

		Products		
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	3
J2	14-00-00	9 1/2" NI-40x	1	34
J2DJ	14-00-00	9 1/2" NI-40x	2	8
J3	12-00-00	9 1/2" NI-40x	1	10
J4	8-00-00	9 1/2" NI-40x	1	9
J5	4-00-00	9 1/2" NI-40x	1	2
J6	2-00-00	9 1/2" NI-40x	1	4
J7	18-00-00	9 1/2" NI-80	1	22
B1	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B7	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B2AL	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B3AL	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4AL	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B9	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B10	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B20AL	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B8	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

-	Connector Summary					
Qty	Manuf	Product				
17	H1	IUS2.56/9.5				
4	H1	IUS2.56/9.5				
9	H1	IUS2.56/9.5				
7	H1	IUS2.56/9.5				
2	H3	HUS1.81/10				
1	H3	HUS1.81/10				
1	H4C	HUC410				
1	H4	HGUS410				



FROM PLAN DATED: OCT 2023

BUILDER: BAYVIEW WELLINGTON **SITE:** ALCONA SHORES

MODEL: S45-4C ELEVATION: A

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: lbv / CH

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/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

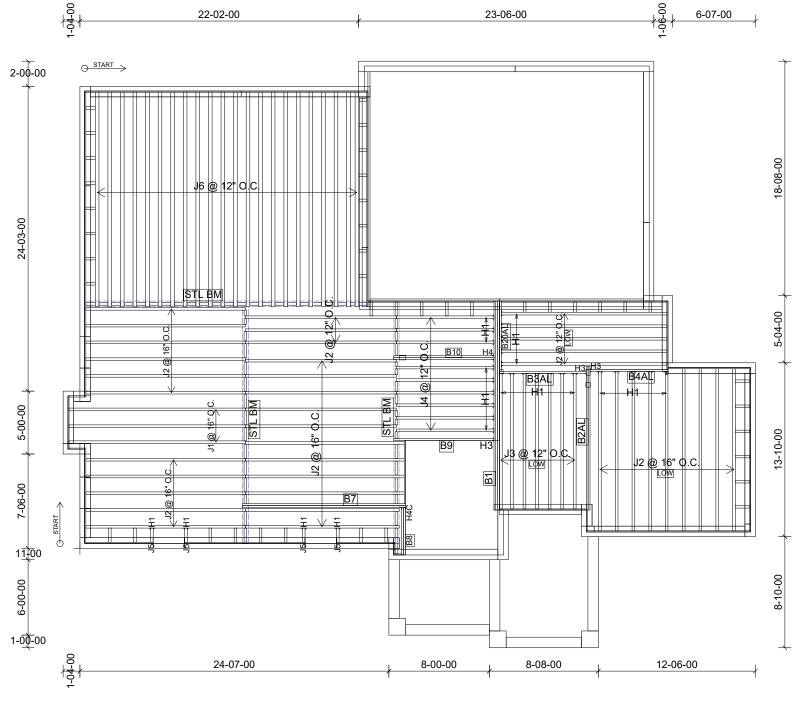
JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 12/15/23

1st FLOOR FRAMING





		Products		
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	3
J2	14-00-00	9 1/2" NI-40x	1	39
J3	12-00-00	9 1/2" NI-40x	1	7
J4	8-00-00	9 1/2" NI-40x	1	9
J5	2-00-00	9 1/2" NI-40x	1	4
J6	18-00-00	9 1/2" NI-80	1	22
B1	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B7	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B2AL	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B3AL	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4AL	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B9	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B10	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B20AL	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B8	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

	Connector Summary					
Qty	Manuf	Product				
17	H1	IUS2.56/9.5				
9	H1	IUS2.56/9.5				
4	H1	IUS2.56/9.5				
2	H3	HUS1.81/10				
1	H3	HUS1.81/10				
1	H4C	HUC410				
1	H4	HGUS410				



FROM PLAN DATED: OCT 2023
BUILDER: BAYVIEW WELLINGTON

SITE: ALCONA SHORES

MODEL: S45-4C ELEVATION: A

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: lbv / CH

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/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

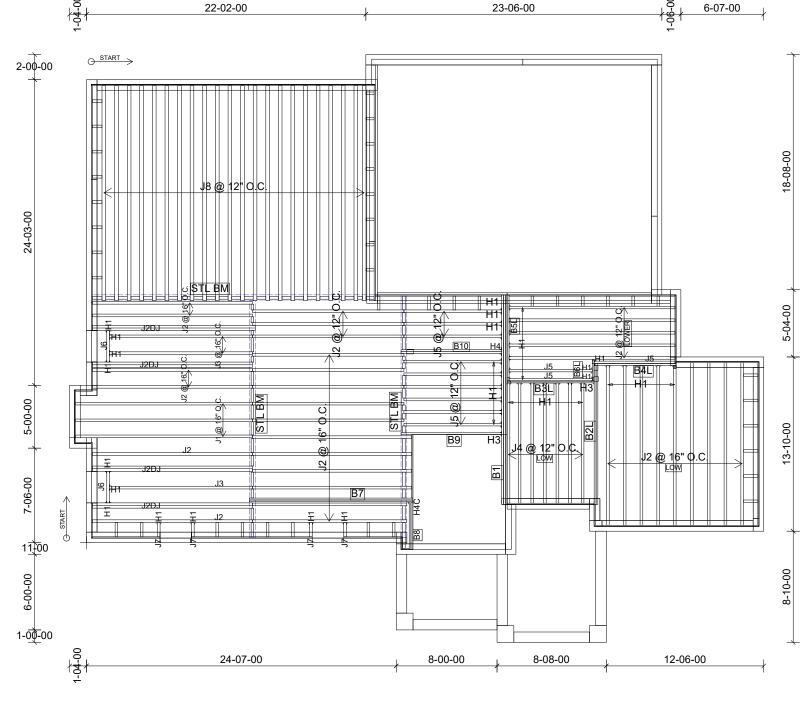
JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 12/15/23

1st FLOOR FRAMING DECK CONDITION





•		Products		
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	3
J2	14-00-00	9 1/2" NI-40x	1	34
J2DJ	14-00-00	9 1/2" NI-40x	2	8
J3	12-00-00	9 1/2" NI-40x	1	3
J4	10-00-00	9 1/2" NI-40x	1	7
J5	8-00-00	9 1/2" NI-40x	1	12
J6	4-00-00	9 1/2" NI-40x	1	2
J7	2-00-00	9 1/2" NI-40x	1	4
J8	18-00-00	9 1/2" NI-80	1	22
B1	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B7	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B2L	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B3L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B5L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B9	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B10	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B8	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B6L	2-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1

	Connector Summary					
		,				
Qty	Manuf	Product				
22	H1	IUS2.56/9.5				
4	H1	IUS2.56/9.5				
9	H1	IUS2.56/9.5				
7	H1	IUS2.56/9.5				
1	H3	HUS1.81/10				
1	H3	HUS1.81/10				
1	H4C	HUC410				
1	H4	HGUS410				



FROM PLAN DATED: OCT 2023

BUILDER: BAYVIEW WELLINGTON

SITE: ALCONA SHORES

MODEL: S45-4C ELEVATION: A

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: lbv / CH

> 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/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

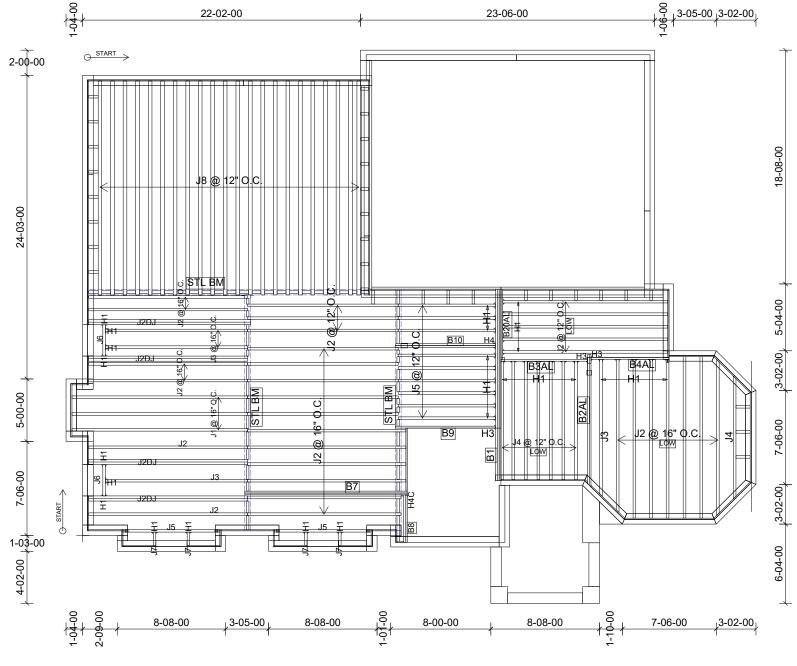
JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 12/18/23

1st FLOOR FRAMING SUNKEN MUDROOM





		Products		
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	3
J2	14-00-00	9 1/2" NI-40x	1	32
J2DJ	14-00-00	9 1/2" NI-40x	2	8
J3	12-00-00	9 1/2" NI-40x	1	4
J4	10-00-00	9 1/2" NI-40x	1	8
J5	8-00-00	9 1/2" NI-40x	1	11
J6	4-00-00	9 1/2" NI-40x	1	2
J7	2-00-00	9 1/2" NI-40x	1	4
J8	18-00-00	9 1/2" NI-80	1	22
B1	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B7	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B2AL	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B3AL	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4AL	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B9	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B10	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B20AL	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B8	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

	Connector Summary					
Qty	Manuf	Product				
17	H1	IUS2.56/9.5				
4	H1	IUS2.56/9.5				
9	H1	IUS2.56/9.5				
7	H1	IUS2.56/9.5				
2	H3	HUS1.81/10				
1	H3	HUS1.81/10				
1	H4C	HUC410				
1	H4	HGUS410				



FROM PLAN DATED: OCT 2023
BUILDER: BAYVIEW WELLINGTON

SITE: ALCONA SHORES

MODEL: S45-4C ELEVATION: B

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: lbv / CH

> 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/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

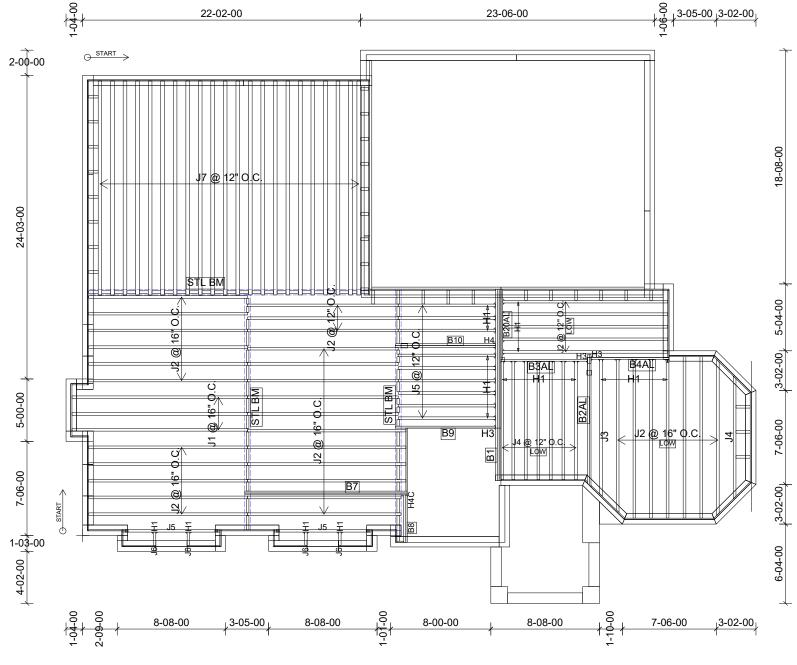
JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 12/18/23

1st FLOOR FRAMING





		Products		
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	3
J2	14-00-00	9 1/2" NI-40x	1	37
J3	12-00-00	9 1/2" NI-40x	1	1
J4	10-00-00	9 1/2" NI-40x	1	8
J5	8-00-00	9 1/2" NI-40x	1	11
J6	2-00-00	9 1/2" NI-40x	1	4
J7	18-00-00	9 1/2" NI-80	1	22
B1	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B7	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B2AL	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B3AL	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4AL	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B9	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B10	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B20AL	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B8	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2

Connector Summary					
Qty	Manuf	Product			
17	H1	IUS2.56/9.5			
9	H1	IUS2.56/9.5			
4	H1	IUS2.56/9.5			
2	H3	HUS1.81/10			
1	H3	HUS1.81/10			
1	H4C	HUC410			
1	Н4	HGUS410			



FROM PLAN DATED: OCT 2023

BUILDER: BAYVIEW WELLINGTON **SITE**: ALCONA SHORES

MODEL: S45-4C ELEVATION: B

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: lbv / CH

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.

