	3						
ID	Start Loc	End Loc	So	urce		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 1 3/4"	PBC	10(i42)		50 lb	70 lb	-	-
2	6'- 4 3/4"	6'- 7 1/8"	W1	6(i40)		51 lb	70 lb	-	-
DESIG	N NOTES								

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY DWG # TF23051714

CITY:

BUILDER: BAYVIEW WELLINGTON ALCONA SHORES

RL-6E INNISFIL Job Name: RL-6E

Level: 2ND FLR FRAMING

Label: B19 - i6470 Type: **Beam** 

3 Ply Member

Report Version: 2021.03.26

1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Status: Design Passed

05/25/2023 12:59

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

5-11-12

#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

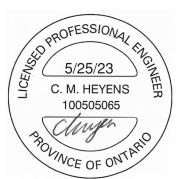
Bottom: 0'- 8 1/2" Top: 0'

#### Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/4"
- 615 psi Wall @ 5'- 9 1/4"

#### PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 6" O/C NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051715

ANALYSIS RESULTS	ANALYSIS RESULTS									
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result				
Factored Pos. Moment:	1'- 11 5/8"	1.25D + 1.5L	1.00	14322 lb ft	34949 lb ft	Passed - 41%				
Factored Shear:	1'- 3/4"	1.25D + 1.5L	1.00	8680 lb	16578 lb	Passed - 52%				
Live Load (LL) Pos. Defl.:	2'- 9 5/8"	L		0.041"	L/360	Passed - L/999				
Total Load (TL) Pos. Defl.:	2'- 9 11/16"	D + L		0.070"	L/240	Passed - L/929				

l	SUP	PORT AND	REACTION INFORM	IATION					
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
l	1	3-04	1.25D + 1.5L	1.00	10225 lb		17745 lb	10493 lb	Passed - 97%
l	2	3-08	1.25D + 1.5L	1.00	5970 lb		19110 lb	11304 lb	Passed - 53%
ı	SPF	CIFIED I O	ADS						

SPECIF	IED LOAL	<i>)</i> 3						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 11 3/4"	Self Weight	Тор	14 lb/ft	-	-	-
Uniform	0'	1'- 9 3/4"	FC5 Floor Decking (Plan View Fill)	Тор	12 lb/ft	23 lb/ft	-	-
Uniform	0'- 8 3/4"	5'- 8 1/4"	7(i1264)	Top	81 lb/ft	-	-	-
Uniform	0'- 8 3/4"	1'- 5 3/4"	7(i1264)	Top	787 lb/ft	872 lb/ft	-	-
Uniform	1'- 3/4"	5'- 8 1/4"	7(i1264)	Top	60 lb/ft	-	-	-
Uniform	1'- 6 1/2"	2'- 10 1/2"	7(i1264)	Top	2 lb/ft	2 lb/ft	-	-
Uniform	1'- 9 3/4"	5'- 8 1/4"	User Load	Front	35 lb/ft	70 lb/ft	-	-
Uniform	2'- 2 1/4"	5'- 8 1/4"	7(i1264)	Top	48 lb/ft	92 lb/ft	-	-
Tapered	0'- 6 3/4"	4'- 6 3/4"	Smoothed Load	Back	159 To 175 lb/ft	320 To 349 lb/ft	-	-
Point	1'- 8"	1'- 8"	B21(i6855)	Front	258 lb	482 lb	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	J4(i6849)	Back	159 lb	319 lb	-	-
Point	5'- 3/4"	5'- 3/4"	J4(i6748)	Back	143 lb	286 lb	-	-
Point	1'- 11 1/4"	1'- 11 1/4"	FC5 Floor Decking (Plan View Fill)	Тор	1 lb	2 lb	-	-
Point	1'- 11 5/8"	1'- 11 5/8"	7(i1264)	Тор	1856 lb	3042 lb	-	-
Point	5'- 10"	5'- 10"	E23(i1263)	Тор	67 lb	6 lb	-	-

1 Ollit	1-11-5/0	1 - 11 3/0	7(11204)	TOP	1000 10	3042 ID	-	-
Point	5'- 10"	5'- 10"	E23(i1263)	Тор	67 lb	6 lb	-	-
UNFAC	CTORED R	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/4"	PBO12(i1776)		3048 lb	4461 lb	-	-
2	5'- 8 1/4"	5'- 11 3/4"	E48(i6376)		1786 lb	2307 lb	-	-
DESIG	NINOTES							

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- · Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION



:52:45 AM jpenfold SITE: ALCONA SHORES

MODEL: RL-6E INNISFIL

Job Name: **RL-6E** 

Level: 2ND FLR FRAMING
Label: B20 - i6638

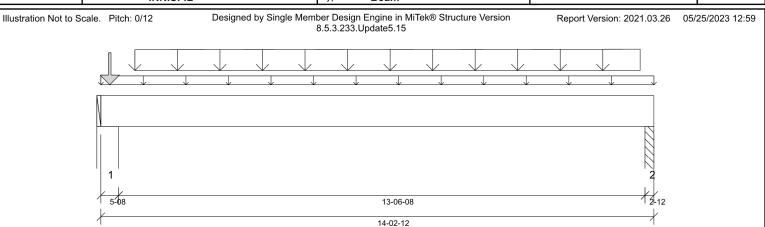
Label: **B20 - i66**Type: **Beam** 

3 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status:

Design
Passed



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 8 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Column @ 14'- 1"

## PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 6" O/C

NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



DWG # TF23051716

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	7'- 4 1/2"	1.25D + 1.5L	1.00	18114 lb ft	34949 lb ft	Passed - 52%
Factored Shear:	13'- 2 1/2"	1.25D + 1.5L	1.00	5076 lb	16578 lb	Passed - 31%
Live Load (LL) Pos. Defl.:	7'- 2 13/16"	L		0.386"	L/360	Passed - L/421
Total Load (TL) Pos. Defl.:	7'- 2 13/16"	D + L		0.593"	L/240	Passed - L/273
Permanent Deflection:	7'- 2 7/8"			-	L/360	Passed - L/806
SUPPORT AND REAC	TION INFORM	IATION				

Input ID Bearing Length		Controlling Combina		Facto Down Reac	ward Uplift	Resistance	Factored Resistance of Support	Result		
1	5-08	1.25D +	1.5L 1.00	5686	3 lb	30030 lb	17764 lb	Passed - 32%		
2	2-12	1.25D +	1.5L 1.00	5144	lb	15015 lb	8879 lb	Passed - 58%		
SPECIFIED LOADS										
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)		
Self Weight	0'	14'- 2 3/4"	Self Weight	Тор	14 lb/ft	-	-	-		
Uniform	-0'	14'- 2 3/4"	FC5 Floor Decking (Plan View Fill)	Тор	12 lb/ft	23 lb/ft	-	-		
Tapered	0'- 10 1/2"	13'- 10 1/2"	Smoothed Load	Back	162 To 169 lb/ft	324 To 338 lb/ft	-	-		
Point	0'- 2 3/4"	0'- 2 3/4"	E10(i1256)	Тор	258 lb	271 lb	-	-		
UNFAC	TORED R	EACTIONS								
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)		
1	0'	0'- 5 1/2"	E1(i211)		1502 lb	2547 lb	-	-		

1275 lb

2359 lb

# **DESIGN NOTES**

14'

14'- 2 3/4"

• The dead loads used in the design of this member were applied to the structure as sloped dead loads.

PBO12(i1776)

- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

CITY:

BUILDER:

BAYVIEW WELLINGTON ALCONA SHORES

RL-6E **INNISFIL**  Job Name: RL-6E

Level: 2ND FLR FRAMING

Label: B21 - i6855 Type: **Beam** 

2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

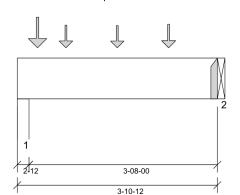
Report Version: 2021.03.26

Status: Design Passed

05/25/2023 12:59

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15



#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Bottom: 0'- 10 1/8" Top: 0'

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 1 3/4"
- 615 psi Beam @ 3'- 10 3/4"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 4" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



DWG # TF23051717

ı	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	1'- 11 3/8"	1.25D + 1.5L	1.00	1417 lb ft	23299 lb ft	Passed - 6%
l	Factored Shear:	3'- 1 1/4"	1.25D + 1.5L	1.00	1107 lb	11052 lb	Passed - 10%

l	SUPPORT AND REACTION INFORMATION											
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result			
l	1	2-12	1.25D + 1.5L	1.00	2100 lb		10010 lb	5921 lb	Passed - 35%			
ı	2	1-08	1.25D + 1.5L	1.00	1117 lb		5460 lb	-	Passed - 20%			

#### **CONNECTOR INFORMATION**

ın	D Part No.	Manufacturer	Na	iling Requirem	ents	Other Information or Requirement for	
טו			Тор	Face	Member	Reinforcement Accessories	
2	HGUS410		-	-	-	Connector manually specified by the user.	

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECI	SPECIFIED LOADS												
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)					
Self Weight	0,	3'- 10 3/4"	Self Weight	Тор	9 lb/ft	-	-	-					
Point	0'- 4 3/4"	0'- 4 3/4"	User Load	Front	250 lb	500 lb	-	-					
Point	0'- 11 3/8"	0'- 11 3/8"	J1(i6789)	Back	164 lb	327 lb	-	-					
Point	1'- 11 3/8"	1'- 11 3/8"	J1(i6780)	Back	159 lb	319 lb	-	-					
Point	2'- 11 3/8"	2'- 11 3/8"	J1(i6779)	Back	173 lb	346 lb	-	-					
UNFAC	TORED RI	EACTIONS											
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 2 3/4"	4(i214)		524 lb	1010 lb	-	-					
2	3'- 10 3/4"	3'- 10 3/4"	B19(i6470	)	258 lb	482 lb	-	-					
DESIC	NINOTES												

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION



BUILDER: BAYVIEW WELLINGTON :52:46 AM jpenfold SITE: ALCONA SHORES

MODEL: RL-6E CITY: INNISFIL Job Name: **RL-6E** 

Level: **2ND FLR FRAMING**Label: **B22 - i6509** 

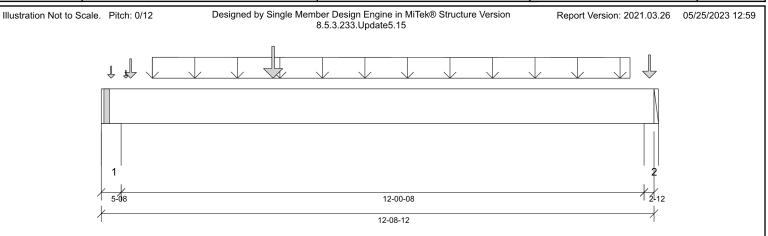
Type: Beam

2 Ply Member

1 3/4" x 9 1/2" (2.0E 3100) De WestFraser LVL Pa

Status:

Design
Passed



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 9 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 12'- 7"

#### PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



DWG # TF23051718

1	ANALYSIS RESULTS						
١	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
I	Factored Pos. Moment:	5'- 8 1/8"	1.25D + 1.5L	1.00	14760 lb ft	23299 lb ft	Passed - 63%
I	Factored Shear:	1'- 3"	1.25D + 1.5L	1.00	4913 lb	11052 lb	Passed - 44%
I	Live Load (LL) Pos. Defl.:	6'- 4 11/16"	L		0.379"	L/360	Passed - L/381
ı	Total Load (TL) Pos. Defl.:	6'- 4 11/16"	D + L		0.578"	L/240	Passed - L/250
I	Permanent Deflection:	6'- 4 3/4"			-	L/360	Passed - L/750
ı	CURRORT AND REACT	TION INFORM	IATION				

ı	SUP	PURIAND	REACTION INFOR	VIATION						
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result	
	1	5-08	1.25D + 1.5L	1.00	5109 lb		20020 lb	11843 lb	Passed - 43%	
	2	2-12	1.25D + 1.5L	1.00	4906 lb		10010 lb	5921 lb	Passed - 83%	
l	SPE	CIFIED LOA	ADS							
	Time	- Ctantlan	Fadles Co.		Г	Deed (D)	Live (L)	C== (C)	\A(:	

ı	OI LOII	ILD LOAD	,						
l	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
l	Self Weight	0'	12'- 8 3/4"	Self Weight	Тор	9 lb/ft	-	-	-
ı	Tapered	1'- 2 1/8"	12'- 2 1/8"	Smoothed Load	Back	161 To 156 lb/ft	323 To 314 lb/ft	-	-
ı	Point	3'- 11 1/2"	3'- 11 1/2"	User Load	Front	250 lb	500 lb	-	-
ı	Point	0'- 8 1/8"	0'- 8 1/8"	J1(i6839)	Back	120 lb	240 lb	-	-
ı	Point	12'- 7 1/2"	12'- 7 1/2"	J1(i6773)	Back	159 lb	319 lb	-	-
ı	Point	0'- 2 3/4"	0'- 2 3/4"	8(i1265)	Тор	71 lb	60 lb	-	-
١	Point	0'- 6 13/16"	0'- 6 13/16"	FC5 Floor Decking (Plan View Fill)	Тор	1 lb	1 lb	-	-

ı		0 0 10110	0 0 10/10	(Plan View Fill)					
	UNFAC	TORED R	EACTIONS						
	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)	
	1	0'	0'- 5 1/2"	1(i213)	1271 lb	2340 lb	-	-	
	2	12'- 6"	12'- 8 3/4"	4(i214)	1195 lb	2281 lb	-	-	

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the
  default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### **PLY TO PLY CONNECTION**

BUILDER: 5:52:46 AM ii MODEL:

CITY:

BAYVIEW WELLINGTON

ALCONA SHORES

RL-6E INNISFIL Job Name: RL-6E

Level: 2ND FLR FRAMING

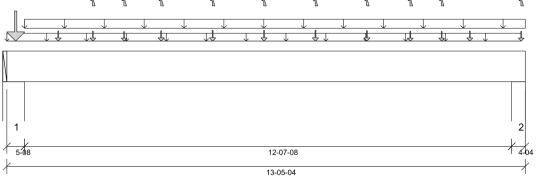
Label: Type: **Beam** 

1 3/4" x 9 1/2" (2.0E 3100) B24 - i6642 WestFraser LVL

3 Ply Member

Status: Design **Passed** 

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 12:59 8.5.3.233.Update5.15



#### **DESIGN INFORMATION**

NBCC 2015, Part9, BCBC 2018, **Building Code:** ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 1'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Wall @ 13'- 2"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.

ANALISIS RESULIS							
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result	
Factored Pos. Moment:	6'- 8"	1.25D + 1.5L	1.00	12552 lb ft	34949 lb ft	Passed - 36%	
Factored Neg. Moment:	0'- 4 1/2"	1.25D + 1.5L	1.00	675 lb ft	34949 lb ft	Passed - 2%	
Factored Shear:	1'- 3"	1.25D + 1.5L	1.00	3809 lb	16578 lb	Passed - 23%	
Live Load (LL) Pos. Defl.:	6'- 9 9/16"	L		0.208"	L/360	Passed - L/729	
Total Load (TL) Pos. Defl.:	6'- 9 9/16"	D + L		0.360"	L/240	Passed - L/420	

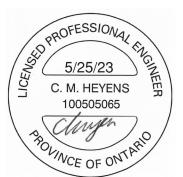
SUP	SUPPORT AND REACTION INFORMATION											
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result				
1	5-08	1.25D + 1.5L	1.00	8522 lb		30030 lb	17764 lb	Passed - 48%				
2	4-04	1.25D + 1.5L	1.00	4261 lb		23205 lb	13727 lb	Passed - 31%				

SPECIF	FIED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	13'- 5 1/4"	Self Weight	Тор	14 lb/ft	-	-	-
Uniform	0'	13'- 4"	FC5 Floor Decking (Plan View Fill)	Тор	5 lb/ft	9 lb/ft	-	-
Uniform	0'- 5 1/2"	13'- 5 1/4"	User Load	Top	60 lb/ft	-	-	-
Point	1'- 4"	1'- 4"	J2(i6710)	Front	126 lb	253 lb	-	-
Point	2'- 2 3/4"	2'- 2 3/4"	B25(i6666)	Front	146 lb	215/-11 lb	-	-
Point	3'- 1/2"	3'- 1/2"	J2DJ(i6711)	Front	74 lb	223/-46 lb	-	-
Point	4'	4'	J2(i6712)	Front	124 lb	289/-5 lb	-	-
Point	5'- 4"	5'- 4"	J2(i6843)	Front	148 lb	336/-6 lb	-	-
Point	6'- 8"	6'- 8"	J2(i6714)	Front	148 lb	336/-6 lb	-	-
Point	8'	8'	J2(i6830)	Front	148 lb	336/-6 lb	-	-
Point	9'- 4"	9'- 4"	J2(i6716)	Front	132 lb	310/-5 lb	-	-
Point	10'- 5 1/2"	10'- 5 1/2"	J2DJ(i6717)	Front	84 lb	244/-46 lb	-	-
Point	11'- 3 1/4"	11'- 3 1/4"	B26(i6454)	Front	138 lb	194/-11 lb	-	-
Point	12'	12'	J2(i6826)	Front	128 lb	257 lb	-	-
Point	13'- 4"	13'- 4"	J2(i6719)	Front	111 lb	224/-1 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E10(i1256)	Тор	1440 lb	1872 lb	-	-
LINEAC	TORED RI	FACTIONS	:					

UNFA	UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 5 1/2"	E1(i211)	2691 lb	3498/-71 lb	-	-					
2	13'- 1"	13'- 5 1/4"	1(i213)	1285 lb	1710/-72 lb	-	-					

#### **DESIGN NOTES**

- · The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- · Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.
- Bearing capacity of member at support 1, 2 was verified for the effect of concentrated load applied near the support. At support 1. Required Load Area: L=1.500", W=5.250". LDF=1.00, Pf=4608 lb, Q'r=8190 lb, Result=56.26%.



STRUCTURAL COMPONENT ONLY DWG # TF23051719 PG 1/2

Town of Inniafil Cartified Model

MiTek

BUILDER: BAYVIEW WELLINGTON 5:52:46 AM jpenfold SITE: ALCONA SHORES

MODEL: RL-6E
CITY: INNISFIL

Job Name: **RL-6E** 

Level: 2ND FLR FRAMING Label: B24 - i6642

Type: Beam

3 Ply Member

1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL Status:

Design
Passed

#### PLY TO PLY CONNECTION





BUILDER: BAYVIEW WELLINGTON

**ALCONA SHORES** 

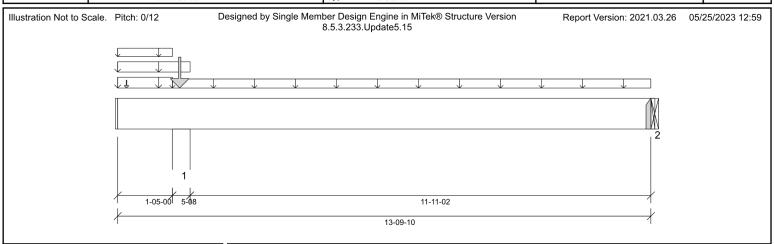
MODEL: RL-6E CITY: INNISFIL Job Name: RL-6E

Level: 2ND FLR FRAMING

Label: B25 - i6666 Type: **Beam** 

2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Status: Design Passed



#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment) Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 11'- 11 1/8"

#### Factored Resistance of Support Material:

• 615 psi Wall @ 1'- 7 3/4"

• 615 psi Beam @ 13'- 9 5/8"

#### PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051720 PG 1/2

l	ANALYSIS RESULTS										
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result				
l	Factored Pos. Moment:	8'- 13/16"	1.25D + 1.5L	0.69	1389 lb ft	16143 lb ft	Passed - 9%				
ı	Factored Neg. Moment:	1'- 7 3/4"	1.25D + 1.5L	0.98	659 lb ft	19879 lb ft	Passed - 3%				
ı	Factored Shear:	2'- 8"	1.25D + 1.5L	0.69	456 lb	7658 lb	Passed - 6%				
ı	Live Load (LL) Pos. Defl.:	7'- 8 11/16"	L		0.035"	L/360	Passed - L/999				
ı	Total Load (TL) Pos. Defl.:	7'- 10 7/16"	D + L		0.052"	L/240	Passed - L/999				

SUP	SUPPORT AND REACTION INFORMATION										
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result			
1	5-08	1.25D + 1.5L	1.00	4669 lb		20020 lb	11843 lb	Passed - 39%			
2	1-08	1.25D + 1.5L	0.69	500 lb		3783 lb	-	Passed - 13%			

<b>CONNECTOR INFORMA</b>	MOIT
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IC	ID	ID Part No.	Manufacturar	Na	iling Requirem	ients	Other Information or Requirement for
	טו		Manufacturer	Тор	Face	Member	Reinforcement Accessories
	2	HCHE440					Connector manually appointed by the up