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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/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

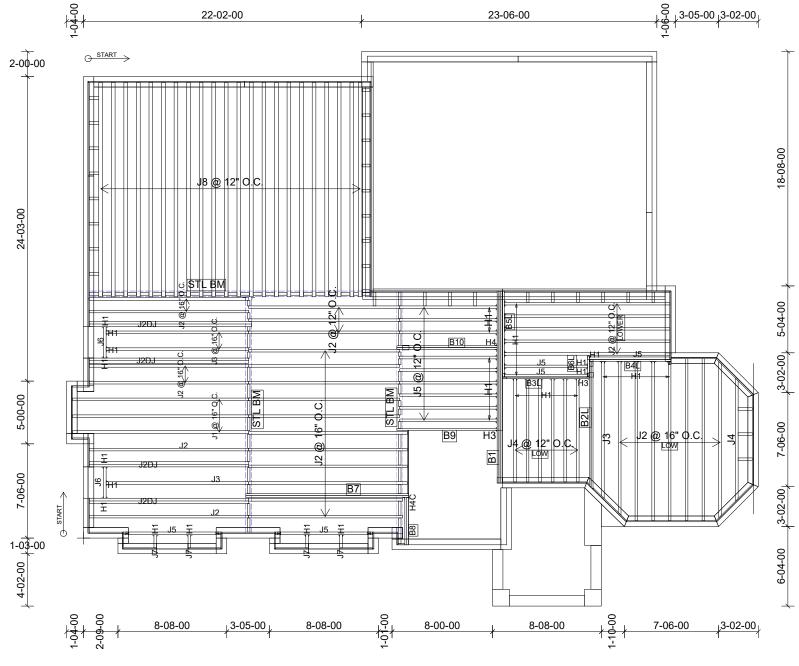
JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 12/18/23

1st FLOOR FRAMING DECK CONDITION





		Products		
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	9 1/2" NI-40x	1	3
J2	14-00-00	9 1/2" NI-40x	1	32
J2DJ	14-00-00	9 1/2" NI-40x	2	8
J3	12-00-00	9 1/2" NI-40x	1	4
J4	10-00-00	9 1/2" NI-40x	1	7
J5	8-00-00	9 1/2" NI-40x	1	14
J6	4-00-00	9 1/2" NI-40x	1	2
J7	2-00-00	9 1/2" NI-40x	1	4
J8	18-00-00	9 1/2" NI-80	1	22
B1	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
B7	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B2L	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B3L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B4L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B5L	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B9	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
B10	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B8	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
B6L	2-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1

	connector	Summary				
Qty	Manuf	Product				
21	H1	IUS2.56/9.5				
4	H1	IUS2.56/9.5				
9	H1	IUS2.56/9.5				
7	H1	IUS2.56/9.5				
1	H3	HUS1.81/10				
1	H3	HUS1.81/10				
1	H4C	HUC410				
1	H4	HGUS410				



FROM PLAN DATED: OCT 2023

BUILDER: BAYVIEW WELLINGTON **SITE:** ALCONA SHORES

MODEL: S45-4C ELEVATION: B

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: lbv / CH

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.

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LOADING:

LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

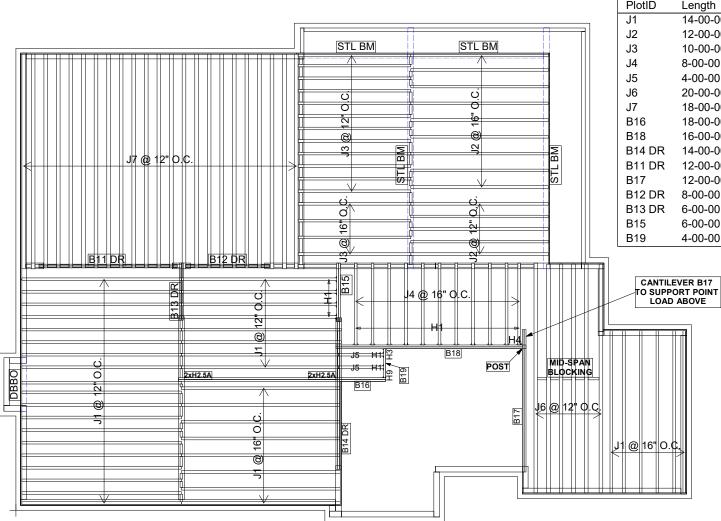
JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

DATE: 12/18/23

1st FLOOR FRAMING SUNKEN MUDROOM





Products									
PlotID	Length	Product	Plies	Net Qty					
J1	14-00-00	9 1/2" NI-40x	1	41					
J2	12-00-00	9 1/2" NI-40x	1	14					
J3	10-00-00	9 1/2" NI-40x	1	16					
J4	8-00-00	9 1/2" NI-40x	1	11					
J5	4-00-00	9 1/2" NI-40x	1	2					
J6	20-00-00	9 1/2" NI-80	1	6					
J7	18-00-00	9 1/2" NI-80	1	23					
B16	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2					
B18	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2					
B14 DR	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3					
B11 DR	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2					
B17	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2					
B12 DR	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2					
B13 DR	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2					
B15	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2					
B19	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1					

	connector	Summary
Qty	Manuf	Product
2	H1	IUS2.56/9.5
15	H1	IUS2.56/9.5
1	H3	HUS1.81/10
1	H4	HGUS410
1	H9	LS90
4		H2.5A*

DATE: 12/18/23

2nd FLOOR FRAMING



FROM PLAN DATED: OCT 2023
BUILDER: BAYVIEW WELLINGTON

SITE: ALCONA SHORES

MODEL: S45-4C ELEVATION: A

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: lbv / CH

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

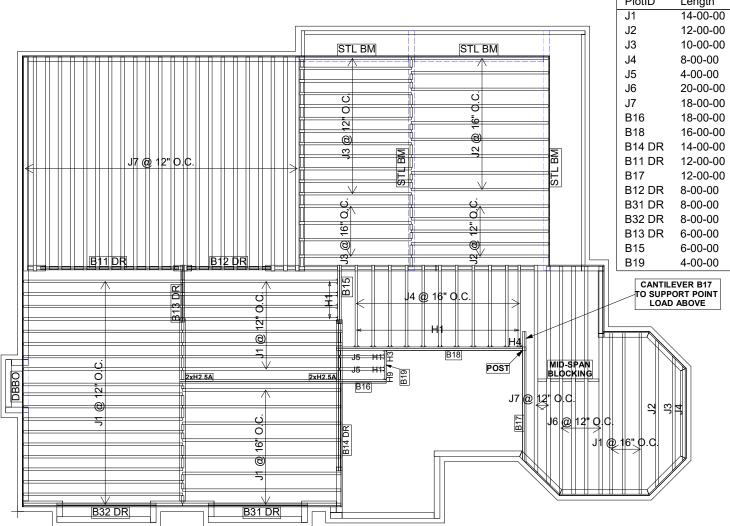
LOADING:

LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED





	PlotID	Length	Product	Plies	Net Qty
	J1	14-00-00	9 1/2" NI-40x	1	38
	J2	12-00-00	9 1/2" NI-40x	1	15
	J3	10-00-00	9 1/2" NI-40x	1	17
	J4	8-00-00	9 1/2" NI-40x	1	12
	J5	4-00-00	9 1/2" NI-40x	1	2
	J6	20-00-00	9 1/2" NI-80	1	4
	J7	18-00-00	9 1/2" NI-80	1	25
	B16	18-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
	B18	16-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
	B14 DR	14-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	3	3
	B11 DR	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
	B17	12-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
	B12 DR	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
	B31 DR	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
	B32 DR	8-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
	B13 DR	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
	B15	6-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	2	2
7	B19	4-00-00	1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL	1	1
TI (

Connector Summary								
Qty	Manuf	Product						
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1	H9	LS90						
4		H2.5A*						

DATE: 12/18/23

2nd FLOOR FRAMING



FROM PLAN DATED: OCT 2023
BUILDER: BAYVIEW WELLINGTON

SITE: ALCONA SHORES

MODEL: S45-4C ELEVATION: B

LOT:

CITY: INNISFIL

SALESMAN: WILL GARCIA

DESIGNER: AJ REVISION: lbv / CH

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.

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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.

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LOADING:

LIVE LOAD: 40.0 lb/ft² DEAD LOAD: 15.0 lb/ft² TILE LOAD: +5.0 lb/ft²

JOIST LL DEFLECTION LIMIT: L/480

SUBFLOOR: 5/8" GLUED AND NAILED

INSTALLATION GUIDE NORDIC JOIST NS-GI33 **■**◆■

VERSION 2020-10-01

Engineered Wood Products

BASIC INSTALLATION **GUIDE FOR RESIDENTIAL FLOORS**

NORDIC **U**JOIST

NORDIC **STRUCTURES**

WEB STIFFENERS

NAIL SPACING

nordic.ca

1a

1g

1h

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 alignmen
- 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-joists installed directly beneath bearing walls parallel to the joists or used as rim board or blocking panels, the 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

1n

- 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. ndividual components not shown to scale for clarity.

NORDIC I-JOIST SERIES RESIDENTIAL SERIES



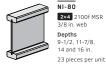
2x3 1950f MSR 3/8 in. web 33 pieces per unit



1d

1k

1p



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

SAFETY AND CONSTRUCTION PRECAUTIONS

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

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,

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

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

NI-90 RIM BOARDS 2x4 2400f MSR 7/16 in. web Width 1-1/8 in. Depths 11-7/8, 14 and 16 in. 23 pieces per uni

APA Rim Board Plu

Do not walk on I-joist

braced or serious

Never stack building

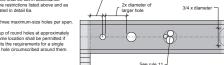
until fully fastened an

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.

- 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



DUCT CHASE OPENINGS

6b

11-7/8

he distance between the inside edge of the support and the cu uct chase opening shall be in compliance with the requiremen

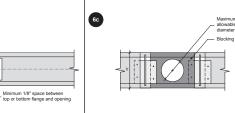
Rules for Cutting Duct Chase Openings in I-joists

- I-joist top and bottom flanges must never be cut, notched or otherwise mo
- 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. The top and bottom flanges of an I-joist blocking panel must never be cut,
- All openings shall be cut in accordance with the restrictions listed above and as illustrated in detail 6b.

HOLES IN BLOCKING PANELS

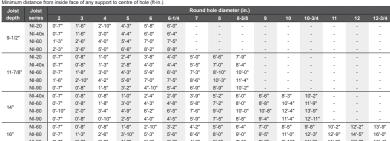
Holes cut into the blocking panels are subject to the following limitations

Allowable Hole Size in Lateral-restraint-only Blocking Panels



	I-joist or rim board blocking depth (in.)	Maximum allowable hole diameter (in.) ^(a)
ı	9-1/2	6-1/4
ı	11-7/8	7-3/4
ı	14	9-1/4
ı	16	10-1/2

TABLE 6.1 - LOCATION OF WEB HOLES



	tes:
1.	Tabulated values are applicable to residential floor construction meeting the above design criteria.
2.	The above table is based on the I-joists being used at their maximum spans.
	The minimum distance as given above may be reduced for shorter spans;

8-5/8

TABLE 6.2 - LOCATION OF DUCT CHASE OPENINGS

Simple or multiple span



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"	-	-	-	-	-	-
11-7/8"	NI-40x	0'-7"	0'-8"	1'-3"	2"-8"	4'-0"	4'-4"	5'-5"	7'-0"	8'-4"	-	-	-	-	-	-
	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"	-	-	-
14"	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"
16"	NI-80	0'-7"	1'-3"	2'-6"	3'-10"	5'-3"	5'-6"	6'-6"	8'-0"	9'-0"	9'-5"	11'-0"	12'-3"	12'-9"	14'-5"	16'-0"
	NI-90	0'-7"	0'-8"	0'-8"	1'-9"	3'-3"	3'-8"	4'-9"	6'-5"	7'-5"	8'-0"	9'-10"	11'-3"	11'-9"	13'-9"	15'-4"

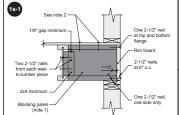
NI-20 4'-1" 4'-5" 4'-10" - - - - - - NI-40x 5'-3" 5'-8" 6'-0" 6'-5" 6'-10" 7'-3" 7'-8" NI-60 5'-4" 5'-9" 6'-2" 6'-7" 7'-1" 7'-5" 8'-0"

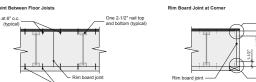
RIM BOARDS



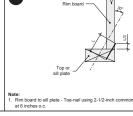


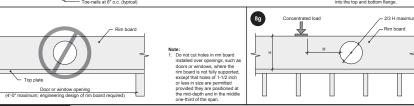


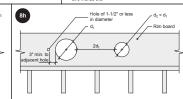




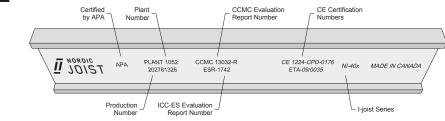
Simple span



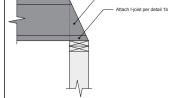




-JOIST MARKING



dard. ers use net joist depth minus 3-1/4 inches for joists with



2 x 2x10 2 x 2x12

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

connection. Leave a 1/8-inch to 1/4-inch gap between top of filler block and bottom of to

FOR ALL construction details \rightarrow DC3

1 x 2-5/16 Minimum width 1-1/2 x 2-5/16 Minimum width



CITY:

BAYVIEW WELLINGTON

S45-4C INNISFIL

ALCONA SHORES

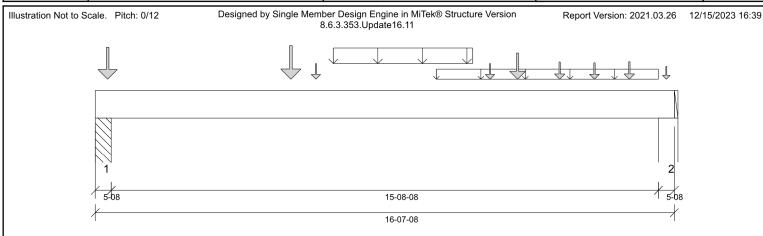
Job Name: S45-4C **1ST FLR FRAMING** Level:

Label: B1 - i2977

Type: **Beam** 3 Ply Member

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

Status: Design Passed



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: 5'- 6 1/2" Bottom: 5'- 6 1/2"

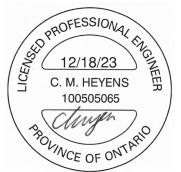
Factored Resistance of Support Material:

- 615 psi Column @ 0'- 4 1/2"
- 615 psi Wall @ 16'- 3"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120960 PG 1/2

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	8'- 5 3/16"	1.25D + 1.5L	1.00	13788 lb ft	34949 lb ft	Passed - 39%
Factored Shear:	15'- 4 1/2"	1.25D + 1.5L	1.00	3548 lb	16578 lb	Passed - 21%
Live Load (LL) Pos. Defl.:	8'- 5 1/16"	L		0.352"	L/360	Passed - L/535
Total Load (TL) Pos. Defl.:	8'- 5 11/16"	D + L		0.611"	L/240	Passed - L/308
Permanent Deflection:	8'- 6 9/16"			-	L/360	Passed - L/749

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	3388 lb		30030 lb	17758 lb	Passed - 19%		
2	5-08	1.25D + 1.5L	1.00	3821 lb		30030 lb	17764 lb	Passed - 22%		
SPE	CIEIED I O	ADS								

SPECIFIED LOADS										
Туре	Type Start Loc End Loc		Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)		
Self Weight	0'	16'- 7 1/2"	Self Weight	Тор	14 lb/ft	-	-	-		
Uniform	6'- 10"	10'- 10"	Smoothed Load	Back	85 lb/ft	170 lb/ft	-	-		
Uniform	9'- 9 1/2"	16'- 2"	User Load	Top	60 lb/ft	-	-	-		
Point	5'- 7 3/8"	5'- 7 3/8"	B9(i2951)	Back	279 lb	521 lb	-	-		
Point	6'- 4"	6'- 4"	J4(i2910)	Back	76 lb	152 lb	-	-		
Point	11'- 4"	11'- 4"	J4(i3185)	Back	76 lb	152 lb	-	-		
Point	12'- 1 1/2"	12'- 1 1/2"	B10(i2857)	Back	239 lb	327 lb	-	-		
Point	13'- 4"	13'- 4"	J4(i2927)	Back	94 lb	187 lb	-	-		
Point	14'- 4"	14'- 4"	J4(i2876)	Back	85 lb	170 lb	-	-		
Point	15'- 4"	15'- 4"	J4(i2816)	Back	97 lb	194 lb	-	-		
Point	0'- 4 1/4"	0'- 4 1/4"	User Load	Тор	250 lb	500 lb	-	-		
Point	16'- 4 3/4"	16'- 4 3/4"	E26(i1033)	Тор	76 lb	64 lb	-	-		
LINEAC	LINEACTORED REACTIONS									

	ON ACTORES REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 5 1/2"	PBO2(i67)	959 lb	1460 lb	-	-					
2	16'- 2"	16'- 7 1/2"	W38(i58)	1272 lb	1487 lb	-	-					

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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 length at support 2 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full

PLY TO PLY CONNECTION



CITY:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C INNISFIL

ALCONA SHORES S45-4C Job Name: **S45-4C**

Level: 1ST FLR FRAMING

Label: B1 - i2977 Type: Beam 3 Ply Member

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

Design
Passed

PLY TO PLY CONNECTION





CITY:

BAYVIEW WELLINGTON

S45-4C **INNISFIL**

ALCONA SHORES

Job Name: S45-4C

Level: 1ST FLR FRAMING Label: **B2AL - i2830**

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 12/15/2023 16:39 8.6.3.353.Update16.11

> 10-03-00 11-05-00

DESIGN INFORMATION

5-08

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

Amendment)

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

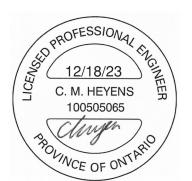
Bottom: 10'- 9 3/8"

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Column @ 10'- 11 1/4"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120961

l	ANALYSIS RESULTS							
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result	
l	Factored Pos. Moment:	9'- 11 1/2"	1.25D + 1.5L + S	1.00	6899 lb ft	23299 lb ft	Passed - 30%	
ı	Factored Neg. Moment:	10'- 11 1/4"	1.25D + 1.5L + S	1.00	283 lb ft	20786 lb ft	Passed - 1%	
l	Factored Shear:	9'- 11"	1.25D + 1.5L + S	1.00	6853 lb	11052 lb	Passed - 62%	
ı	Live Load (LL) Pos. Defl.:	6'- 3 1/16"	L + 0.5S		0.087"	L/360	Passed - L/999	
ı	Total Load (TL) Pos. Defl.:	6'- 3 5/16"	D + L + 0.5S		0.165"	L/240	Passed - L/746	

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	2709 lb		20020 lb	11843 lb	Passed - 23%				
2	5-08	1.25D + 1.5L + S	1.00	10596 lb	10596 lb		11839 lb	Passed - 90%				
SPECIFIED LOADS												

П	SPECIF	IED LOAD	S						
Ш	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
П	Self Weight	0'	11'- 5"	Self Weight	Тор	9 lb/ft	-	-	-
	Uniform	0'	11'- 1 1/8"	FC2 Floor Decking (Plan View Fill)	Тор	9 lb/ft	19 lb/ft	-	-
	Uniform	-0'	10'- 11 3/8"	FC2 Floor Decking (Plan View Fill)	Тор	11 lb/ft	21 lb/ft	-	-
Ш	Uniform	0'- 5 1/2"	1'- 1/2"	User Load	Тор	60 lb/ft	-	-	-
Ш	Uniform	8'- 6 1/2"	11'- 2"	User Load	Тор	60 lb/ft	-	-	-
Ш	Point	11'- 1 1/8"	11'- 1 1/8"	B4AL(i3156)	Front	531 lb	686 lb	-	-
Ш	Point	10'- 11 3/8"	10'- 11 3/8"	B3AL(i2835)	Back	353 lb	675 lb	-	-
Ш	Point	0'- 2 3/4"	0'- 2 3/4"	E10(i896)	Тор	555 lb	515/-59 lb	-50 lb	-
Ш	Point	9'- 11 1/2"	9'- 11 1/2"	PBO9(i1227)	Top	2475 lb	2528 lb	544 lb	-

Point	9-11-1/2	9-11 1/2	PBO9(11227)	10p 2475 lb	2526 ID	544 ID	-					
UNFACTORED REACTIONS												
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 5 1/2"	W15(i21)	1022 lb	994/-61 lb	-1 lb	-					
2	10'- 8 1/2"	11'- 2"	PBO1(i64)	3413 lb	3852 lb	495 lb	-					

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- The deflection at the cantilever for either live and/or total loads is less than 1/8" 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.

PLY TO PLY CONNECTION



CITY:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C **INNISFIL**

1ST FLR FRAMING Level: Label: **B3AL - i2835**

Type: **Beam**

Job Name: S45-4C

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

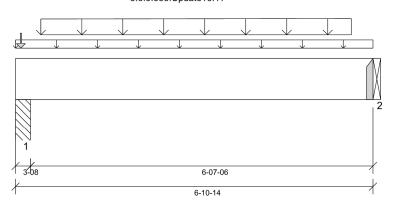
WestFraser LVL

Status: Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

Report Version: 2021.03.26 12/15/2023 16:39



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:

Bottom: 0'- 9 3/4"

Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Beam @ 6'- 10 7/8"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 11 7/8"	1.25D + 1.5L	1.00	2707 lb ft	11650 lb ft	Passed - 23%
Factored Shear:	6'- 1 3/8"	1.25D + 1.5L	1.00	1426 lb	5526 lb	Passed - 26%
Live Load (LL) Pos. Defl.:	3'- 6 11/16"	L		0.042"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 6 11/16"	D + L		0.064"	L/240	Passed - L/999

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	3-08	1.25D + 1.5L	1.00	1735 lb		6370 lb	3767 lb	Passed - 46%	
l	2	1-08	1.25D + 1.5L	1.00	1457 lb		2730 lb	-	Passed - 53%	

CONIN	ECTOD	INFORMATION	
CONN	IEUTUR	INFURIMATION	

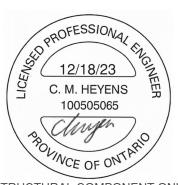
ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for
טו	Fait No.		Тор	Face	Member	Reinforcement Accessories
2	HIIC1 91/10					Connector manually engeified by the us

* 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.

3. 13. 12. 13. 13. 13. 13. 13. 13. 13. 13. 13. 13									
Туре	Type Start Loc End Loc Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)		
Self Weight 0' 6'- 10 7/8" Self Weight Uniform 0' 6'- 10 7/8" FC2 Floor Decking (Plan View Fill)		6'- 10 7/8"	7/8" Self Weight		5 lb/ft	-	-	-	
		Тор	7 lb/ft	14 lb/ft	-	-			
Tapered	0'- 5 7/8"	6'- 5 7/8"	Smoothed Load	Front	104 To 109 lb/ft	210 To 218 lb/ft	-	-	
Point	Point 0'- 1 1/4" 0'- 1 1/4" J3(i3081) Fr		Front	53 lb	105 lb	-	-		
UNFAC	TORED RI	EACTIONS	3						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)	
1	1 0' 0'- 3 1/2" PBO3(i68)		421 lb	808 lb	-	-			
2	2 6'- 10 7/8" 6'- 10 7/8" B2AL(i2830)		353 lb	675 lb	-	-			
DESIG	NOTES								

SPECIFIED LOADS

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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 # TF23120962



CITY:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C **INNISFIL**

Job Name: S45-4C Level:

1ST FLR FRAMING Label: **B4AL - i3156**

Type:

Beam

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

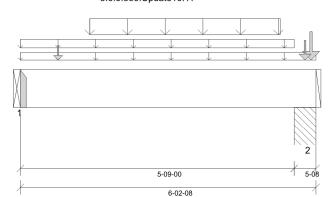
Report Version: 2021.03.26

Status: Design Passed

12/15/2023 16:39

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11



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:

Bottom: 1'- 1 1/2"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Column @ 5'- 10"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 7 3/4"	1.25D + 1.5L	1.00	2349 lb ft	11650 lb ft	Passed - 20%
Factored Neg. Moment:	5'- 10"	1.25D + 1.5L + S	1.00	609 lb ft	11650 lb ft	Passed - 5%
Factored Shear:	4'- 11 1/2"	1.25D + 1.5L + S	1.00	1657 lb	5526 lb	Passed - 30%
Live Load (LL) Pos. Defl.:	2'- 10 1/4"	L		0.024"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 10 5/16"	D + L		0.042"	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	1-08	1.25D + 1.5L	1.00	1592 lb		2730 lb	-	Passed - 58%				
2	5-08	1.25D + 1.5L + S	1.00	4452 lb		10010 lb	5919 lb	Passed - 75%				

-	IECTOR		
COM	IECION	IIALOKIA	IATION

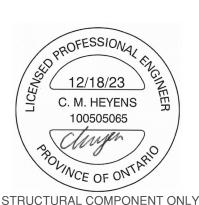
ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for
טו	Fait No.	Manuacturei	Тор	Face	Member	Reinforcement Accessories
1	HUS1 81/10		_	_	_	Connector manually specified by the user

* 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.

SPECIF	IED LOAD	S							
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)	
Self Weight	0'	6'- 2 1/2"	Self Weight	Тор	5 lb/ft	-	-	-	
Uniform	0'	6'- 2 1/2"	FC2 Floor Decking (Plan View Fill)	Тор	5 lb/ft	11 lb/ft	-	-	
Uniform	0'	5'- 9"	User Load	Top	60 lb/ft	-	-	-	
Tapered	1'- 5 1/2"	5'- 5 1/2"	Smoothed Load	Front	126 To 124 lb/ft	251 To 249 lb/ft	-	-	
Point	0'- 9 1/2"	0'- 9 1/2"	J2(i3173)	Front	142 lb	285 lb	-	-	
Point	6'- 1 1/4"	6'- 1 1/4"	J2(i3065)	Front	433 lb	756 lb	30 lb	-	
Point	5'- 11 3/4"	5'- 11 3/4"	E30(i1246)	Тор	266 lb	422 lb	30 lb	-	
UNFACTORED REACTIONS									

UNFAC	JOKED KI	EACTIONS					
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'	B2AL(i2830)	531 lb	686 lb	-	-
2	5'- 9"	6'- 2 1/2"	PBO4(i72)	1218 lb	1844 lb	60 lb	

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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 # TF23120963



CITY:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C **INNISFIL**

Job Name: S45-4C

Level: **1ST FLR FRAMING**

Label: B7 - i2811 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 12/15/2023 16:39 8.6.3.353.Update16.11 5-08 11-06-12

12-11-08

SUPPORT AND REACTION INFORMATION

DESIGN INFORMATION

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

Amendment)

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

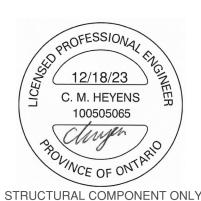
Bottom: 11'- 6 3/4"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Beam @ 12'- 3"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" O/C