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIF	SPECIFIED LOADS											
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)				
Self Weight	0'	13'- 9 5/8"	Self Weight	Тор	9 lb/ft	-	-	-				
Uniform	0'	1'- 10 1/2"	E20(i1260)	Top	100 lb/ft	-	-	-				
Uniform	0'	1'- 5"	E20(i1260)	Top	40 lb/ft	80 lb/ft	-	-				
Uniform	0'	1'- 5"	FC5 Floor Decking (Plan View Fill)	Тор	10 lb/ft	19 lb/ft	-	-				
Uniform	1'- 5"	13'- 9 5/8"	FC5 Floor Decking (Plan View Fill)	Тор	17 lb/ft	34 lb/ft	-	-				
Point	0'- 2 3/4"	0'- 2 3/4"	FC5 Floor Decking (Plan View Fill)	Тор	15 lb	9 lb	-	-				
Point	1'- 7 1/4"	1'- 7 1/4"	E20(i1260)	Тор	1120 lb	1400 lb	-	-				
UNFAC	TORED RI	EACTIONS	5									

UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	1'- 5"	1'- 10 1/2"	E6(i208)	1593 lb	1771 lb	-	-				
2	13'- 9 5/8"	13'- 9 5/8"	B24(i6642)	146 lb	215/-11 lb	-	-				

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- The deflection at the cantilever for either live and/or total loads is less than 1/4" and therefore has been excluded from the deflection ratio considerations.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

Town of Innisfii Certified Model

BUILDER: BAYVIEW WELLINGTON
SITE: ALCONA SHORES

MiTek

SITE: ALCONA SHORES
MODEL: RL-6E
CITY: INNISFIL

Job Name: RL-6E
Level: 2ND FLR FRAMING

Label: **B25 - i6666**Type: **Beam** 

2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL Status:

Design
Passed

 Bearing capacity of member at support 1, 2 was verified for the effect of concentrated load applied near the support. At support 1. Required Load Area: L=1.500", W=3.500". LDF=1.00, Pf=3500 lb, Q'r=5460 lb, Result=64.10%.

#### **PLY TO PLY CONNECTION**





BUILDER: BAYVIEW WELLINGTON 5:52:47 AM jpenfold SITE: ALCONA SHORES

MODEL: RL-6E INNISFIL

Job Name: **RL-6E** 

Level: 2ND FLR FRAMING

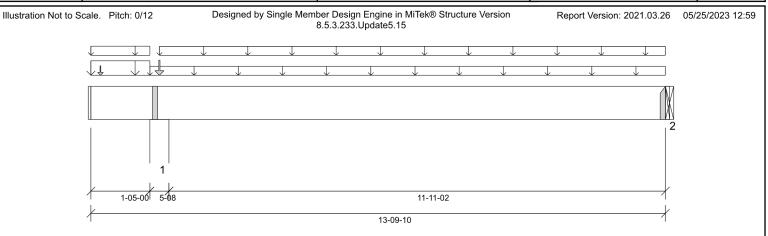
Label: **B26 - i6454**Type: **Beam** 

2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status: Design

Design Passed



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 11'- 11 1/8"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 1'- 7 3/4"
- 615 psi Beam @ 13'- 9 5/8"

#### PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051721 PG 1/2

ı	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	8'- 7/16"	1.25D + 1.5L	0.90	1286 lb ft	20913 lb ft	Passed - 6%
l	Factored Neg. Moment:	1'- 7 3/4"	1.25D + 1.5L	0.79	508 lb ft	16804 lb ft	Passed - 3%
l	Factored Shear:	2'- 8"	1.25D + 1.5L	0.90	415 lb	9920 lb	Passed - 4%
l	Live Load (LL) Pos. Defl.:	7'- 8 11/16"	L		0.031"	L/360	Passed - L/999
۱	Total Load (TL) Pos. Defl.:	7'- 10 1/4"	D + L		0.049"	L/240	Passed - L/999

SUP	SUPPORT AND REACTION INFORMATION											
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result				
1	5-08	1.25D + 1.5L	1.00	1235 lb		20001 lb	11831 lb	Passed - 10%				
2	1-08	1.25D + 1.5L	0.90	460 lb		4901 lb	-	Passed - 9%				

	INFORMAT	

ID	Part No.	Manufacturer	Nai	ling Requirem	ents	Other Information or Requirement for
טו			Тор	Face	Member	Reinforcement Accessories
2	HGUS410		-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIFIED LOADS											
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)			
Self Weight	0'	13'- 9 5/8"	Self Weight	Тор	9 lb/ft	-	-	-			
Uniform	-0'	1'- 5"	E22(i1261)	Top	140 lb/ft	80 lb/ft	-	-			
Uniform	0'	1'- 5"	FC5 Floor Decking (Plan View Fill)	Тор	10 lb/ft	19 lb/ft	-	-			
Uniform	1'- 5"	13'- 9 5/8"	FC5 Floor Decking (Plan View Fill)	Тор	7 lb/ft	15 lb/ft	-	-			
Uniform	1'- 7 3/4"	13'- 9 5/8"	FC5 Floor Decking (Plan View Fill)	Тор	8 lb/ft	16 lb/ft	-	-			
Point	0'- 2 3/4"	0'- 2 3/4"	FC5 Floor Decking (Plan View Fill)	Тор	15 lb	9 lb	-	-			
Point	1'- 7 3/4"	1'- 7 3/4"	E15(i1254)	Top	61 lb	75 lb	-	-			
LINEAC	TOPED DI	EACTIONS	•								

			(,	P								
UNFACTORED REACTIONS												
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	1'- 5"	1'- 10 1/2"	E6(i208)	474 lb	424 lb	-	-					
2	13'- 9 5/8"	13'- 9 5/8"	B24(i6642)	138 lb	194/-11 lb	-	-					

#### DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- The deflection at the cantilever for either live and/or total loads is less than 1/4" and therefore has been excluded from the deflection ratio considerations.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

SITE:

MiTek

MODEL: CITY:

BUILDER: BAYVIEW WELLINGTON **ALCONA SHORES** 

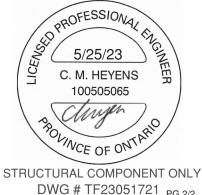
RL-6E INNISFIL Job Name: RL-6E

Level: **2ND FLR FRAMING** Label: B26 - i6454 Type: Beam

2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Status: Design **Passed** 

#### PLY TO PLY CONNECTION





CITY:

MODEL: RL-6E

RL-6E INNISFIL Job Name: **RL-6E** 

Level: 3RD FLR FRAMING

Label: **B27 - i6827**Type: **Beam** 

3 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status:

Design
Passed

Illustration Not to Scale. Pitch: 0/12 Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15 Report Version: 2021.03.26 05/25/2023 12:59

#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 9'- 1 1/2"

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3 3/8"
- 615 psi Wall @ 14'- 11 3/8"

## PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051722

	ANALYSIS RESULTS										
1	Design Criteria	Load Combination	LDF	Design	Limit	Result					
l	Factored Pos. Moment: 9'- 7 5/8"		1.25D + 1.5L	1.00	7366 lb ft	34949 lb ft	Passed - 21%				
l	Factored Shear:	1.25D + 1.5L	1.00	1541 lb	16578 lb	Passed - 9%					
l	Live Load (LL) Pos. Defl.:	Live Load (LL) Pos. Defl.: 8'- 13/16"		L		L/360	Passed - L/999				
l	Total Load (TL) Pos. Defl.:	8'- 1/2"	D + L		0.238"	L/240	Passed - L/730				
ı	SUPPORT AND REACTION INFORMATION										

l	SUP	SUPPORT AND REACTION INFORMATION									
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result		
l	1	4-06	1.25D + 1.5L	1.00	1090 lb		23888 lb	14130 lb	Passed - 8%		
l	2	4-00	1.25D + 1.5L	1.00	1719 lb		21840 lb	12919 lb	Passed - 13%		
ı	SPECIFIED LOADS										

SPECIFIED LUADS									
Туре		Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
	Self Weight	0'	15'- 2 3/8" Self Weight		Тор	14 lb/ft	-	-	-
	Uniform	0'	15'- 2 3/8"	FC6 Floor Decking (Plan View Fill)	Тор	7 lb/ft	13 lb/ft	-	-
	Uniform	0'	9'- 7 5/8"	FC6 Floor Decking (Plan View Fill)	Тор	3 lb/ft	7 lb/ft	-	-
	Uniform	9'- 7 5/8"	15'- 2 3/8"	FC6 Floor Decking (Plan View Fill)	Тор	9 lb/ft	18 lb/ft	-	-
	Uniform	13'- 10 7/8"	15'- 2 3/8"	User Load	Top	60 lb/ft	-	-	-
	Point	9'- 7 5/8"	9'- 7 5/8"	B28(i6941)	Back	481 lb	709 lb	-	-
	LINEAG	TODED DE	AOTIONO						

UNFA	JNFACTORED REACTIONS										
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	0'	0'- 4 3/8"	E10(i1256)	367 lb	421 lb	-	-				
2	14'- 10 3/8"	15'- 2 3/8"	7(i1264)	590 lb	654 lb	-	-				
-											

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the
  default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

**Town of Innisfil Certified Model** 

MITEK\*

BUILDER: BAYVIEW WELLINGTON
5:52:47 AM jpeniold
SITE: ALCONA SHORES

ALCONA SHORES

MODEL: RL-6E
CITY: INNISFIL

Job Name: **RL-6E** 

Level: 3RD FLR FRAMING

Label: B28 - i6941 Type: Beam 2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

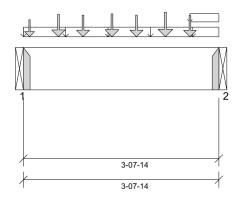
Status:

Design
Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:59



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0' Bottom: 0'- 5 1/4"

#### Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Beam @ 3'- 7 7/8"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 4" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.