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



DWG # TF23120964

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	1'- 10 1/8"	1.4D	0.65	13 lb ft	15145 lb ft	Passed - 0%
Factored Neg. Moment:	12'- 3"	1.25D + 1.5L	1.00	3994 lb ft	20409 lb ft	Passed - 20%
Factored Shear:	11'- 2 3/4"	1.25D + 1.5L	1.00	669 lb	11052 lb	Passed - 6%
Live Load (LL) Neg. Defl.:	7'- 11 9/16"	L		0.030"	L/360	Passed - L/999
Total Load (TL) Neg. Defl.:	8'- 1/2"	D + L		0.050"	L/240	Passed - L/999

Factored

Factored

Factored

Factored

		Input Bearing Length	Controlling Combina		Factored Downward Reaction	d Uplift	Factored Resistance of Member	Factored Resistance of Support	Result
ı	1	5-08	1.25D +	1.5L 1.00	428 lb		20020 lb	11839 lb	Passed - 4%
l	2	5-08	1.25D +	1.5L 1.00	8580 lb		20020 lb	11839 lb	Passed - 72%
l	SPECI	FIED LOAD	S						
l	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
l	Self Weight	0'	12'- 11 1/2"	Self Weight	Тор	9 lb/ft	-	-	-
l	Uniform	0'- 2 3/4"	12'- 3"	FC3 Floor Decking (Plan View Fill)	Тор	13 lb/ft	27 lb/ft	-	-
ı	Point	12'- 9 3/4"	12'- 9 3/4"	B8(i2412)	Front	587 lb	681 lb	-	-
ı	Point	0'- 2 3/4"	0'- 2 3/4"	4(i1120)	Тор	97 lb	146 lb	-	-
ı	Point	12'- 8 3/4"	12'- 8 3/4"	5(i1167)	Тор	1563 lb	2031 lb	-	-
ı	Point	12'- 9 3/4"	12'- 9 3/4"	User Load	Тор	250 lb	500 lb	-	-
l	Point	12'- 11 1/4"	12'- 11 1/4"	FC3 Floor Decking (Plan View Fill)	Тор	4 lb	7 lb	-	-
l	UNFA	CTORED RI	EACTIONS						
١	ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
۱	1	0'	0'- 5 1/2"	STL BM(i6	0)	96 lb	119 lb	-	-
۱	2	12'- 1/4"	12'- 5 3/4"	STL BM(i6	1)	2687 lb	3566 lb	-	-

DESIGN NOTES

Input

- The dead loads used in the design of this member were applied to the structure as projected 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 1/8" 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.
- 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=5000 lb, Q'r=5460 lb, Result=91.59%

PLY TO PLY CONNECTION



CITY:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C INNISFIL

ALCONA SHOR S45-4C Job Name: S45-4C

Level: 1ST FLR FRAMING

Label: B8 - i2412 Type: Beam 2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Report Version: 2021.03.26

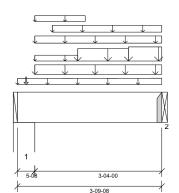
Status:

Design
Passed

12/15/2023 16:39

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11



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:

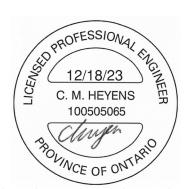
Top: 0' Bottom: 3'- 4"

Factored Resistance of Support Material:

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

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.



STRUCTURAL COMPONENT ONLY DWG # TF23120965

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 2 7/16"	1.25D + 1.5L	1.00	1354 lb ft	23299 lb ft	Passed - 6%
Factored Shear:	3'	1.25D + 1.5L	1.00	836 lb	11052 lb	Passed - 8%

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	1325 lb		20020 lb	11843 lb	Passed - 11%			
2	1-08	1.25D + 1.5L	1.00	1764 lb		5460 lb	-	Passed - 32%			

CONNECTOR INFORMATION

ın	ID Part No.	Manufacturer	Na	iling Requirem	ents	Other Information or Requirement for
טו	Fait No.	Manufacturer	Тор	Face	Member	Reinforcement Accessories
2	HUC/110		_	_	_	Connector manually enecified by the use

* 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	IED LOAD	S						
Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	3'- 9 1/2"	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	0'- 5 1/2"	3'- 9 1/2"	User Load	Тор	70 lb/ft	140 lb/ft	-	-
Uniform	0'- 5 1/2"	3'- 9 1/2"	5(i1167)	Top	81 lb/ft	-	-	-
Uniform	0'- 5 1/2"	1'- 9 3/8"	5(i1167)	Тор	5 lb/ft	9 lb/ft	-	-
Uniform	0'- 5 1/2"	1'- 7"	5(i1167)	Тор	2 lb/ft	2 lb/ft	-	-
Uniform	0'- 11"	3'- 9 1/2"	5(i1167)	Тор	60 lb/ft	-	-	-
Uniform	1'- 7"	2'- 11"	5(i1167)	Тор	120 lb/ft	240 lb/ft	-	-
Uniform	2'- 11"	3'- 9 1/2"	5(i1167)	Тор	148 lb/ft	297 lb/ft	-	-
Tapered	-0'	3'- 9 1/2"	FC3 Floor Decking (Plan View Fill)	Тор	7 To 12 lb/ft	14 To 24 lb/ft	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E21(i986)	Тор	63 lb	-	-	-

Point	0'- 2 3/4"	0'- 2 3/4"	E21(i986)	Тор	63 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"	W18(i35)		523 lb	453 lb	-	-
2	3'- 9 1/2"	3'- 9 1/2"	B7(i2811)		587 lb	681 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C INNISFIL Job Name: S45-4C

Level: 1ST FLR FRAMING
Label: B9 - i2951

Label: B9 - i29
Type: Beam

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

WestFraser LVL

Design Passed

12/15/2023 16:39

Status:

Illustration Not to Scale. Pitch: 0/12 Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

Performance of the provided Hember Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

Performance of the provided Hember Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

Performance of the provided Hember Design Engine in MiTek® Structure Version 8.6.3.253.Update16.11

Performance of the provided Hember Design Engine in MiTek® Structure Version 8.6.3.253.Update16.11

Performance of the provided Hember Design Engine in MiTek® Structure Version 8.6.3.253.Update16.11

Performance of the provided Hember Design Engine in MiTek® Structure Version 8.6.3.253.Update16.11

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Performance of the provided Hember Design Engine in MiTek® Structure Version 8.6.3.253.Update16.11

Performance of the provided Hember Design Engine in MiTek® Structure Version 9.0.253.Update16.11

Performance of the provided Hember Design Engine in MiTek® Structure Version 9.0.253.Update16.11

Performance of the provided Hember Design Engine in MiTek® Structure Version 9.0.253.Update16.11

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Performance of the provided Hember Design Engine in MiTek® Structure Version 9.0.253.Update16.11

Performance of the provided Hember Design Engine in MiTek® Structure Version 9.0.253.Update16.11

Performance of the provided Hemb

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:

op: 0' Bottom: 7'- 5/8"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Beam @ 7'- 11 7/8"

Location	Load Combination	LDF	Design	Limit	Result
1'- 2 7/16"	1.25D + 1.5L	1.00	2113 lb ft	11650 lb ft	Passed - 18%
7'- 2 3/8"	1.25D + 1.5L	1.00	882 lb	5526 lb	Passed - 16%
4'- 2 1/4"	L		0.042"	L/360	Passed - L/999
4'- 2 1/4"	D + L		0.064"	L/240	Passed - L/999
1	'- 2 7/16" 7'- 2 3/8" 4'- 2 1/4"	'- 2 7/16" 1.25D + 1.5L 7'- 2 3/8" 1.25D + 1.5L 4'- 2 1/4" L	'- 2 7/16" 1.25D + 1.5L 1.00 7'- 2 3/8" 1.25D + 1.5L 1.00 4'- 2 1/4" L	'- 2 7/16" 1.25D + 1.5L 1.00 2113 lb ft 7'- 2 3/8" 1.25D + 1.5L 1.00 882 lb 4'- 2 1/4" L 0.042"	

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	5-08	1.25D + 1.5L	1.00	976 lb		10010 lb	5919 lb	Passed - 16%			
l	2	1-08	1.25D + 1.5L	1.00	1130 lb		2730 lb	-	Passed - 41%			

CONNECTOR INFORMATION

ın	Part No.	Manufacturer	Na	iling Requireme	ents	Other Information or Requirement for
טו	Fait No.	Manuacturei	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.

SPECIF	FIED LOAD)S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	7'- 11 7/8"	Self Weight	Тор	5 lb/ft	-	-	-
Uniform	0'- 2 3/4"	0'- 11 1/4"	FC3 Floor Decking (Plan View Fill)	Тор	3 lb/ft	6 lb/ft	-	-
Uniform	0'- 11 1/4"	7'- 11 7/8"	FC3 Floor Decking (Plan View Fill)	Тор	8 lb/ft	16 lb/ft	-	-
Uniform	0'- 11 1/4"	4'- 5 9/16"	User Load	Front	60 lb/ft	120 lb/ft	-	-
Uniform	4'- 5 9/16"	7'- 11 7/8"	User Load	Тор	60 lb/ft	120 lb/ft	-	-
UNFAC	TORED RI	EACTIONS	5					
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM(i61)		244 lb	447 lb	-	-
2	7'- 11 7/8"	7'- 11 7/8"	B1(i2977)		279 lb	521 lb	-	-
DEGLO	NATES							

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- ullet Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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 # TF23120966



CITY:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C INNISFIL Job Name: **S45-4C**

Level: 1ST FLR FRAMING

Label: **B10 - i2857** Type: **Beam**

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

Report Version: 2021.03.26

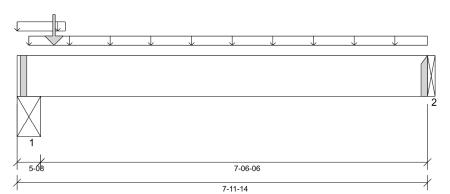
Status:

Design
Passed

12/15/2023 16:39

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11



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: 7'- 6 3/8"

Factored Resistance of Support Material:

- 615 psi Beam @ 0'- 4 1/2"
- 615 psi Beam @ 7'- 11 7/8"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120967

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	0'- 8 5/8"	1.25D + 1.5L	1.00	2909 lb ft	23299 lb ft	Passed - 12%
Factored Shear:	7'- 2 3/8"	1.25D + 1.5L	1.00	676 lb	11052 lb	Passed - 6%
Live Load (LL) Pos. Defl.:	3'- 9 1/4"	L		0.022"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 9 1/4"	D + L		0.038"	L/240	Passed - L/999

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	5-08	1.25D + 1.5L	1.00	8559 lb		20020 lb	11839 lb	Passed - 72%
l	2	1-08	1.25D + 1.5L	1.00	790 lb		5460 lb	-	Passed - 14%

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Na	iling Requireme	ents	Other Information or Requirement for
טו	Fait No.	Manuacturei	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	IED LOAL	วร						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	7'- 11 7/8"	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	0'	0'- 11 1/4"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'- 2 3/4"	7'- 11 7/8"	FC3 Floor Decking (Plan View Fill)	Тор	20 lb/ft	40 lb/ft	-	-
Point	0'- 8 5/8"	0'- 8 5/8"	PBO8(i1172)	Тор	2611 lb	3482 lb	-	-
UNFAC	TORED RI	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	STL BM(i61)		2668 lb	3483 lb	-	-
2	7'- 11 7/8"	7'- 11 7/8"	B1(i2977)		239 lb	327 lb	-	-

DESIGN NOTES

- · The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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=5.250", W=3.500". LDF=1.00, Pf=8487 lb, Q'r=13043 lb, Result=65.07%.

PLY TO PLY CONNECTION



CITY:

BAYVIEW WELLINGTON

S45-4C **INNISFIL**

ALCONA SHORES

Label:

Level:

Job Name: S45-4C

1ST FLR FRAMING B20AL - i2999

Type: **Beam**

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

WestFraser LVL

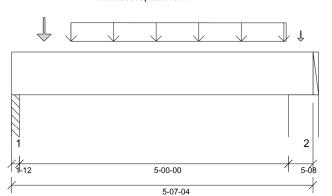
Report Version: 2021.03.26

Status: Design Passed

12/15/2023 16:39

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11



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:

Bottom: 0'- 9 1/2"

Factored Resistance of Support Material:

- 615 psi Column @ 0'- 3/4"
- 615 psi Wall @ 5'- 2 3/4"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 7 1/4"	1.25D + 1.5L	1.00	1918 lb ft	11650 lb ft	Passed - 16%
Factored Shear:	4'- 4 1/4"	1.25D + 1.5L	1.00	1371 lb	5526 lb	Passed - 25%
Live Load (LL) Pos. Defl.:	2'- 7 13/16"	L		0.017"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	2'- 7 3/4"	D + L		0.026"	L/240	Passed - L/999

ı	SUF	PPORT 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
ı	1	1-12	1.25D + 1.5L	1.00	1345 lb		3185 lb	1883 lb	Passed - 71%
l	2	5-08	1.25D + 1.5L	1.00	1450 lb		10010 lb	5921 lb	Passed - 24%
١	SPE	CIFIED LO	ADS						
1									

Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	5'- 7 1/4"	Self Weight	Тор	5 lb/ft	-	-	-
Tapered	1'- 1 1/4"	5'- 1 1/4"	Smoothed Load	Front	133 To 130 lb/ft	265 To 259 lb/ft	-	-
Point	0'- 7 1/4"	0'- 7 1/4"	J2(i3161)	Front	108 lb	217 lb	-	-
Point	5'- 4 1/2"	5'- 4 1/2"	E27(i1050)	Тор	30 lb	23 lb	-	-
UNFAC	TORED RI	EACTIONS						

ı	OI II A	O I O I LED I KI						
	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
	1	0'	0'- 1 3/4"	PBO3(i68)	322 lb	619 lb	-	-
	2	5'- 1 3/4"	5'- 7 1/4"	W39(i63)	368 lb	669 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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 length at support 2 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full



STRUCTURAL COMPONENT ONLY DWG # TF23120968



CITY:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C **INNISFIL**

Job Name: S45-4C

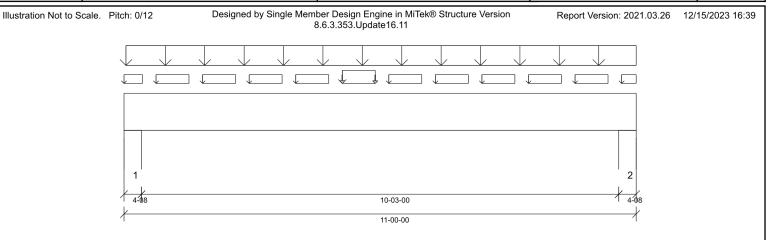
Level: 2ND FLR FRAMING Label: B11 DR - i3155

Type: **Beam**

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

WestFraser LVL

Status: Design Passed



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:

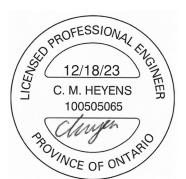
Top: 0'- 8 1/2" Bottom: 11'

Factored Resistance of Support Material:

- 812 psi Wall @ 0'- 3 1/2"
- 812 psi Wall @ 10'- 8 1/2"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120969 PG 1/2

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 6 1/2"	1.25D + 1.5L	1.00	11360 lb ft	23299 lb ft	Passed - 49%
Factored Shear:	1'- 2"	1.25D + 1.5L	1.00	3799 lb	11052 lb	Passed - 34%
Live Load (LL) Pos. Defl.:	5'- 5 7/8"	L		0.190"	L/360	Passed - L/646
Total Load (TL) Pos. Defl.:	5'- 5 15/16"	D + L		0.323"	L/240	Passed - L/380
Permanent Deflection:	5'- 5 15/16"			-	L/360	Passed - L/953

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
1	4-08	1.25D + 1.5L	1.00	4451 lb		16380 lb	12789 lb	Passed - 35%
2	4-08	1.25D + 1.5L	1.00	4491 lb		16380 lb	12789 lb	Passed - 35%

01 2011	ILD LOAL	~						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	11'	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	-0'	0'- 4 3/4"	Bk1(i2998)	Тор	60 lb/ft	-	-	-
Uniform	0'- 1/2"	11'	Smoothed Load	Тор	184 lb/ft	332 lb/ft	-	-
Uniform	0'- 8 1/4"	1'- 4 3/4"	Bk1(i3060)	Тор	60 lb/ft	-	-	-
Uniform	1'- 8 1/4"	2'- 4 3/4"	Bk1(i3050)	Тор	60 lb/ft	-	-	-
Uniform	2'- 8 1/4"	3'- 4 3/4"	Bk1(i3141)	Тор	60 lb/ft	-	-	-
Uniform	3'- 8 1/4"	4'- 4 3/4"	Bk1(i2897)	Тор	60 lb/ft	-	-	-
Uniform	4'- 8 1/4"	5'- 4 3/4"	Bk1(i1676)	Тор	119 lb/ft	117 lb/ft	-	-
Uniform	5'- 8 1/4"	6'- 4 3/4"	Bk1(i2656)	Тор	60 lb/ft	-	-	-
Uniform	6'- 8 1/4"	7'- 4 3/4"	Bk1(i2831)	Тор	60 lb/ft	-	-	-
Uniform	7'- 8 1/4"	8'- 4 3/4"	Bk1(i2909)	Тор	60 lb/ft	-	-	-
Uniform	8'- 8 1/4"	9'- 4 3/4"	Bk1(i2952)	Тор	60 lb/ft	-	-	-
Uniform	9'- 8 1/4"	10'- 4 3/4"	Bk1(i2933)	Тор	60 lb/ft	-	-	-
Uniform	10'- 8 1/4"	11'	Bk1(i2556)	Тор	60 lb/ft	-	-	-
Point	4'- 8 1/4"	4'- 8 1/4"	Bk1(i1676)	Тор	9 lb	17 lb	-	-
Point	5'- 4 3/4"	5'- 4 3/4"	Bk1(i1676)	Тор	9 lb	17 lb	-	-

UNFAC	UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 4 1/2"	2(i1116)	1296 lb	1839 lb	-	-					
2	10'- 7 1/2"	11'	3(i1117)	1348 lb	1919 lb	-	-					

DESIGN NOTES

SPECIFIED LOADS

- · The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C INNISFIL Job Name: **S45-4C**

Level: 2ND FLR FRAMING Label: B11 DR - i3155

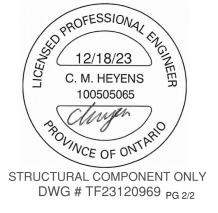
Type: **Beam**

2 Ply Member

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

Design
Passed

PLY TO PLY CONNECTION





CITY:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C **INNISFIL** Job Name: S45-4C

Level: 2ND FLR FRAMING Label: B12 DR - i2823

Type: **Beam**

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

Report Version: 2021.03.26

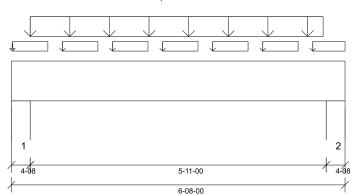
Status: Design Passed

12/15/2023 16:39

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version

8.6.3.353.Update16.11



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'- 8 1/2" Bottom: 6'- 8"

Factored Resistance of Support Material:

- 812 psi Wall @ 0'- 3 1/2"
- 812 psi Wall @ 6'- 4 1/2"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120970

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 1 3/8"	1.25D + 1.5L	1.00	3864 lb ft	23299 lb ft	Passed - 17%
Factored Shear:	1'- 2"	1.25D + 1.5L	1.00	2132 lb	11052 lb	Passed - 19%
Live Load (LL) Pos. Defl.:	3'- 4"	L		0.023"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 4"	D + L		0.038"	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	4-08	1.25D + 1.5L	1.00	2528 lb		16380 lb	12789 lb	Passed - 20%					
2	4-08	1.25D + 1.5L	1.00	2581 lb		16380 lb	12789 lb	Passed - 20%					
CDE	CIEIED I C	ADS											

SPECIF	IED LOAL	13						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	6'- 8"	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	0'- 1/4"	0'- 8 3/4"	Bk1(i1662)	Top	71 lb/ft	21 lb/ft	-	-
Uniform	0'- 4 1/2"	6'- 2 3/4"	Smoothed Load	Тор	192 lb/ft	345 lb/ft	-	-
Uniform	1'- 1/4"	1'- 8 3/4"	Bk1(i1662)	Тор	71 lb/ft	21 lb/ft	-	-
Uniform	2'- 1/4"	2'- 8 3/4"	Bk1(i1662)	Top	71 lb/ft	21 lb/ft	-	-
Uniform	3'- 1/4"	3'- 8 3/4"	Bk1(i1662)	Тор	71 lb/ft	21 lb/ft	-	-
Uniform	4'- 1/4"	4'- 8 3/4"	Bk1(i1662)	Тор	71 lb/ft	21 lb/ft	-	-
Uniform	5'- 1/4"	5'- 8 3/4"	Bk1(i1662)	Тор	71 lb/ft	21 lb/ft	-	-
Uniform	6'- 1/4"	6'- 8"	Bk1(i1648)	Тор	71 lb/ft	21 lb/ft	-	-
Point	0'- 1/4"	0'- 1/4"	Bk1(i1662)	Тор	2 lb	3 lb	-	-

UNFAC	UNFACTORED REACTIONS										
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	0'	0'- 4 1/2"	3(i1117)	726 lb	1002 lb	-	-				
2	6'- 3 1/2"	6'- 8"	1(i1085)	806 lb	1127 lb	-	-				

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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:

ALCONA SHORES

S45-4C **INNISFIL**

BAYVIEW WELLINGTON

2ND FLR FRAMING Label: B13 DR - i2655

Job Name: S45-4C

Type: **Beam**

Level:

2 Ply Member

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

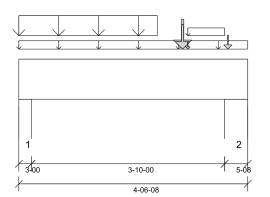
Report Version: 2021.03.26

Status: Design Passed

12/15/2023 16:39

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11



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'- 10 3/4" Bottom: 4'- 1"

Factored Resistance of Support Material:

- 812 psi Wall @ 0'- 2"
- 812 psi Wall @ 4'- 2"

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.



l	ANALYSIS RESULTS							
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result	
l	Factored Pos. Moment:	2'- 3"	1.25D + 1.5L	1.00	2415 lb ft	23299 lb ft	Passed - 10%	
l	Factored Shear:	3'- 3 1/2"	1.25D + 1.5L	1.00	1912 lb	11052 lb	Passed - 17%	
l	Total Load (TL) Pos. Defl.:	2'- 2 1/8"	D + L		0.010"	L/240	Passed - L/999	

ш	SUP	PURT ANI	D REACTION INFORM	AHON					
	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	3-00	1.25D + 1.5L	1.00	2789 lb		10920 lb	8526 lb	Passed - 33%
IL	2	5-08	1.25D + 1.5L	1.00	2240 lb		20020 lb	15631 lb	Passed - 14%
ı	SPF	CIFIED I C	DADS						

SPECIF	IED LOAL	<i>J</i> O						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	4'- 6 1/2"	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	0'	4'- 6 1/2"	User Load	Top	60 lb/ft	-	-	-
Uniform	0'	2'- 9"	Smoothed Load	Тор	272 lb/ft	543 lb/ft	-	-
Uniform	3'- 4 1/4"	4'- 1"	Bk1(i1559)	Top	5 lb/ft	11 lb/ft	-	-
Point	3'- 3"	3'- 3"	J1(i2462)	Top	166 lb	332 lb	-	-
Point	3'- 3"	3'- 3"	J1(i2906)	Тор	125 lb	251 lb	-	-
Point	3'- 4 1/4"	3'- 4 1/4"	Bk1(i1559)	Тор	1 lb	1 lb	-	-
Point	4'- 1 3/4"	4'- 1 3/4"	J7(i3003)	Тор	48 lb	95 lb	-	-

п	UNFAC	LOKED K	EACTIONS					
I	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
I	1	0'	0'- 3"	4(i1120)	769 lb	1240 lb	-	-
l	2	4'- 1"	4'- 6 1/2"	3(i1117)	636 lb	941 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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:

BAYVIEW WELLINGTON

S45-4C **INNISFIL**

ALCONA SHORES

Job Name: S45-4C

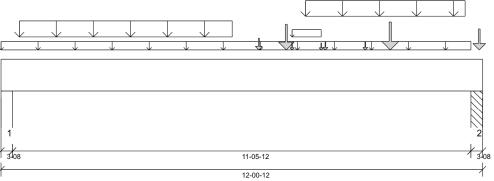
Level: 2ND FLR FRAMING Label: B14 DR - i2967

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 12/15/2023 16:39 8.6.3.353.Update16.11



DESIGN INFORMATION

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

Amendment)

Design Methodology: LSD Service Condition: Dry L/360 LL Deflection Limit: 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: 1'- 2 1/16" Bottom: 12'- 3/4"

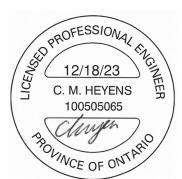
Factored Resistance of Support Material:

- 812 psi Wall @ 0'- 2 1/2"
- 615 psi Column @ 11'- 10 1/4"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120972

I	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	7'- 1 3/4"	1.25D + 1.5L	1.00	18737 lb ft	34949 lb ft	Passed - 54%
l	Factored Neg. Moment:	11'- 10 1/4"	1.25D + 1.5L	1.00	202 lb ft	34949 lb ft	Passed - 1%
l	Factored Shear:	10'- 11 3/4"	1.25D + 1.5L	1.00	6596 lb	16578 lb	Passed - 40%
l	Live Load (LL) Pos. Defl.:	6'- 2 15/16"	L		0.249"	L/360	Passed - L/552
l	Total Load (TL) Pos. Defl.:	6'- 2 13/16"	D + L		0.431"	L/240	Passed - L/319
I	Permanent Deflection:	6'- 2 11/16"			-	L/360	Passed - L/781

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	3-08	1.25D + 1.5L	1.00	4798 lb		19110 lb	14921 lb	Passed - 32%					
2	3-08	1.25D + 1.5L	1.00	8385 lb		19110 lb	11301 lb	Passed - 74%					

SPECII	FIED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 3/4"	Self Weight	Тор	14 lb/ft	-	-	-
Uniform	0'	11'- 9 1/4"	User Load	Тор	60 lb/ft	-	-	-
Uniform	0'- 5 1/2"	5'- 9 1/2"	Smoothed Load	Тор	130 lb/ft	259 lb/ft	-	-
Uniform	7'- 3 1/2"	8'- 1/4"	Bk1(i3148)	Top	4 lb/ft	9 lb/ft	-	-
Uniform	7'- 7 1/2"	11'- 7 1/2"	Smoothed Load	Тор	124 lb/ft	248 lb/ft	-	-
Point	6'- 5 1/2"	6'- 5 1/2"	J1(i2469)	Тор	131 lb	262 lb	-	-
Point	7'- 1 3/4"	7'- 1 3/4"	B16(i2840)	Top	582 lb	951 lb	-	-
Point	7'- 3 1/2"	7'- 3 1/2"	Bk1(i3148)	Тор	1 lb	1 lb	-	-
Point	8'- 1/4"	8'- 1/4"	Bk1(i3148)	Тор	1 lb	1 lb	-	-
Point	8'- 1 1/2"	8'- 1 1/2"	J5(i2953)	Top	38 lb	75 lb	-	-
Point	9'- 1 1/2"	9'- 1 1/2"	J5(i2976)	Тор	30 lb	61 lb	-	-
Point	9'- 9"	9'- 9"	B18(i2821)	Тор	694 lb	1030 lb	-	-
Point	11'- 11 3/4"	11'- 11 3/4"	B15(i2939)	Тор	488 lb	669 lb	-	-
LINEAC	TODED D	EACTIONS						

CIVI	-ACTORED KI	EACTIONS					
IE	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	5(i1167)	1496 lb	1945 lb	-	-
2	11'- 9 1/4"	12'- 3/4"	PBO8(i1172)	2537 lb	3482 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C **INNISFIL** Job Name: S45-4C

2ND FLR FRAMING Level: Label: B15 - i2939

Type: **Beam**

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

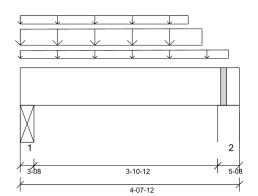
Report Version: 2021.03.26

Status: Design Passed

12/15/2023 16:39

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11



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:

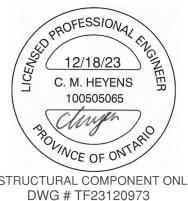
Bottom: 0'- 9 1/2"

Factored Resistance of Support Material:

- 1040 psi Beam @ 0'- 2 1/2"
- 615 psi Wall @ 4'- 3 1/4"

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.