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STRUCTURAL COMPONENT ONLY DWG # TF23051723

ANALYSIS RESULTS								
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result		
Factored Pos. Moment:	1'- 7 7/8"	1.25D + 1.5L	1.00	1564 lb ft	23299 lb ft	Passed - 7%		
Factored Shear:	2'- 10 3/8"	1.25D + 1.5L	1.00	1031 lb	11052 lb	Passed - 9%		

SUPPORT AND REACTION INFORMATION									
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
ı	1	1-08	1.25D + 1.5L	1.00	1657 lb		5460 lb	-	Passed - 30%
ı	2	1-08	1.25D + 1.5L	1.00	1502 lb		5460 lb	-	Passed - 28%

	MATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for
ID	Fait No.	Manufacturer	Тор	Face	Member	Reinforcement Accessories
1	HGUS410		-	-	-	Connector manually specified by the user.
2	HGUS410		-			Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIFIED LOADS								
Type Start Loc End Loc Source		Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)	
Self Weight	0'	3'- 7 7/8"	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	-0'	3'- 7 7/8"	User Load	Top	60 lb/ft	-	-	-
Uniform	3'- 1 3/8"	3'- 7 7/8"	FC6 Floor Decking (Plan View Fill)	Тор	3 lb/ft	6 lb/ft	-	-
Point	0'- 7 7/8"	0'- 7 7/8"	J3(i6835)	Front	101 lb	203 lb	-	-
Point	1'- 7 7/8"	1'- 7 7/8"	J3(i6608)	Front	104 lb	208 lb	-	-
Point	2'- 7 7/8"	2'- 7 7/8"	J3(i6607)	Front	116 lb	231 lb	-	-
Point	0'- 1 3/8"	0'- 1 3/8"	J4(i6803)	Back	63 lb	126 lb	-	-
Point	1'- 1 3/8"	1'- 1 3/8"	J4(i6801)	Back	95 lb	190 lb	-	-
Point	2'- 1 3/8"	2'- 1 3/8"	J4(i6605)	Back	95 lb	190 lb	-	-
Point	3'- 1 3/8"	3'- 1 3/8"	J4(i6850)	Back	92 lb	185 lb	-	-

UNFAC	UNFACTORED REACTIONS										
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	0'	0'	B27(i6827)	481 lb	709 lb	-	-				
2	3'- 7 7/8"	3'- 7 7/8"	STL BM(i3125)	441 lb	628 lb	-	-				

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for quideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION



ALCONA SHORES

MODEL: RL-6E CITY: INNISFIL Job Name: RL-6E

Level: **3RD FLR FRAMING** 

Label: B30 - i6648 Type: **Beam** 

3 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status: Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 12:59 8.5.3.233.Update5.15 4-06 14-06-00 15-02-06

#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment) Design Methodology: LSD Dry

Service Condition: LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Bottom: 1'- 1 1/2" Top: 0'

#### Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 3 3/8"
- 615 psi Wall @ 14'- 11 3/8"

#### PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051724

I	ANALYSIS RESULTS						
1	Design Criteria Location		Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	7'- 10 7/8"	1.25D + 1.5L	1.00	16818 lb ft	34949 lb ft	Passed - 48%
l	Factored Shear:	14'- 7/8"	1.25D + 1.5L	1.00	4428 lb	16578 lb	Passed - 27%
l	Live Load (LL) Pos. Defl.:	7'- 7 3/16"	L		0.378"	L/360	Passed - L/460
l	Total Load (TL) Pos. Defl.:	7'- 7 1/4"	D + L		0.640"	L/240	Passed - L/271
l	Permanent Deflection:	7'- 7 1/4"			-	L/360	Passed - L/685

SUPPORT AND REACTION INFORMATION											
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result			
1	4-06	1.25D + 1.5L	1.00	4518 lb		23887 lb	14130 lb	Passed - 32%			
2	4-00	1.25D + 1.5L	1.00	4578 lb		21840 lb	12919 lb	Passed - 35%			

П	SPECIFIED LOADS								
I	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
I	Self Weight	0'	15'- 2 3/8"	Self Weight	Тор	14 lb/ft	-	-	-
	Uniform	0'	15'- 2 3/8"	FC6 Floor Decking (Plan View Fill)	Тор	10 lb/ft	19 lb/ft	-	-
П	Uniform	0'- 4 3/8"	5'- 8 7/8"	User Load	Top	60 lb/ft	-	-	-
П	Uniform	9'- 4 7/8"	15'- 2 3/8"	User Load	Top	60 lb/ft	-	-	-
П	Tapered	1'- 10 7/8"	12'- 6 7/8"	Smoothed Load	Front	126 To 125 lb/ft	251 To 249 lb/ft	-	-
П	Point	1'- 2 7/8"	1'- 2 7/8"	J2(i6580)	Front	154 lb	307 lb	-	-
П	Point	13'- 2 7/8"	13'- 2 7/8"	J2(i6660)	Front	112 lb	224/0 lb	-	-
	Point	14'- 6 7/8"	14'- 6 7/8"	J3(i6686)	Front	133 lb	265 lb	-	-

UNFAC	CTORED RE	<b>EACTIONS</b>					
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 4 3/8"	E10(i1256)	1367 lb	1868 lb	-	-
2	14'- 10 3/8"	15'- 2 3/8"	8(i1265)	1399 lb	1891 lb	-	-

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- · Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION



BUILDER: BAYVIEW WELLINGTON ALCONA SHORES

RL-6E

**INNISFIL** 

Job Name: RL-6E

Level: **3RD FLR FRAMING** 

Type: **Beam** 

Label: B31 - i6458

3 Ply Member 1 3/4" x 11 7/8" (2.0E 3100)

WestFraser LVL

Status: Design Passed

CITY: Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 12:59 8.5.3.233.Update5.15 5-08 16-02-00

17-01-00

#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Bottom: 0'- 9 1/2" Top: 0'

#### Factored Resistance of Support Material:

- 1334 psi Wall @ 0'- 4 1/2"
- 1334 psi Wall @ 16'- 8 1/2"

#### PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051725

l	ANALYSIS RESULTS							
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result	
l	Factored Pos. Moment:	8'- 10 13/16"	1.25D + 1.5L	1.00	27684 lb ft	53017 lb ft	Passed - 52%	
l	Factored Shear:	15'- 7 5/8"	1.25D + 1.5L	1.00	6824 lb	20723 lb	Passed - 33%	
ı	Live Load (LL) Pos. Defl.:	8'- 7 1/2"	L		0.404"	L/360	Passed - L/479	
l	Total Load (TL) Pos. Defl.:	8'- 7 1/16"	D + L		0.672"	L/240	Passed - L/288	
I	Permanent Deflection:	8'- 6 3/8"			-	L/360	Passed - L/747	

SUP	SUPPORT AND REACTION INFORMATION										
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result			
1	5-08	1.25D + 1.5L	1.00	6456 lb		30030 lb	38531 lb	Passed - 21%			
2	5-08	1.25D + 1.5L	1.00	6871 lb		30030 lb	38531 lb	Passed - 23%			
SDE	CIEIED I O	ADS									

SPECIF	SPECIFIED LOADS							
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	17'- 1"	Self Weight	Тор	18 lb/ft	-	-	-
Uniform	0'	0'- 5 1/2"	FC6 Floor Decking (Plan View Fill)	Тор	3 lb/ft	7 lb/ft	-	-
Uniform	0'- 5 1/2"	10'- 3 7/16"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 5 1/2"	1'- 2 1/4"	FC6 Floor Decking (Plan View Fill)	Тор	4 lb/ft	9 lb/ft	-	-
Uniform	16'- 2 1/4"	16'- 7 1/2"	FC6 Floor Decking (Plan View Fill)	Тор	4 lb/ft	9 lb/ft	-	-
Tapered	0'- 8 1/4"	15'- 8 1/4"	Smoothed Load	Back	166 To 164 lb/ft	331 To 327 lb/ft	-	-
Point	13'- 1 1/2"	13'- 1 1/2"	User Load	Front	250 lb	500 lb	-	-
Point	16'- 2 1/4"	16'- 2 1/4"	J1(i6679)	Back	144 lb	287 lb	-	-
Point	16'- 7 1/2"	16'- 7 1/2"	FC6 Floor Decking (Plan View Fill)	Тор	2 lb	3 lb	-	-

			(I lall view I lil)								
UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	0'	0'- 5 1/2"	8(i1265)	1914 lb	2701 lb	-	-				
2	16'- 7 1/2"	17'- 1"	7(i1264)	1856 lb	3042 lb	-	-				

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

BUILDER: BAYVIEW WELLINGTON

ALCONA SHORES

MODEL: RL-6E INNISFIL Job Name: RL-6E

Level: 3RD FLR FRAMING

Label: B33 - i6639 Type: **Beam** 

3 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status: Design Passed

CITY: Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 12:59 8.5.3.233.Update5.15 12-00-00 12-05-08

## **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment) Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Bottom: 1'- 1 1/2" Top: 0'

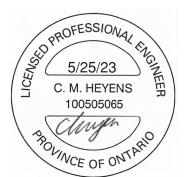
## Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Wall @ 12'- 1"

## PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

NAIL FROM BOTH FACES (STAGGER 1/2 SPACE)

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051726 PG 1/2

I	ANALYSIS RESULTS									
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result			
l	Factored Pos. Moment:	6'- 3 5/8"	1.25D + 1.5S + L	1.00	19418 lb ft	34949 lb ft	Passed - 56%			
l	Factored Shear:	0'- 9 1/2"	1.25D + 1.5S + L	1.00	5598 lb	16578 lb	Passed - 34%			
l	Live Load (LL) Pos. Defl.:	6'- 1 5/16"	S + 0.5L		0.279"	L/360	Passed - L/516			
l	Total Load (TL) Pos. Defl.:	6'- 1 1/16"	D + S + 0.5L		0.476"	L/240	Passed - L/302			
l	Permanent Deflection:	6'- 3/4"			-	L/360	Passed - L/754			

SUP	SUPPORT AND REACTION INFORMATION											
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result				
1	1-08	1.25D + 1.5S + L	1.00	6081 lb		8190 lb	-	Passed - 74%				
2	5-08	1.25D + 1.5S + L	1.00	6009 lb		30030 lb	17764 lb	Passed - 34%				

CONNEC	TOR INF	FORMATION

ID	D Part No.	Manufacturer	Nai	ling Requirem	ents	Other Information or Requirement for
טו			Тор	Face	Member	Reinforcement Accessories
1	HGUS5.50/1	0	-	-	-	Connector manually specified by the user.

 Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

SPECIF	SPECIFIED LOADS							
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 5 1/2"	Self Weight	Тор	14 lb/ft	-	-	-
Uniform	0'	12'- 5 1/2"	E34(i3643)	Тор	81 lb/ft	-	-	-
Uniform	0'	8'- 3 3/16"	E34(i3643)	Тор	81 lb/ft	-	260 lb/ft	-
Uniform	1'- 1 1/2"	7'- 9 1/2"	Smoothed Load	Front	109 lb/ft	217 lb/ft	-	-
Uniform	8'- 3 3/16"	12'- 5 1/2"	E34(i3643)	Тор	36 lb/ft	-	132 lb/ft	-
Point	0'- 5 1/2"	0'- 5 1/2"	J3(i6645)	Front	109 lb	218 lb	-	-
Point	8'- 5 1/2"	8'- 5 1/2"	J3(i6573)	Front	145 lb	289 lb	-	-
Point	9'- 9 1/2"	9'- 9 1/2"	J3(i6572)	Front	145 lb	289 lb	-	-
Point	11'- 1 1/2"	11'- 1 1/2"	J3(i6662)	Front	134 lb	268 lb	-	-
Point	8'- 3 3/16"	8'- 3 3/16"	E34(i3643)	Тор	227 lb	-	777 lb	-

UNFACTORED REACTIONS								
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)	
1	0'	0'	STL BM(i3125)	1754 lb	1289 lb	1738 lb	-	
2	12'	12'- 5 1/2"	E11(i1258)	1736 lb	1220 lb	1741 lb	-	

## **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

#### PLY TO PLY CONNECTION

SITE: MODEL:

CITY:

MiTek

BUILDER: BAYVIEW WELLINGTON **ALCONA SHORES** 

RL-6E INNISFIL

Job Name: RL-6E

Level: **3RD FLR FRAMING** Label: B33 - i6639

Type: Beam 3 Ply Member

1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Status: Design **Passed** 

# **PLY TO PLY CONNECTION**

· Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.



BUILDER:

MODEL:

BAYVIEW WELLINGTON

**ALCONA SHORES** 

RL-6E CITY: INNISFIL Job Name: RL-6E

Level: **1ST FLR FRAMING** 

Label: B16 - i4814 Type: **Beam** 

1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Status: Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 12:00 8.5.3.233.Update5.15 7-03-08

7-07-06

#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment) Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Bottom: 0'- 9 1/2" Top: 0'

## Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 7/8"
- 615 psi Beam @ 7'- 7 3/8"

ANALYSIS RESULTS									
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result			
Factored Pos. Moment:	3'- 9 1/8"	1.25D + 1.5L	1.00	3421 lb ft	11650 lb ft	Passed - 29%			
Factored Shear:	6'- 9 7/8"	1.25D + 1.5L	1.00	1628 lb	5526 lb	Passed - 29%			
Live Load (LL) Pos. Defl.:	3'- 11 1/16"	L		0.054"	L/360	Passed - L/999			
Total Load (TL) Pos. Defl.:	3'- 11 1/16"	D + L		0.099"	L/240	Passed - L/886			

SUP	SUPPORT AND REACTION INFORMATION											
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result				
1	3-14	1.25D + 1.5L	1.00	1782 lb		7052 lb	4172 lb	Passed - 43%				
2	1-08	1.25D + 1.5L	1.00	1692 lb		2730 lb	-	Passed - 62%				

		RMATION

ID	D Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for
טו		Manufacturer	Тор	Face	Member	Reinforcement Accessories
2	HUS1.81/10		-	-	-	Connector manually specified by the user.

\* Connectors: Refer to manufacturer's specifications, fasteners requirements and installation instruction. Where header fasteners are longer than the width of the supporting member, install backer block or clinch header nails.

FIED LUAL	<i>1</i> 3						
Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
0'	7'- 7 3/8"	Self Weight Top		5 lb/ft	-	-	-
0'- 3 7/8"	7'- 7 3/8"	User Load	Тор	60 lb/ft	-	-	-
2'- 3 1/8"	7'- 3 1/8"	Smoothed Load	Front	98 lb/ft	196 lb/ft	-	-
0'- 10 7/8"	0'- 10 7/8"	J3(i4659)	Front	97 lb	194 lb	-	-
1'- 9 1/8"	1'- 9 1/8"	J3(i4793)	Front	91 lb	182 lb	-	-
TORED RI	EACTIONS						
Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
0'	0'- 3 7/8"	W24(i4560)		585 lb	700 lb	-	-
7'- 7 3/8"	7'- 7 3/8"	B17(i4813)		566 lb	656 lb	-	-
	0' - 3 7/8" 2'- 3 1/8" 0'- 10 7/8" 1'- 9 1/8" TORED RI Start Loc 0'	0' 7'- 7 3/8" 0'- 3 7/8" 7'- 7 3/8" 2'- 3 1/8" 7'- 3 1/8" 0'- 10 7/8" 0'- 10 7/8" 1'- 9 1/8" 1'- 9 1/8"  TORED REACTIONS Start Loc End Loc 0' 0'- 3 7/8"	Start Loc         End Loc         Source           0'         7'- 7 3/8"         Self Weight           0'- 3 7/8"         7'- 7 3/8"         User Load           2'- 3 1/8"         7'- 3 1/8"         Smoothed Load           0'- 10 7/8"         0'- 10 7/8"         J3(i4659)           1'- 9 1/8"         1'- 9 1/8"         J3(i4793)           TORED REACTIONS           Start Loc         End Loc         Source           0'         0'- 3 7/8"         W24(i4560)	Start Loc         End Loc         Source         Face           0'         7'- 7 3/8"         Self Weight         Top           0'- 3 7/8"         7'- 7 3/8"         User Load         Top           2'- 3 1/8"         7'- 3 1/8"         Smoothed Load         Front           0'- 10 7/8"         0'- 10 7/8"         J3(i4659)         Front           1'- 9 1/8"         1'- 9 1/8"         J3(i4793)         Front           TORED REACTIONS           Start Loc         End Loc         Source           0'         0'- 3 7/8"         W24(i4560)	Start Loc         End Loc         Source         Face         Dead (D)           0'         7'- 7 3/8"         Self Weight         Top         5 lb/ft           0'- 3 7/8"         7'- 7 3/8"         User Load         Top         60 lb/ft           2'- 3 1/8"         7'- 3 1/8"         Smoothed Load         Front         98 lb/ft           0'- 10 7/8"         0'- 10 7/8"         J3(i4659)         Front         97 lb           1'- 9 1/8"         1'- 9 1/8"         J3(i4793)         Front         91 lb           TORED REACTIONS           Start Loc         End Loc         Source         Dead (D)           0'         0'- 3 7/8"         W24(i4560)         585 lb	Start Loc         End Loc         Source         Face         Dead (D)         Live (L)           0'         7'- 7 3/8"         Self Weight         Top         5 lb/ft         -           0'- 3 7/8"         7'- 7 3/8"         User Load         Top         60 lb/ft         -           2'- 3 1/8"         7'- 3 1/8"         Smoothed Load         Front         98 lb/ft         196 lb/ft           0'- 10 7/8"         0'- 10 7/8"         J3(i4659)         Front         97 lb         194 lb           1'- 9 1/8"         1'- 9 1/8"         J3(i4793)         Front         91 lb         182 lb           TORED REACTIONS           Start Loc         End Loc         Source         Dead (D)         Live (L)           0'         0'- 3 7/8"         W24(i4560)         585 lb         700 lb	Start Loc         End Loc         Source         Face         Dead (D)         Live (L)         Snow (S)           0'         7'- 7 3/8"         Self Weight         Top         5 lb/ft         -         -           0'- 3 7/8"         7'- 7 3/8"         User Load         Top         60 lb/ft         -         -           2'- 3 1/8"         7'- 3 1/8"         Smoothed Load         Front         98 lb/ft         196 lb/ft         -           0'- 10 7/8"         0'- 10 7/8"         J3(i4659)         Front         97 lb         194 lb         -           1'- 9 1/8"         1'- 9 1/8"         J3(i4793)         Front         91 lb         182 lb         -           TORED REACTIONS           Start Loc         End Loc         Source         Dead (D)         Live (L)         Snow (S)           0'         0'- 3 7/8"         W24(i4560)         585 lb         700 lb         -

## **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



STRUCTURAL COMPONENT ONLY DWG # TF23051727



ALCONA SHORES MODEL:

RL-6E INNISFIL Job Name: RL-6E

Level: **1ST FLR FRAMING** 

Label: B17 - i4813 Type: **Beam** 

2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status: Design Passed

CITY: Designed by Single Member Design Engine in MiTek® Structure Version Illustration Not to Scale. Pitch: 0/12 Report Version: 2021.03.26 05/25/2023 12:00 8.5.3.233.Update5.15 15-02-12 16-00-00

#### **DESIGN INFORMATION**

**Building Code:** NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019

Amendment)

Design Methodology: LSD Service Condition: Dry LL Deflection Limit: L/360, TL Deflection Limit: L/240.

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Bottom: 9'- 3 1/2" Top: 0'

## Factored Resistance of Support Material:

- 534 psi Beam @ 0'- 4 3/8"
- 615 psi Wall @ 15'- 9 1/8"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 8" O/C

PLY TO PLY CONNECTION ASSUMES ANY SUPPORTED BEAM HANGERS ARE FASTENED TO THIS BEAM WITH MIN. 3.5" FASTENERS.



STRUCTURAL COMPONENT ONLY DWG # TF23051728

_							
I	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	9'- 9 3/4"	1.25D + 1.5L	0.97	9446 lb ft	22704 lb ft	Passed - 42%
l	Factored Shear:	14'- 10 5/8"	1.25D + 1.5L	0.97	1886 lb	10770 lb	Passed - 18%
l	Live Load (LL) Pos. Defl.:	8'- 4 5/16"	L		0.258"	L/360	Passed - L/709
l	Total Load (TL) Pos. Defl.:	8'- 5 1/16"	D + L		0.525"	L/240	Passed - L/347
ı	Permanent Deflection:	8'- 5 13/16"			_	L/360	Passed - L/703

SUP	PPORT AND	D REACTION INFORM.	ATION					
ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
1	5-06	1.25D + 1.5L	0.97	1474 lb		19065 lb	9789 lb	Passed - 15%
2	3-14	1.25D + 1.5L	0.97	2022 lb		13744 lb	8130 lb	Passed - 25%
SPE	CIFIED LO	ADS						

ı	OI LOII	ILD LOAD	,						
l	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
l	Self Weight	0'	16'	Self Weight	Тор	9 lb/ft	-	-	-
l	Uniform	0'- 2 5/8"	16'	FC4 Floor Decking (Plan View Fill)	Тор	10 lb/ft	20 lb/ft	-	-
l	Uniform	0'- 2 5/8"	9'- 10 5/8"	FC4 Floor Decking (Plan View Fill)	Тор	10 lb/ft	20 lb/ft	-	-
l	Uniform	9'- 7 1/8"	15'- 7 5/8"	User Load	Тор	60 lb/ft	-	-	-
	Uniform	9'- 10 5/8"	16'	FC4 Floor Decking (Plan View Fill)	Тор	3 lb/ft	6 lb/ft	-	-
ı	Point	9'- 9 3/4"	9'- 9 3/4"	B16(i4814)	Back	566 lb	656 lb	-	-

UNFAC	CTORED RE	EACTIONS					
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 3/8"	STL BM(i13)	509 lb	546 lb	-	-
2	15'- 8 1/8"	16'	W18(i65)	844 lb	657 lb	-	-

#### **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- · Lateral stability factor (KL) was based on user preference to use the width of all plies. (Consult with manufacturer for guideline pertaining to this design option.)
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.