STRUCTURAL COMPONENT ONLY

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	2'- 4 1/4"	1.25D + 1.5L	1.00	1434 lb ft	23299 lb ft	Passed - 6%
Factored Shear:	1'- 1"	1.25D + 1.5L	1.00	1448 lb	11052 lb	Passed - 13%

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	3-08	1.25D + 1.5L	1.00	1592 lb		12740 lb	12740 lb	Passed - 12%					
l	2	5-08	1.25D + 1.5L	1.00	1168 lb		20020 lb	11843 lb	Passed - 10%					

П	SPECIF	IED LUAL	Jo						
l	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
	Self Weight	0'	4'- 7 3/4"	Self Weight	Тор	9 lb/ft	-	-	-
П	Uniform	-0'	3'- 6 3/4"	User Load	Top	60 lb/ft	-	-	-
	Tapered	0'	4'- 5"	FC4 Floor Decking (Plan View Fill)	Тор	10 To 20 lb/ft	19 To 40 lb/ft	-	-
l	Tapered	0'	3'- 10 1/4"	Smoothed Load	Back	129 To 134 lb/ft	258 To 270 lb/ft	-	-

UNFAC	UNFACTORED REACTIONS												
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)						
1	0'	0'- 3 1/2"	B14 DR(i2967)	488 lb	669 lb	-	-						
2	4'- 2 1/4"	4'- 7 3/4"	E26(i1033)	342 lb	478 lb	-	-						

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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 study, or beveled plates are required to transfer the loads to this beam.

PLY TO PLY CONNECTION



CITY:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C INNISFIL

Job Name: S45-4C

Level: 2ND FLR FRAMING

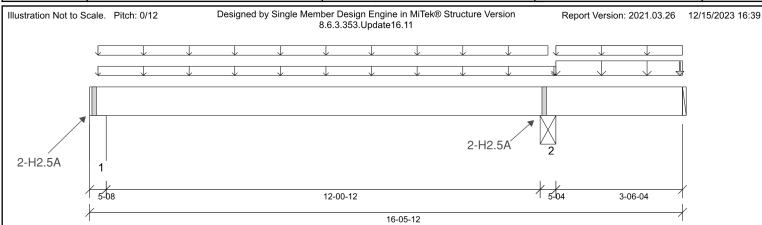
Label: B16 - i2840 Type: **Beam**

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

2 Ply Member

Status:

Design Passed



DESIGN INFORMATION

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

> Amendment) LSD

Design Methodology: 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: 12'- 3/4"

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 1040 psi Beam @ 12'- 8 7/8"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" O/C

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



CE OF O.
STRUCTURAL COMPONENT ONLY
DWG # TF23120974

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 7 7/16"	1.25D + 1.5L	0.89	1135 lb ft	20759 lb ft	Passed - 5%
Factored Neg. Moment:	12'- 8 7/8"	1.25D + 1.5L	0.98	3006 lb ft	19920 lb ft	Passed - 15%
Factored Shear:	13'- 9"	1.25D + 1.5L	0.98	1115 lb	10869 lb	Passed - 10%
Live Load (LL) Neg. Defl.:	7'- 6 3/16"	L		0.048"	L/360	Passed - L/999
Total Load (TL) Neg. Defl.:	8'- 1 1/4"	D + L		0.047"	L/240	Passed - L/999
SUPPORT AND REAC	TION INFORM	MATION				

ID B	Input earing .ength	Controlling Combina		Pactored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result		
1	5-08	1.25D +	1.5L 0.89	448 lb		17838 lb	10552 lb	Passed - 4%		
1	5-08	0.9D +	1.5L 0.98		-71 lb	-	-			
2	5-04	1.25D +	1.5L 1.00	2161 lb		19110 lb	19110 lb	Passed - 11%		
SPECIFIED LOADS										
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)		
Self Weight	0'	16'- 5 3/4"	Self Weight	Тор	9 lb/ft	-	-	-		
Uniform	0'- 2 3/4"	12'- 11 1/2"	FC4 Floor Decking (Plan View Fill)	Тор	7 lb/ft	14 lb/ft	-	-		
Uniform	0'- 2 3/4"	12'- 8 7/8"	FC4 Floor Decking (Plan View Fill)	Тор	10 lb/ft	20 lb/ft	-	-		
Uniform	12'- 11 1/2"	16'- 5 3/4"	User Load	Front	70 lb/ft	140 lb/ft	-	-		
Uniform	12'- 11 1/2"	16'- 5 3/4"	FC4 Floor Decking (Plan View Fill)	Тор	11 lb/ft	23 lb/ft	-	-		
		16'- 4 7/8"	B19(i2921)	Back	37 lb	63 lb				

ID Start Loc End Loc Dead (D) Live (L) Snow (S) Wind (W) Source 0'- 5 1/2' 4(i1120) 107 lb 209/-106 lb 12'- 6 1/4" 12'- 11 1/2" B14 DR(i2967) 582 lb 951 lb 2

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- The deflection at the cantilever for either live and/or total loads is less than 1/8" 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.

PLY TO PLY CONNECTION



CITY:

Illustration Not to Scale. Pitch: 0/12

BAYVIEW WELLINGTON

S45-4C INNISFIL

ALCONA SHORES

Job Name: S45-4C

Level: 2ND FLR FRAMING

Label: B17 - i2406 Type: **Beam**

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

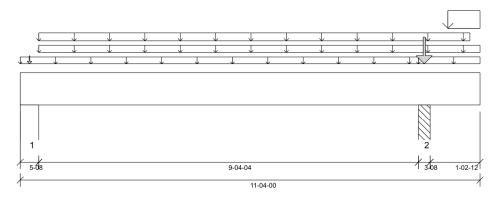
WestFraser LVL

Design Passed

Status:

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

Report Version: 2021.03.26 12/15/2023 16:39



DESIGN INFORMATION

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

Amendment)

Design Methodology: LSD Service Condition: Dry L/360 LL Deflection Limit: 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'- 9 3/4"

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Column @ 9'- 11 1/2"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120975

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	5'- 1/4"	1.25D + 1.5L	0.96	4809 lb ft	22385 lb ft	Passed - 21%
Factored Neg. Moment:	9'- 11 1/2"	1.25D + 1.5S + L	0.70	1952 lb ft	15692 lb ft	Passed - 12%
Factored Shear:	9'- 1/4"	1.25D + 1.5L + S	1.00	1935 lb	11052 lb	Passed - 18%
Live Load (LL) Pos. Defl.:	5'- 2"	L		0.063"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	5'- 1 5/16"	D + L		0.116"	L/240	Passed - L/964

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	0.96	2264 lb		19234 lb	11378 lb	Passed - 20%				
2	3-08	1.25D + 1.5L + S	1.00	7320 lb		12740 lb	7534 lb	Passed - 97%				
ODE	OIFIED I O	ADO										

SPECIFIED LOADS											
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)			
Self Weight	0'	11'- 4"	Self Weight	Тор	9 lb/ft	-	-	-			
Uniform	0'	9'- 9 3/4"	FC4 Floor Decking (Plan View Fill)	Тор	11 lb/ft	22 lb/ft	-	-			
Uniform	0'- 5 1/2"	11'- 4"	6(i2138)	Тор	81 lb/ft	-	-	-			
Uniform	0'- 5 1/2"	11'- 1"	6(i2138)	Top	64 lb/ft	140 lb/ft	-	-			
Uniform	9'- 9 3/4"	11'- 4"	FC4 Floor Decking (Plan View Fill)	Тор	13 lb/ft	27 lb/ft	-	-			
Uniform	10'- 6 1/2"	11'- 4"	6(i2138)	Тор	509 lb/ft	575 lb/ft	624 lb/ft	-			
Point	9'- 11 1/2"	9'- 11 1/2"	B18(i2821)	Back	917 lb	1051 lb	-	-			
Point	0'- 2 3/4"	0'- 2 3/4"	E38(i1748)	Тор	75 lb	64 lb	-	-			

Point	9'- 11 1/2"	9'- 11 1/2"	B18(i2821)	Back	917 lb	1051 lb	-	-
Point	0'- 2 3/4"	0'- 2 3/4"	E38(i1748)	Тор	75 lb	64 lb	-	-
UNFAC	CTORED RI	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	E10(i896)		814 lb	842/-59 lb	-50 lb	-
2	9'- 9 3/4"	10'- 1 1/4"	PBO9(i1227)		2374 lb	2528 lb	544 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- The deflection at the cantilever for either live and/or total loads is less than 1/8" 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.
- 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=3.500". LDF=1.00, Pf=2723 lb, Q'r=8493 lb, Result=32.06%

PLY TO PLY CONNECTION



CITY:

ALCONA SHORES

S45-4C INNISFIL

BAYVIEW WELLINGTON

Level: 2ND FLR FRAMING

Label: B18 - i2821

Type: **Beam**

Job Name: S45-4C

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 12/15/2023 16:39 8.6.3.353.Update16.11 14-04-12 14-10-00

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:

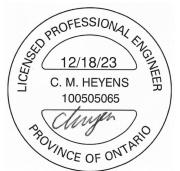
Bottom: 1'- 1 1/2"

Factored Resistance of Support Material:

- 1040 psi Beam @ 0'- 4 1/4"
- 615 psi Beam @ 14'- 10"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120976 PG 1/2

l	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	8'- 3"	1.25D + 1.5L	1.00	9281 lb ft	23299 lb ft	Passed - 40%
l	Factored Shear:	14'- 1/2"	1.25D + 1.5L	1.00	2649 lb	11052 lb	Passed - 24%
l	Live Load (LL) Pos. Defl.:	7'- 6 9/16"	L		0.294"	L/360	Passed - L/587
l	Total Load (TL) Pos. Defl.:	7'- 7 1/2"	D + L		0.520"	L/240	Passed - L/332
l	Permanent Deflection:	7'- 8 11/16"			-	L/360	Passed - L/787

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	5-04	1.25D + 1.5L	1.00	2418 lb		19110 lb	19110 lb	Passed - 13%			
2	1-08	1.25D + 1.5L	1.00	2718 lb		5460 lb	-	Passed - 50%			

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nai	ling Requirem	ents	Other Information or Requirement for
טו	Part No.	Manufacturer	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'	14'- 10"	Self Weight	Тор	9 lb/ft	-	-	-	
Uniform	0'- 2 5/8"	3'- 11 1/2"	FC4 Floor Decking (Plan View Fill)	Тор	6 lb/ft	12 lb/ft	-	-	
Uniform	3'- 11 1/2"	4'- 3"	FC4 Floor Decking (Plan View Fill)	Тор	3 lb/ft	6 lb/ft	-	-	
Uniform	7'- 9 1/2"	14'- 10"	User Load	Тор	60 lb/ft	-	-	-	
Tapered	2'- 3"	12'- 11"	Smoothed Load	Back	67 To 70 lb/ft	133 To 139 lb/ft	-	-	
Point	3'- 10 5/8"	3'- 10 5/8"	B19(i2921)	Front	43 lb	77 lb	-	-	
Point	1'- 7"	1'- 7"	J4(i2913)	Back	104 lb	209 lb	-	-	
Point	13'- 7"	13'- 7"	J4(i2817)	Back	80 lb	160 lb	-	-	
Point	14'- 7"	14'- 7"	J4(i2914)	Back	67 lb	134 lb	-	-	

UNFAC	UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 5 1/4"	B14 DR(i2967)	694 lb	1030 lb	-	-					
2	14'- 10"	14'- 10"	B17(i2406)	917 lb	1051 lb	-	-					

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C INNISFIL Job Name: **S45-4C**

Level: 2ND FLR FRAMING
Label: B18 - i2821

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:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C **INNISFIL**

Job Name: S45-4C

Level: 2ND FLR FRAMING

Label: B19 - i2921 Type: **Beam**

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

Report Version: 2021.03.26

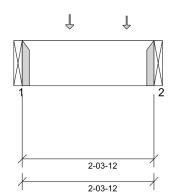
1 Ply Member

Status: Design Passed

12/15/2023 16:39

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11



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:

Bottom: 0'- 9 1/2"

Factored Resistance of Support Material:

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

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	0'- 10"	1.25D + 1.5L	1.00	115 lb ft	11650 lb ft	Passed - 1%
Factored Shear:	0'- 9 1/2"	1.25D + 1.5L	1.00	136 lb	5526 lb	Passed - 2%

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	1-08	1.25D + 1.5L	1.00	141 lb		2730 lb	-	Passed - 5%		
l	2	1-08	1.25D + 1.5L	1.00	169 lb		2730 lb	-	Passed - 6%		

COI	NNECTOR II	NFORMATION				
ID	Part No.	Manufacturer	Na	illing Requirem	ents	Other Information or Requirement for
טו	Part No.	Manufacturer	Тор	Face	Member	Reinforcement Accessories
1	LS90		-	-	-	Connector manually specified by the user.
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

SPECIF	SPECIFIED LOADS										
Type	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)			
Self Weight	Weight 0 2-33/4 Self Weight Top				5 lb/ft	-	-	-			
Point 0'- 10" 0'- 10" J5(i2953) Back					39 lb	79 lb	-	-			
Point	1'- 10"	1'- 10"	J5(i2976)	Back	30 lb	61 lb	-	-			
UNFAC	TORED R	EACTIONS									
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	0'	0'	B16(i2840)		37 lb	63 lb	-	-			
2	2 2'- 3 3/4" 2'- 3 3/4" B18(i2821)				43 lb	77 lb	-	-			

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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.





CITY:

Illustration Not to Scale. Pitch: 0/12

BAYVIEW WELLINGTON

S45-4C **INNISFIL**

ALCONA SHORES

Job Name: S45-4C

Level: 1ST FLR FRAMING **B2L - i2340**

Label: Type: **Beam**

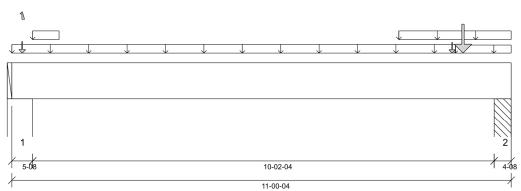
2 Ply Member 1 3/4" x 9 1/2" (2.0E 3100)

WestFraser LVL

Status: Design Passed

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

Report Version: 2021.03.26 12/15/2023 16:38



DESIGN INFORMATION

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

Amendment)

Design Methodology: LSD Service Condition: Dry L/360 LL Deflection Limit: 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'- 6 5/8"

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 4 1/2"
- 615 psi Column @ 10'- 8 3/4"

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120978

l	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	9'- 8 5/8"	1.25D + 1.5L + S	1.00	6830 lb ft	23299 lb ft	Passed - 29%
l	Factored Neg. Moment:	0'- 4 1/2"	1.25D + 1.5L	1.00	221 lb ft	21326 lb ft	Passed - 1%
l	Factored Shear:	9'- 10 1/4"	1.25D + 1.5L + S	1.00	7502 lb	11052 lb	Passed - 68%
l	Live Load (LL) Pos. Defl.:	6'- 1 7/8"	L + 0.5S		0.085"	L/360	Passed - L/999
l	Total Load (TL) Pos. Defl.:	6'- 2 1/16"	D + L + 0.5S		0.156"	L/240	Passed - L/782

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	2716 lb		20020 lb	11843 lb	Passed - 23%			
2	4-08	1.25D + 1.5L + S	1.00	8641 lb		16380 lb	9686 lb	Passed - 89%			

SPECIF	SPECIFIED LOADS												
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)					
Self Weight	0'	11'- 1/4"	Self Weight	Тор	9 lb/ft	-	-	-					
Uniform	-0'	9'- 9 1/2"	FC2 Floor Decking (Plan View Fill)	Тор	20 lb/ft	40 lb/ft	-	-					
Uniform	0'- 5 1/2"	1'- 1/2"	User Load	Top	60 lb/ft	-	-	-					
Uniform	8'- 6 1/2"	11'- 1/4"	User Load	Top	60 lb/ft	-	-	-					
Uniform	9'- 9 1/2"	11'- 1/4"	FC2 Floor Decking (Plan View Fill)	Тор	11 lb/ft	22 lb/ft	-	-					
Point	9'- 8 5/8"	9'- 8 5/8"	B3L(i2254)	Back	320 lb	564 lb	-	-					
Point	0'- 2 3/4"	0'- 2 3/4"	E10(i896)	Тор	555 lb	515/-59 lb	-50 lb	-					
Point	9'- 11 1/2"	9'- 11 1/2"	PBO9(i1227)	Тор	2475 lb	2528 lb	544 lb	-					

UNFA	UNFACTORED REACTIONS											
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
1	0'	0'- 5 1/2"	W15(i21)	1039 lb	1035/-61 lb	-3 lb	-					
2	10'- 7 3/4"	11'- 1/4"	PBO1(i64)	2810 lb	2996 lb	497 lb	-					

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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=3.500", W=3.500". LDF=1.00, Pf=7430 lb, Q'r=9707 lb, Result=76.54%.

PLY TO PLY CONNECTION



CITY:

BAYVIEW WELLINGTON

S45-4C **INNISFIL**

ALCONA SHORES

Job Name: S45-4C

1ST FLR FRAMING Level: B3L - i2254

Label: Type: **Beam**

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

WestFraser LVL

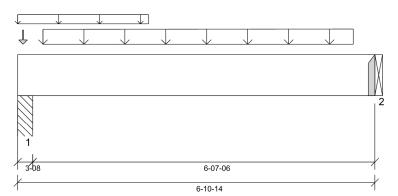
Status: Design Passed

12/15/2023 16:38

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

Report Version: 2021.03.26



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:

Bottom: 0'- 9 3/4"

Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Beam @ 6'- 10 7/8"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 6"	1.25D + 1.5L	1.00	2376 lb ft	11650 lb ft	Passed - 20%
Factored Shear:	6'- 1 3/8"	1.25D + 1.5L	1.00	1244 lb	5526 lb	Passed - 23%
Live Load (LL) Pos. Defl.:	3'- 6 11/16"	L		0.035"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 6 1/2"	D + L		0.057"	L/240	Passed - L/999

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	3-08	1.25D + 1.5L	1.00	1625 lb		6370 lb	3767 lb	Passed - 43%	
l	2	1-08	1.25D + 1.5L	1.00	1249 lb		2730 lb	-	Passed - 46%	

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COMM	EU IUK	IINFUI	RMATION

ın	Part No. Manu	ufacturer	Nailing F	Requirement	s	Other Information or Requirement for
טו	Fait No. Maiit	T	- ор	Face	Member	Reinforcement Accessories
2	HIIC1 81/10		_	_	_	Connector manually enecified by the use

* 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'	6'- 10 7/8"	Self Weight	Тор	5 lb/ft	-	-	-				
Uniform	0'	2'- 6 3/8"	User Load	Top	60 lb/ft	-	-	-				
Tapered	0'- 5 7/8"	6'- 5 7/8"	Smoothed Load	Front	94 To 97 lb/ft	188 To 196 lb/ft	-	-				
Point	0'- 1 1/4"	0'- 1 1/4"	J4(i2134)	Front	47 lb	94 lb	-	-				
UNFAC	TORED R	EACTIONS										
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)				
1	0'	0'- 3 1/2"	PBO3(i68)		484 lb	681 lb	-	-				
2	6'- 10 7/8"	6'- 10 7/8"	B2L(i2340)		320 lb	564 lb	-	-				

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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 # TF23120979



CITY:

BAYVIEW WELLINGTON ALCONA SHORES

S45-4C **INNISFIL**

Job Name: S45-4C

1ST FLR FRAMING Level:

Label: B4L - i2339 Type: **Beam**

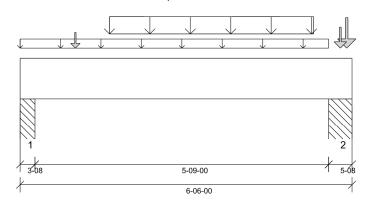
1 Ply Member 1 3/4" x 9 1/2" (2.0E 3100) WestFraser LVL

Status: Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

Report Version: 2021.03.26 12/15/2023 16:38



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:

Bottom: 1'- 1 1/2"

Factored Resistance of Support Material:

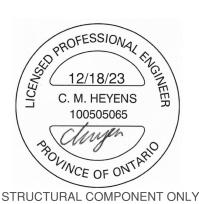
- 615 psi Column @ 0'- 2 1/2"
- 615 psi Column @ 6'- 1 1/2"

ANALYSIS RESULTS												
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result						
Factored Pos. Moment:	2'- 7 1/16"	1.25D + 1.5L	1.00	2357 lb ft	11650 lb ft	Passed - 20%						
Factored Neg. Moment:	6'- 1 1/2"	1.25D + 1.5L + S	1.00	610 lb ft	11650 lb ft	Passed - 5%						
Factored Shear:	5'- 3"	1.25D + 1.5L + S	1.00	1648 lb	5526 lb	Passed - 30%						
Live Load (LL) Pos. Defl.:	3'- 1 1/4"	L		0.024"	L/360	Passed - L/999						
Total Load (TL) Pos. Defl.:	3'- 1 5/16"	D + L		0.043"	L/240	Passed - L/999						
SUPPORT AND REACT	SUPPORT AND REACTION INFORMATION											

ID	В	Input earing ength	Controlling Combina		LDF	Factor Downw React	ard Uplift	Resistance	Factored Resistance of Support	Result
1		3-08	1.25D +	1.5L	1.00	1548	lb	6370 lb	3767 lb	Passed - 41%
2		5-08	1.25D + 1.5	5L + S	1.00	4424	lb	10010 lb	5919 lb	Passed - 75%
SP	PECIF	IED LOAD)S							
Т	уре	Start Loc	End Loc	Source	•	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
	elf eight	0'	6'- 6"	Self We	ight	Тор	5 lb/ft	-	-	-
Uni	iform	0'	6'- 1/2"	User Lo	ad	Тор	60 lb/ft	-	-	-
Тар	ered	1'- 9"	5'- 9"	Smoothed	Load	Front	127 To 126 lb/ft	254 To 251 lb/ft	-	-
Po	oint	1'- 1"	1'- 1"	J2(i186	64)	Front	146 lb	292 lb	-	-
Po	oint	6'- 4 3/4"	6'- 4 3/4"	J2(i185	(8)	Front	435 lb	760 lb	30 lb	-
Po	oint	6'- 3 1/4"	6'- 3 1/4"	E30(i12	46)	Top	266 lb	422 lb	30 lb	-
UN	IFAC	TORED R	EACTIONS							
	ID	Start Loc	End Loc	S	ource		Dead (D)	Live (L)	Snow (S)	Wind (W)
Ш	1	0'	0'- 3 1/2"	PB	O1(i64)		532 lb	655 lb	-	-
	2	6'- 1/2"	6'- 6"	PB	O4(i72)		1214 lb	1830 lb	60 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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 # TF23120980



CITY:

ALCONA SHORES

S45-4C **INNISFIL**

BAYVIEW WELLINGTON

Job Name: S45-4C

1ST FLR FRAMING Level: Label: B5L - i1791

Type: **Beam**

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

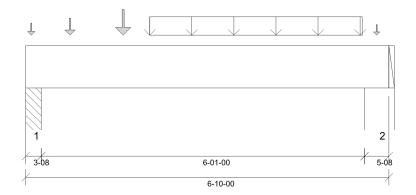
WestFraser LVL

Status: Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

Report Version: 2021.03.26 12/15/2023 16:38



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:

Bottom: 0'- 9 1/2"

Factored Resistance of Support Material:

- 615 psi Column @ 0'- 2 1/2"
- 615 psi Wall @ 6'- 5 1/2"

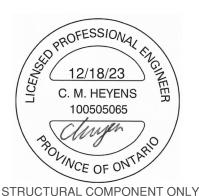
Location	Load Combination	LDF	Design	Limit	Result
3'- 10"	1.25D + 1.5L	1.00	2643 lb ft	11650 lb ft	Passed - 23%
5'- 7"	1.25D + 1.5L	1.00	1653 lb	5526 lb	Passed - 30%
3'- 4 1/4"	L		0.035"	L/360	Passed - L/999
3'- 4 1/4"	D + L		0.054"	L/240	Passed - L/999
	3'- 10" 5'- 7" 3'- 4 1/4"	3'- 10" 1.25D + 1.5L 5'- 7" 1.25D + 1.5L 3'- 4 1/4" L	3'- 10" 1.25D + 1.5L 1.00 5'- 7" 1.25D + 1.5L 1.00 3'- 4 1/4" L	3'- 10" 1.25D + 1.5L 1.00 2643 lb ft 5'- 7" 1.25D + 1.5L 1.00 1653 lb 3'- 4 1/4" L 0.035"	3'- 10" 1.25D + 1.5L 1.00 2643 lb ft 11650 lb ft 5'- 7" 1.25D + 1.5L 1.00 1653 lb 5526 lb 3'- 4 1/4" L 0.035" L/360

SUP	SUPPORT AND REACTION INFORMATION									
ID	Input Bearing Length	Controlling Combina		Factor DF Downw React	vard Uplift	Resistance	Factored Resistance of Support	Result		
1	3-08	1.25D +	1.5L 1	.00 1534	lb	6370 lb	3767 lb	Passed - 41%		
2	5-08	1.25D +	1.5L 1	.00 1737	lb	10010 lb	5921 lb	Passed - 29%		
SPECIFIED LOADS										
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)		
Self Weigh	t 0'	6'- 10"	Self Weight	Тор	5 lb/ft	-	-	-		
Uniforn	n 2'- 4"	6'- 4"	Smoothed Lo	ad Front	132 lb/ft	263 lb/ft	-	-		
Point	0'- 1 1/4"	0'- 1 1/4"	J5(i90)	Front	29 lb	58 lb	-	-		
Point	0'- 10"	0'- 10"	J5(i85)	Front	63 lb	127 lb	-	-		
Point	1'- 10"	1'- 10"	J2(i1945)	Front	123 lb	247 lb	-	-		
Point	6'- 7 1/4"	6'- 7 1/4"	E27(i1050)	Тор	33 lb	23 lb	-	-		

l	UNFAC	CTORED RE	EACTIONS					
l	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
l	1	0'	0'- 3 1/2"	PBO5(i73)	373 lb	715 lb	-	-
l	2	6'- 4 1/2"	6'- 10"	W39(i63)	435 lb	792 lb	-	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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 length at support 2 was calculated based on the actual bearing area divided by the supported member width and may not match expected value when bearing is not rectangular or when the supported member is not supported by its full width.