## PLY TO PLY CONNECTION

Member design assumed proper ply to ply connection by others. Fastener spacing along length of member must not exceed 4 times depth of member. Verify connection between plies according to code specification and follow the manufacturer's installation instruction. Loads assumed to be distributed equally to each ply.

Town of Inniefil Certified Model

BAYVIEW WELLINGTON

CITY:

SITE: ALCONA SHORES
MODEL: RL-6E

RL-6E INNISFIL Job Name: **RL-6E** 

Level: 1ST FLR FRAMING
Label: B18L - i4620

Type: Beam

1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

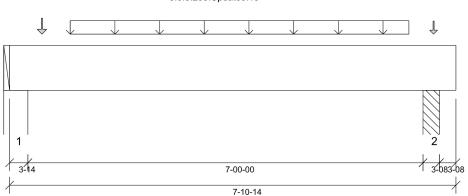
WestFraser LVL

Status:

Design
Passed

Illustration Not to Scale. Pitch: 0/12 Designed by Single Member Design Engine in MiTek® Structure Version 8.5.3.233.Update5.15

Report Version: 2021.03.26 05/25/2023 12:00



#### DESIGN INFORMATION

Building Code: NBCC 2015, Part9, BCBC 2018, ABC 2019, OBC 2012 (2019 Amendment)

Design Methodology: LSD
Service Condition: Dry
LL Deflection Limit: L/360,
TL Deflection Limit: L/240,

#### Lateral Restraint Requirements:

Both ends of the member and the outer supports must be laterally restrained. Top and bottom edges of the member must be fully restrained or have the following maximum unbraced length:

Top: 0'- 3 1/2" Bottom: 0'- 9 1/2"

## Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 7/8"
- 615 psi Column @ 7'- 5 5/8"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 6 7/8"	1.25D + 1.5L	1.00	1707 lb ft	11650 lb ft	Passed - 15%
Factored Shear:	1'- 1 3/8"	1.25D + 1.5L	1.00	937 lb	5526 lb	Passed - 17%
Live Load (LL) Pos. Defl.:	3'- 10 1/4"	L		0.030"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 10 1/4"	D + L		0.046"	L/240	Passed - L/999

Ш	SUP	PORT AND	REACTION INFORM	ATION					
	ID	Input Bearing Length	Controlling Load Combination	LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result
Ш	1	3-14	1.25D + 1.5L	1.00	944 lb		7052 lb	4172 lb	Passed - 23%
Ш	2	3-08	1.25D + 1.5L	1.00	984 lb		6370 lb	3767 lb	Passed - 26%
Ш	SPE	CIFIED LO	ADS						

ı	OI LOII	ILD LOTTE	, ,						
	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
	Self Weight	0'	7'- 10 7/8"	Self Weight	Тор	5 lb/ft	-	-	-
	Uniform	1'- 7/8"	7'- 7/8"	Smoothed Load	Back	60 lb/ft	120 lb/ft	-	-
	Point	0'- 6 7/8"	0'- 6 7/8"	J5(i4618)	Back	50 lb	100 lb	-	-
	Point	7'- 6 1/8"	7'- 6 1/8"	J5(i4615)	Back	31 lb	63 lb	-	-
ı	LINEAG		FACTIONS						

ONE	ACTORED K	EACTIONS					
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 7/8"	W22(i4085)	235 lb	434 lb	-	-
2	7'- 3 7/8"	7'- 7 3/8"	PBO14(i4079)	244 lb	452 lb	-	-

# **DESIGN NOTES**

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the
  default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
  specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
  required) as per manufacturer's instruction.
- The deflection at the cantilever for either live and/or total loads is less than 3/8" and therefore has been excluded from the deflection ratio considerations.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
  transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.



JCTURAL COMPONENT ONLY
DWG # TF23051729

2023-08-08 5:52:49 AM jpenfold



# Maximum Floor Spans - S2.1

## Design Criteria

Spans: Simple span

Live load = 40 psf and dead load = 15 psf

Deflection limits: L/480 under live load and L/240 under total load

Sheathing: 5/8 in. nailed-glued oriented strand board (OSB) sheathing

## **Maximum Floor Spans**

			В	are			1/2 in. gyr	sum ceiling		
Joist depth	Joist series		On cent	re spacing		On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	15'-1"	14'-3"	13'-10"	-	15'-7"	14'-9"	14'-3"	-	
0.4/0"	NI-40x	16'-2"	15'-3"	14'-8"	-	16'-7"	15'-8"	15'-1"	-	
9-1/2"	NI-60	16'-4"	15'-4"	14'-10"	-	16'-9"	15'-9"	15'-3"	-	
	NI-80	17'-3"	16'-3"	15'-8"	-	17'-8"	16'-7"	16'-0"	-	
	NI-20	17'-0"	16'-0"	15'-6"	-	17'-6"	16'-7"	16'-0"	-	
11-7/8"	NI-40x	18'-2"	17'-1"	16'-6"	-	18'-9"	17'-6"	16'-11"	-	
	NI-60	18'-5"	17'-3"	16'-8"	-	19'-0"	17'-8"	17'-1"	-	
	NI-80	19'-9"	18'-3"	17'-7"	-	20'-4"	18'-10"	18'-0"	-	
	NI-90	20'-2"	18'-8"	17'-10"	-	20'-9"	19'-2"	18'-4"	-	
	NI-40x	20'-1"	18'-8"	17'-10"	-	20'-10"	19'-4"	18'-6"	-	
14"	NI-60	20'-6"	18'-11"	18'-2"	-	21'-2"	19'-8"	18'-9"	-	
14	NI-80	21'-11"	20'-3"	19'-4"	-	22'-7"	20'-11"	20'-0"	-	
	NI-90	22'-5"	20'-8"	19'-9"	-	23'-0"	21'-4"	20'-4"	-	
	NI-60	22'-4"	20'-8"	19'-9"	-	23'-1"	21'-5"	20'-6"	-	
16"	NI-80	23'-11"	22'-1"	21'-1"	-	24'-8"	22'-10"	21'-9"	-	
	NI-90	24'-5"	22'-6"	21'-6"	-	25'-1"	23'-2"	22'-2"	-	

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

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



# Maximum Floor Spans - S4.1

## Design Criteria

Spans: Simple span

Live load = 40 psf and dead load = 15 psf

Deflection limits: L/480 under live load and L/240 under total load

Sheathing: 3/4 in. nailed-glued oriented strand board (OSB) sheathing

## **Maximum Floor Spans**

			В	are			1/2 in. gy	osum ceiling	
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	15'-11"	15'-0"	14'-6"	13'-5"	16'-5"	15'-5"	14'-6"	13'-5"
0.4/0"	NI-40x	17'-0"	16'-0"	15'-5"	14'-10"	17'-5"	16'-5"	15'-10"	15'-2"
9-1/2"	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-7"	16'-7"	16'-0"	15'-4"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	16'-1"
	NI-20	17'-11"	16'-11"	16'-3"	15'-8"	18'-7"	17'-5"	16'-10"	16'-2"
	NI-40x	19'-4"	17'-11"	17'-3"	16'-7"	19'-11"	18'-6"	17'-9"	17'-0"
11-7/8"	NI-60	19'-7"	18'-2"	17'-6"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"
	NI-80	21'-1"	19'-6"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"
	NI-90	21'-6"	19'-10"	18'-11"	17'-11"	22'-0"	20'-4"	19'-5"	18'-4"
	NI-40x	21'-5"	19'-11"	18'-11"	18'-0"	22'-1"	20'-7"	19'-7"	18'-7"
14"	NI-60	21'-10"	20'-2"	19'-3"	18'-3"	22'-6"	20'-10"	19'-11"	18'-10
14	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"
	NI-90	23'-10"	22'-1"	21'-0"	19'-10"	24'-5"	22'-7"	21'-6"	20'-4"
	NI-60	23'-9"	22'-0"	21'-0"	19'-10"	24'-6"	22'-9"	21'-8"	20'-7"
16"	NI-80	25'-6"	23'-7"	22'-5"	21'-2"	26'-2"	24'-3"	23'-1"	21'-10
	NI-90	26'-0"	24'-0"	22'-10"	21'-6"	26'-7"	24'-8"	23'-5"	22'-2"

		Mi	d-span blocking	with 1x4 inch	strap	Mid-sp	oan blocking an	d 1/2 in. gypsui	m ceiling	
Joist depth	Joist series		On cent	re spacing		On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"	
9-1/2"	NI-40x	18'-8"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"	
9-1/2	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"	
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10'	
	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"	
	NI-40x	21'-10"	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-8"	
11-7/8"	NI-60	22'-1"	20'-7"	19'-8"	18'-4"	22'-8"	20'-10"	19'-8"	18'-4"	
	NI-80	23'-8"	22'-0"	20'-11"	19'-10"	24'-1"	22'-6"	21'-6"	20'-0"	
	NI-90	24'-1"	22'-5"	21'-4"	20'-2"	24'-7"	22'-11"	21'-10"	20'-7"	
	NI-40x	24'-5"	22'-9"	21'-9"	19'-5"	25'-1"	23'-2"	21'-9"	19'-5"	
14"	NI-60	24'-10"	23'-2"	22'-1"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10'	
14	NI-80	26'-6"	24'-8"	23'-6"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"	
	NI-90	27'-0"	25'-1"	23'-11"	22'-7"	27'-6"	25'-8"	24'-6"	23'-2"	
	NI-60	27'-3"	25'-5"	24'-3"	22'-11"	28'-0"	26'-2"	24'-9"	23'-1"	
16"	NI-80	29'-1"	27'-1"	25'-9"	24'-4"	29'-8"	27'-9"	26'-5"	25'-0"	
	NI-90	29'-7"	27'-6"	26'-2"	24'-9"	30'-2"	28'-2"	26'-10"	25'-5"	

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

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# Maximum Floor Spans - S6.1

## Design Criteria

Spans: Simple span

Live load = 40 psf and dead load = 15 psf

Deflection limits: L/480 under live load and L/240 under total load

Sheathing: 5/8 in. nailed-glued Canadian softwood plywood

## **Maximum Floor Spans**

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

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

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

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# Maximum Floor Spans - S7.1

## Design Criteria

Spans: Simple span

Loads: Live load = 40 psf and dead load = 15 psf
Deflection limits: L/480 under live load and L/240 under total load
Sheathing: 3/4 in. nailed-glued Canadian softwood plywood

## **Maximum Floor Spans**

			В	are			1/2 in. gyp	osum ceiling		
Joist depth	Joist series		On cent	re spacing		On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"	
0.4/0"	NI-40x	16'-11"	15'-11"	15'-4"	14'-9"	17'-4"	16'-4"	15'-9"	15'-1"	
9-1/2"	NI-60	17'-1"	16'-1"	15'-6"	14'-10"	17'-6"	16'-6"	15'-11"	15'-3"	
	NI-80	18'-1"	17'-0"	16'-4"	15'-8"	18'-7"	17'-4"	16'-8"	16'-0"	
	NI-20	17'-10"	16'-10"	16'-2"	15'-7"	18'-5"	17'-4"	16'-9"	16'-1"	
11-7/8"	NI-40x	19'-3"	17'-10"	17'-2"	16'-6"	19'-10"	18'-5"	17'-8"	16'-11'	
	NI-60	19'-6"	18'-1"	17'-4"	16'-8"	20'-1"	18'-8"	17'-10"	17'-1"	
	NI-80	20'-11"	19'-4"	18'-5"	17'-7"	21'-5"	19'-10"	18'-11"	17'-11'	
	NI-90	21'-4"	19'-9"	18'-9"	17'-10"	21'-10"	20'-3"	19'-3"	18'-3"	
	NI-40x	21'-4"	19'-9"	18'-10"	17'-11"	22'-0"	20'-5"	19'-6"	18'-6"	
14"	NI-60	21'-8"	20'-1"	19'-2"	18'-2"	22'-4"	20'-9"	19'-9"	18'-9"	
14	NI-80	23'-3"	21'-6"	20'-5"	19'-4"	23'-10"	22'-1"	21'-0"	19'-11'	
	NI-90	23'-9"	21'-11"	20'-10"	19'-8"	24'-3"	22'-6"	21'-5"	20'-3"	
	NI-60	23'-7"	21'-10"	20'-10"	19'-9"	24'-4"	22'-7"	21'-7"	20'-5"	
16"	NI-80	25'-4"	23'-5"	22'-3"	21'-1"	26'-0"	24'-1"	22'-11"	21'-8"	
	NI-90	25'-10"	23'-10"	22'-8"	21'-5"	26'-5"	24'-6"	23'-4"	22'-0"	

		Mi	d-span blocking	with 1x4 inch	strap	Mid-sp	an blocking an	d 1/2 in. gypsu	ım ceiling
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
9-1/2"	NI-40x	18'-7"	17'-2"	16'-3"	15'-2"	18'-10"	17'-2"	16'-3"	15'-2"
9-1/2	NI-60	18'-10"	17'-6"	16'-6"	15'-5"	19'-1"	17'-6"	16'-6"	15'-5"
	NI-80	20'-2"	18'-9"	17'-11"	16'-10"	20'-7"	19'-2"	18'-2"	16'-10'
	NI-20	20'-1"	18'-5"	17'-5"	16'-2"	20'-1"	18'-5"	17'-5"	16'-2"
11-7/8"	NI-40x	21'-9"	20'-3"	19'-4"	17'-8"	22'-4"	20'-5"	19'-4"	17'-8"
	NI-60	22'-0"	20'-6"	19'-7"	18'-4"	22'-7"	20'-10"	19'-8"	18'-4"
	NI-80	23'-6"	21'-10"	20'-10"	19'-9"	24'-0"	22'-5"	21'-4"	20'-0"
	NI-90	24'-0"	22'-4"	21'-3"	20'-1"	24'-6"	22'-10"	21'-9"	20'-7"
	NI-40x	24'-4"	22'-8"	21'-8"	19'-5"	25'-0"	23'-2"	21'-9"	19'-5"
14"	NI-60	24'-9"	23'-0"	22'-0"	20'-9"	25'-5"	23'-8"	22'-4"	20'-10'
14	NI-80	26'-5"	24'-6"	23'-4"	22'-1"	27'-0"	25'-2"	24'-0"	22'-8"
	NI-90	26'-11"	25'-0"	23'-10"	22'-6"	27'-5"	25'-7"	24'-5"	23'-1"
	NI-60	27'-2"	25'-4"	24'-2"	22'-10"	27'-11"	26'-1"	24'-9"	23'-1"
16"	NI-80	29'-0"	26'-11"	25'-8"	24'-3"	29'-7"	27'-7"	26'-4"	24'-11'
	NI-90	29'-6"	27'-5"	26'-1"	24'-8"	30'-1"	28'-1"	26'-9"	25'-4"

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

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# Maximum Floor Spans - M2.1

Design Criteria

Spans: Simple span

Live load = 40 psf and dead load = 20 psf

Deflection limits: L/480 under live load and L/240 under total load

Sheathing: 5/8 in. nailed-glued oriented strand board (OSB) sheathing

## **Maximum Floor Spans**

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

		Mi	d-span blocking	g with 1x4 inch s	trap	Mid-sp	oan blocking an	d 1/2 in. gypsum	ceiling
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	16'-8"	15'-3"	14'-5"	-	16'-8"	15'-3"	14'-5"	-
9-1/2"	NI-40x	17'-11"	17'-0"	16'-1"	-	18'-5"	17'-1"	16'-1"	-
9-1/2	NI-60	18'-2"	17'-1"	16'-4"	-	18'-8"	17'-4"	16'-4"	-
	NI-80	19'-5"	18'-0"	17'-5"	-	19'-10"	18'-5"	17'-8"	-
	NI-20	19'-7"	18'-2"	17'-3"	-	19'-11"	18'-3"	17'-3"	-
11-7/8"	NI-40x	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-0"	-
	NI-60	21'-4"	19'-9"	18'-11"	-	21'-11"	20'-5"	19'-6"	-
	NI-80	22'-9"	21'-1"	20'-2"	-	23'-3"	21'-8"	20'-8"	-
	NI-90	23'-3"	21'-6"	20'-6"	-	23'-9"	22'-0"	21'-0"	-
	NI-40x	23'-8"	21'-11"	20'-11"	-	24'-4"	22'-8"	20'-11"	-
14"	NI-60	24'-0"	22'-3"	21'-3"	-	24'-8"	22'-11"	21'-11"	-
14	NI-80	25'-7"	23'-9"	22'-7"	-	26'-2"	24'-4"	23'-3"	-
	NI-90	26'-1"	24'-2"	23'-0"	-	26'-8"	24'-9"	23'-7"	-
	NI-60	26'-5"	24'-6"	23'-5"	-	27'-2"	25'-3"	24'-2"	-
16"	NI-80	28'-2"	26'-1"	24'-10"	-	28'-10"	26'-9"	25'-6"	-
	NI-90	28'-8"	26'-6"	25'-3"	-	29'-3"	27'-2"	25'-11"	_

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

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# Maximum Floor Spans - M4.1

## Design Criteria

Spans: Simple span

Live load = 40 psf and dead load = 20 psf
Deflection limits: L/480 under live load and L/240 under total load

Sheathing: 3/4 in. nailed-glued oriented strand board (OSB) sheathing

## **Maximum Floor Spans**

			В	are			1/2 in. gy	osum ceiling		
Joist depth	Joist series		On cent	re spacing		On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	15'-11"	15'-0"	14'-6"	13'-5"	16'-5"	15'-5"	14'-6"	13'-5"	
0.4/0"	NI-40x	17'-0"	16'-0"	15'-5"	14'-10"	17'-5"	16'-5"	15'-10"	14'-11'	
9-1/2"	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-7"	16'-7"	16'-0"	15'-4"	
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"	16'-9"	16'-1"	
	NI-20	17'-11"	16'-11"	16'-3"	15'-8"	18'-7"	17'-5"	16'-10"	16'-1"	
11-7/8"	NI-40x	19'-4"	17'-11"	17'-3"	16'-7"	19'-11"	18'-6"	17'-9"	17'-0"	
	NI-60	19'-7"	18'-2"	17'-6"	16'-9"	20'-2"	18'-9"	17'-11"	17'-2"	
	NI-80	21'-1"	19'-6"	18'-6"	17'-7"	21'-7"	20'-0"	19'-0"	18'-0"	
	NI-90	21'-6"	19'-10"	18'-11"	17'-11"	22'-0"	20'-4"	19'-5"	18'-4"	
	NI-40x	21'-5"	19'-11"	18'-11"	18'-0"	22'-1"	20'-7"	19'-7"	18'-7"	
14"	NI-60	21'-10"	20'-2"	19'-3"	18'-3"	22'-6"	20'-10"	19'-11"	18'-10'	
14	NI-80	23'-5"	21'-7"	20'-7"	19'-5"	24'-0"	22'-3"	21'-2"	20'-0"	
	NI-90	23'-10"	22'-1"	21'-0"	19'-10"	24'-5"	22'-7"	21'-6"	20'-4"	
	NI-60	23'-9"	22'-0"	21'-0"	19'-10"	24'-6"	22'-9"	21'-8"	20'-7"	
16"	NI-80	25'-6"	23'-7"	22'-5"	21'-2"	26'-2"	24'-3"	23'-1"	21'-10'	
	NI-90	26'-0"	24'-0"	22'-10"	21'-6"	26'-7"	24'-8"	23'-5"	22'-2"	

		Mi	d-span blocking	with 1x4 inch	strap	Mid-sp	an blocking an	d 1/2 in. gypsui	m ceiling
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
9-1/2"	NI-40x	18'-8"	17'-2"	16'-3"	14'-11"	18'-10"	17'-2"	16'-3"	14'-11"
9-1/2	NI-60	18'-11"	17'-6"	16'-6"	15'-5"	19'-2"	17'-6"	16'-6"	15'-5"
	NI-80	20'-3"	18'-10"	17'-11"	16'-10"	20'-8"	19'-3"	18'-2"	16'-10'
	NI-20	20'-1"	18'-5"	17'-5"	16'-1"	20'-1"	18'-5"	17'-5"	16'-1"
11-7/8"	NI-40x	21'-10"	20'-4"	19'-0"	17'-0"	22'-5"	20'-6"	19'-0"	17'-0"
	NI-60	22'-1"	20'-7"	19'-8"	18'-4"	22'-8"	20'-10"	19'-8"	18'-4"
	NI-80	23'-8"	22'-0"	20'-11"	19'-10"	24'-1"	22'-6"	21'-6"	20'-0"
	NI-90	24'-1"	22'-5"	21'-4"	20'-2"	24'-7"	22'-11"	21'-10"	20'-7"
	NI-40x	24'-5"	22'-9"	20'-11"	18'-8"	25'-1"	22'-11"	20'-11"	18'-8"
14"	NI-60	24'-10"	23'-2"	22'-1"	20'-10"	25'-6"	23'-8"	22'-4"	20'-10'
14	NI-80	26'-6"	24'-8"	23'-6"	22'-2"	27'-1"	25'-3"	24'-1"	22'-9"
	NI-90	27'-0"	25'-1"	23'-11"	22'-7"	27'-6"	25'-8"	24'-6"	23'-2"
	NI-60	27'-3"	25'-5"	24'-3"	22'-11"	28'-0"	26'-2"	24'-9"	23'-1"
16"	NI-80	29'-1"	27'-1"	25'-9"	24'-4"	29'-8"	27'-9"	26'-5"	25'-0"
	NI-90	29'-7"	27'-6"	26'-2"	24'-9"	30'-2"	28'-2"	26'-10"	25'-5"

- 1. The tabulated clear spans are based on CSA 086-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
- 2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- 3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
- 4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
- 5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.

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# Maximum Floor Spans - M6.1

## Design Criteria

Spans: Simple span

Loads: Live load = 40 psf and dead load = 20 psf

Deflection limits: L/480 under live load and L/240 under total load

Sheathing: 5/8 in. nailed-glued Canadian softwood plywood

## **Maximum Floor Spans**

			В	are			1/2 in. gyp	sum ceiling	
Joist depth	Joist series		On cent	re spacing			On cent	e spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	14'-11"	14'-1"	13'-7"	-	15'-4"	14'-6"	14'-1"	-
0.4/0"	NI-40x	15'-11"	15'-0"	14'-6"	-	16'-4"	15'-5"	14'-11"	-
9-1/2"	NI-60	16'-1"	15'-2"	14'-8"	-	16'-6"	15'-7"	15'-1"	-
	NI-80	17'-1"	16'-1"	15'-6"	-	17'-5"	16'-5"	15'-10"	-
	NI-20	16'-9"	15'-10"	15'-4"	-	17'-4"	16'-4"	15'-10"	-
	NI-40x	17'-10"	16'-10"	16'-3"	-	18'-6"	17'-4"	16'-9"	-
11-7/8"	NI-60	18'-1"	17'-0"	16'-5"	-	18'-9"	17'-6"	16'-11"	-
	NI-80	19'-6"	18'-0"	17'-4"	-	20'-1"	18'-7"	17'-9"	-
	NI-90	19'-11"	18'-4"	17'-8"	-	20'-5"	18'-11"	18'-1"	-
	NI-40x	19'-10"	18'-4"	17'-8"	-	20'-6"	19'-1"	18'-3"	-
14"	NI-60	20'-2"	18'-8"	17'-11"	-	20'-10"	19'-4"	18'-6"	-
14	NI-80	21'-8"	20'-0"	19'-1"	-	22'-4"	20'-8"	19'-9"	-
	NI-90	22'-1"	20'-5"	19'-6"	-	22'-9"	21'-0"	20'-1"	-
	NI-60	22'-0"	20'-4"	19'-6"	-	22'-9"	21'-1"	20'-2"	-
16"	NI-80	23'-7"	21'-10"	20'-10"	-	24'-4"	22'-6"	21'-6"	-
	NI-90	24'-1"	22'-2"	21'-2"	-	24'-9"	22'-11"	21'-10"	-

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

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

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# Maximum Floor Spans - M7.1

## Design Criteria

Spans: Simple span

Loads: Live load = 40 psf and dead load = 20 psf
Deflection limits: L/480 under live load and L/240 under total load
Sheathing: 3/4 in. nailed-glued Canadian softwood plywood

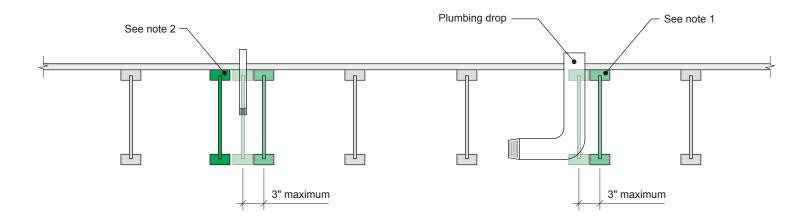
## **Maximum Floor Spans**

			В	are			1/2 in. gy	sum ceiling		
Joist depth	Joist series		On cent	re spacing		On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	15'-10"	15'-0"	14'-5"	13'-5"	16'-4"	15'-5"	14'-6"	13'-5"	
0.4/0"	NI-40x	16'-11"	15'-11"	15'-4"	14'-9"	17'-4"	16'-4"	15'-9"	14'-11'	
9-1/2"	NI-60	17'-1"	16'-1"	15'-6"	14'-10"	17'-6"	16'-6"	15'-11"	15'-3"	
	NI-80	18'-1"	17'-0"	16'-4"	15'-8"	18'-7"	17'-4"	16'-8"	16'-0"	
	NI-20	17'-10"	16'-10"	16'-2"	15'-7"	18'-5"	17'-4"	16'-9"	16'-1"	
11-7/8"	NI-40x	19'-3"	17'-10"	17'-2"	16'-6"	19'-10"	18'-5"	17'-8"	16'-11'	
	NI-60	19'-6"	18'-1"	17'-4"	16'-8"	20'-1"	18'-8"	17'-10"	17'-1"	
	NI-80	20'-11"	19'-4"	18'-5"	17'-7"	21'-5"	19'-10"	18'-11"	17'-11'	
	NI-90	21'-4"	19'-9"	18'-9"	17'-10"	21'-10"	20'-3"	19'-3"	18'-3"	
	NI-40x	21'-4"	19'-9"	18'-10"	17'-11"	22'-0"	20'-5"	19'-6"	18'-6"	
14"	NI-60	21'-8"	20'-1"	19'-2"	18'-2"	22'-4"	20'-9"	19'-9"	18'-9"	
14	NI-80	23'-3"	21'-6"	20'-5"	19'-4"	23'-10"	22'-1"	21'-0"	19'-11'	
	NI-90	23'-9"	21'-11"	20'-10"	19'-8"	24'-3"	22'-6"	21'-5"	20'-3"	
	NI-60	23'-7"	21'-10"	20'-10"	19'-9"	24'-4"	22'-7"	21'-7"	20'-5"	
16"	NI-80	25'-4"	23'-5"	22'-3"	21'-1"	26'-0"	24'-1"	22'-11"	21'-8"	
	NI-90	25'-10"	23'-10"	22'-8"	21'-5"	26'-5"	24'-6"	23'-4"	22'-0"	

		Mi	d-span blocking	with 1x4 inch	strap	Mid-sp	an blocking an	d 1/2 in. gypsur	m ceiling
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
9-1/2"	NI-40x	18'-7"	17'-2"	16'-3"	14'-11"	18'-10"	17'-2"	16'-3"	14'-11"
9-1/2	NI-60	18'-10"	17'-6"	16'-6"	15'-5"	19'-1"	17'-6"	16'-6"	15'-5"
	NI-80	20'-2"	18'-9"	17'-11"	16'-10"	20'-7"	19'-2"	18'-2"	16'-10'
	NI-20	20'-1"	18'-5"	17'-5"	16'-1"	20'-1"	18'-5"	17'-5"	16'-1"
11-7/8"	NI-40x	21'-9"	20'-3"	19'-0"	17'-0"	22'-4"	20'-5"	19'-0"	17'-0"
	NI-60	22'-0"	20'-6"	19'-7"	18'-4"	22'-7"	20'-10"	19'-8"	18'-4"
	NI-80	23'-6"	21'-10"	20'-10"	19'-9"	24'-0"	22'-5"	21'-4"	20'-0"
	NI-90	24'-0"	22'-4"	21'-3"	20'-1"	24'-6"	22'-10"	21'-9"	20'-7"
	NI-40x	24'-4"	22'-8"	20'-11"	18'-8"	25'-0"	22'-11"	20'-11"	18'-8"
14"	NI-60	24'-9"	23'-0"	22'-0"	20'-9"	25'-5"	23'-8"	22'-4"	20'-10'
14	NI-80	26'-5"	24'-6"	23'-4"	22'-1"	27'-0"	25'-2"	24'-0"	22'-8"
	NI-90	26'-11"	25'-0"	23'-10"	22'-6"	27'-5"	25'-7"	24'-5"	23'-1"
	NI-60	27'-2"	25'-4"	24'-2"	22'-10"	27'-11"	26'-1"	24'-9"	23'-1"
16"	NI-80	29'-0"	26'-11"	25'-8"	24'-3"	29'-7"	27'-7"	26'-4"	24'-11'
	NI-90	29'-6"	27'-5"	26'-1"	24'-8"	30'-1"	28'-1"	26'-9"	25'-4"

- 1. The tabulated clear spans are based on CSA 086-14 and NBC 2015, and are applicable to residential floor construction meeting the above design criteria.
- 2. For multiple-span applications, the end spans shall be 40% or more of the adjacent span.
- 3. Minimum bearing length shall be 1-3/4 inch for end bearings, and 3-1/2 inches for intermediate bearings.
- 4. Bearing stiffeners are not required when I-joists are used in accordance with this table, except as required for hangers.
- 5. Nordic I-joists are listed in CCMC Evaluation Report 13032-R and APA Product Report PR-L274C.





#### Notes:

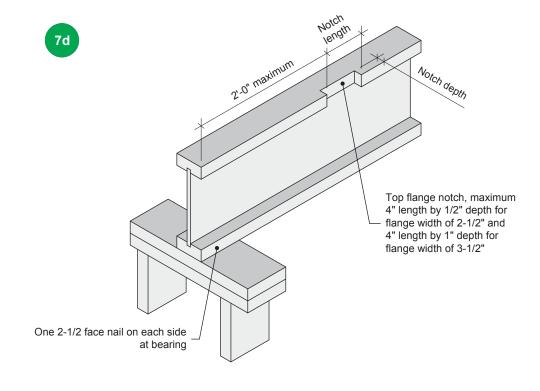
- 1. To prevent interference with plumbing, a joist may be shifted up to 3 inches if the edge of the floor panel is supported and the span rating is not exceeded.
- 2. In all other cases, an additional joist is required.

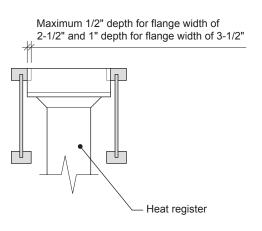
All nails shown in the details are assumed to be common nails unless otherwise noted. Nails shall have a diameter not less than 0.128 inch for 2-1/2-inch nails, or 0.144 inch for 3-inch nails. Individual components not shown to scale for clarity.





Allowance for Piping		7c	
CATEGORY Openings for Vertical Elements	SCALE	DATE 2020-10-01	PAGE 3.10





#### Notes:

- 1. Blocking required at bearing for lateral support, not shown for clarity.
- 2. The maximum dimensions for a notch on the side of the top flange are 4-inch length by 1/2-inch depth for flange width of 2-1/2 inches, and 4-inch length 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.

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.





TITLE		DRAWING	
Notch in I-joist for Heat Register		7d	
-			
CATEGORY	SCALE	DATE	PAGE
Openings for Vertical Elements	-	2020-10-01	3.11