DWG # TF23120981



CITY:

BAYVIEW WELLINGTON

S45-4C **INNISFIL**

ALCONA SHORES

ANALYSIS RESULTS

Job Name: S45-4C **1ST FLR FRAMING** Level:

Type: **Beam**

Label: B6L - i2342

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

WestFraser LVL

Report Version: 2021.03.26

Status: Design Passed

12/15/2023 16:38

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

1

1-01-00 1-08-00

3-b8

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:

Bottom: 0'- 6 1/4"

Factored Resistance of Support Material:

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

D	esign Criteria	Loc	ation	Load	Combinatio	n LDF	Design	Limit	Result
Factored	d Pos. Moment:	0'-	· 10"	1.2	25D + 1.5L	1.00	78 lb ft	11650 lb ft	Passed - 1%
Factored	d Shear:	0'	- 7"	1.2	25D + 1.5L	1.00	145 lb	5526 lb	Passed - 3%
SUPP	ORT AND RE	ACTION	INFORM <i>A</i>	TION					
ID	Input Bearing Length	Controlling Combina		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member		Result
1	3-08	1.25D +	1.5L	1.00	271 lb		6370 lb	3767 lb	Passed - 7%
2	3-08	1.25D +	1.5L	1.00	194 lb		6370 lb	3767 lb	Passed - 5%
SPEC	IFIED LOADS	5							
Туре	Start Loc	End Loc	Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	1'- 8"	Self Wei		Тор	5 lb/ft	-	-	-
Uniform	0'- 10"	1'- 4 1/2"	FC1 Floor D (Plan View	Fill)	Тор	2 lb/ft	3 lb/ft	-	-
Uniform	1'- 4 1/2"	1'- 8"	FC1 Floor D (Plan View		Тор	2 lb/ft	5 lb/ft	-	-
Point	1'- 5 3/4"	1'- 5 3/4"	J5(i234	1)	Front	14 lb	28 lb	-	-
Point	0'- 1 1/4"	0'- 1 1/4"	J5(i90)	Back	29 lb	58 lb	-	-
Point	0'- 10"	0'- 10"	J5(i85)	Back	63 lb	125 lb	-	-
UNFA	CTORED RE	ACTIONS							
ID	Start Loc	End Loc	Sc	urce		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	PBG	D6(i75)		68 lb	129 lb	-	-
2	1'- 4 1/2"	1'- 8"	PBG	D7(i76)		47 lb	85 lb	-	-
DESIG	N NOTES								

- The dead loads used in the design of this member were applied to the structure as projected dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have
- 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 1.00
- 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.





CITY:

ALCONA SHORES

S45-4C **INNISFIL**

BAYVIEW WELLINGTON

Level: 2ND FLR FRAMING Label:

B31 DR - i4306 Type: **Beam**

Job Name: S45-4C

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

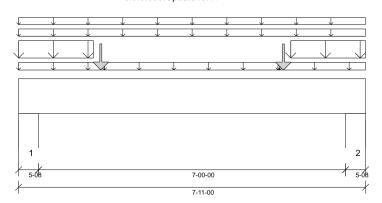
2 Ply Member

Status: Design Passed

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

Report Version: 2021.03.26 12/18/2023 08:13



DESIGN INFORMATION

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

Amendment)

Design Methodology: LSD Service Condition: Dry L/360 LL Deflection Limit: 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: 7'- 11" Bottom: 7'- 11"

Factored Resistance of Support Material:

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

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120983

	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	3'- 11 1/4"	1.25D + 1.5S + L	1.00	7749 lb ft	21944 lb ft	Passed - 35%
l	Factored Neg. Moment:	7'- 6 1/2"	1.25D + 1.5S + L	1.00	119 lb ft	21944 lb ft	Passed - 1%
l	Factored Shear:	1'- 3"	1.25D + 1.5S + L	1.00	4634 lb	11052 lb	Passed - 42%
l	Live Load (LL) Pos. Defl.:	3'- 11 1/2"	S + 0.5L		0.074"	L/360	Passed - L/999
l	Total Load (TL) Pos. Defl.:	3'- 11 1/2"	D + S + 0.5L		0.115"	L/240	Passed - L/729

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
1	5-08	1.25D + 1.5S + L	1.00	6751 lb		20020 lb	15631 lb	Passed - 43%
2	5-08	1.25D + 1.5S + L	1.00	6736 lb		20020 lb	15631 lb	Passed - 43%

SPECIF	FIED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	7'- 11"	Self Weight	Тор	9 lb/ft	-	-	-
Uniform	0'	7'- 11"	R1(i3968)	Тор	20 lb/ft	5 lb/ft	40 lb/ft	-
Uniform	0'	7'- 11"	J1(i4308)	Top	15 lb/ft	26 lb/ft	-	-
Uniform	0'	1'- 11 1/2"	R1(i3968)	Тор	100 lb/ft	-	-	-
Uniform	0'	1'- 8 1/2"	R1(i3968)	Top	249 lb/ft	-	740 lb/ft	-
Uniform	1'- 11 1/2"	5'- 11 1/2"	R1(i3968)	Тор	100 lb/ft	-	-	-
Uniform	5'- 11 1/2"	7'- 11"	R1(i3968)	Тор	100 lb/ft	-	-	-
Uniform	6'- 2 1/2"	7'- 11"	R1(i3968)	Тор	249 lb/ft	-	740 lb/ft	-
Point	1'- 10 1/2"	1'- 10 1/2"	R1(i3968)	Тор	596 lb	-	1672 lb	-
Point	6'- 1/2"	6'- 1/2"	R1(i3968)	Top	592 lb	-	1658 lb	_

UNFA	CTORED RI	EACTIONS					
ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	E55(i4300)	1558 lb	121 lb	3016 lb	-
2	7'- 5 1/2"	7'- 11"	E15(i897)	1628 lb	121 lb	3159 lb	-

DESIGN NOTES

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 0.94
- 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:

BAYVIEW WELLINGTON

S45-4C

ALCONA SHORES

INNISFIL

Job Name: S45-4C

Level: 2ND FLR FRAMING Label: B32 DR - i4307

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

12/18/2023 08:13

Illustration Not to Scale. Pitch: 0/12

Designed by Single Member Design Engine in MiTek® Structure Version 8.6.3.353.Update16.11

2 1 5-08 7-00-00

7-11-00

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: 7'- 11" Bottom: 7'- 11"

Factored Resistance of Support Material:

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

PLY TO PLY CONNECTION: 3 ROWS OF 3.25" PNEUMATIC GUN NAILS (0.120"x3.25") @ 12" 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 # TF23120984

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 1/16"	1.25D + 1.5S + L	1.00	9944 lb ft	21944 lb ft	Passed - 45%
Factored Neg. Moment:	7'- 6 1/2"	1.25D + 1.5S + L	1.00	145 lb ft	21944 lb ft	Passed - 1%
Factored Shear:	1'- 3"	1.25D + 1.5S + L	1.00	6209 lb	11052 lb	Passed - 56%
Live Load (LL) Pos. Defl.:	3'- 11 9/16"	S + 0.5L		0.099"	L/360	Passed - L/848
Total Load (TL) Pos. Defl.:	3'- 11 9/16"	D + S + 0.5L		0.148"	L/240	Passed - L/567

SUP	PORT ANI	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	5-08	1.25D + 1.5S + L	1.00	7008 lb		20020 lb	15631 lb	Passed - 45%
2	5-08	1.25D + 1.5S + L	1.00	8318 lb		20020 lb	15631 lb	Passed - 53%
CDE	CIEIED I C	ADC						

ı	SPECIF	IED LOAL	15						
١	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
l	Self Weight	0'	7'- 11"	Self Weight	Тор	9 lb/ft	-	-	-
ı	Uniform	-0'	7'- 11"	R1(i3968)	Top	20 lb/ft	5 lb/ft	40 lb/ft	-
l	Uniform	0'	7'- 11"	J1(i4319)	Top	12 lb/ft	19 lb/ft	-	-
l	Uniform	-0'	1'- 11 1/2"	R1(i3968)	Тор	100 lb/ft	-	-	-
l	Uniform	-0'	1'- 8 1/2"	R1(i3968)	Тор	47 lb/ft	-	164 lb/ft	-
l	Uniform	1'- 11 1/2"	5'- 11 1/2"	R1(i3968)	Тор	100 lb/ft	-	-	-
l	Uniform	5'- 11 1/2"	7'- 11"	R1(i3968)	Тор	100 lb/ft	-	-	-
ı	Uniform	6'- 2 1/2"	7'- 11"	R1(i3968)	Тор	249 lb/ft	-	740 lb/ft	-
ı	Point	0'- 1/4"	0'- 1/4"	J1(i4319)	Top	1 lb	1 lb	-	-
١	Point	1'- 10 1/2"	1'- 10 1/2"	R1(i3968)	Тор	958 lb	-	2769 lb	-
١	Point	6'- 1/2"	6'- 1/2"	R1(i3968)	Тор	867 lb	-	2476 lb	-
1			- 4 0 - 1 0 1 0						

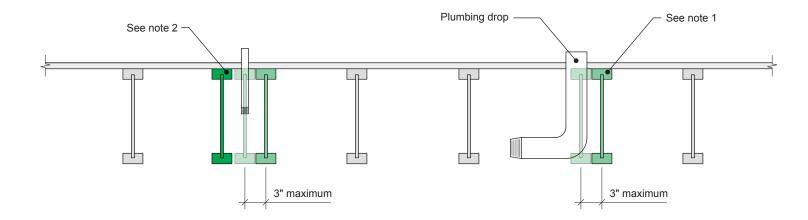
Point	6'- 1/2"	6'- 1/2"	R1(i3968)	Тор	867 lb	-	2476 lb	-
UNFAC	TORED R	EACTIONS	;					
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 5 1/2"	E54(i4274)		1594 lb	146 lb	3118 lb	-
2	7'- 5 1/2"	7'- 11"	E55(i4300)		1916 lb	134 lb	3988 lb	-
DEGLO	LNOTEO							

- The dead loads used in the design of this member were applied to the structure as projected 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.
- Beam Stability Factor used in the calculation for Allowable Max Pos Moment (KL) = 0.94
- 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







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.

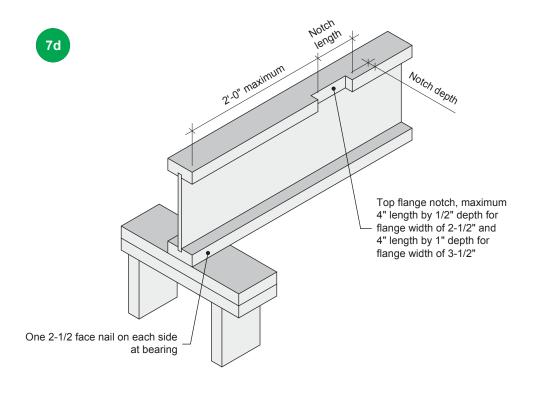
All nails shown in the details are assumed to be common nails unless otherwise noted. Nails shall have a diameter not less than 0.128 inch for 2-1/2-inch nails, or 0.144 inch for 3-inch nails. Individual components not shown to scale for clarity.

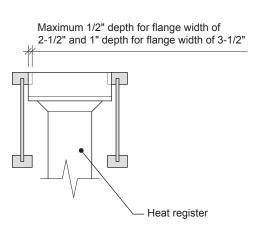




Allowance for Piping		7c	
CATEGORY	SCALE	DATE	PAGE
Openings for Vertical Elements	-	2020-10-01	3.10







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		7 u		
CATEGORY	SCALE	DATE	PAGE	
Openings for Vertical Elements	-	2020-10-01	3.11	



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. 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	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"	-
	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 st	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"	-
	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 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.



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	an blocking an	d 1/2 in. gypsui	n 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"
0.4/0"	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.



Maximum Floor Spans - S6.1

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: 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	an 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.



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 cent	re 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"
	NI-40x	19'-3"	17'-10"	17'-2"	16'-6"	19'-10"	18'-5"	17'-8"	16'-11'
11-7/8"	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	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"
0.4/0"	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"
	NI-40x	21'-9"	20'-3"	19'-4"	17'-8"	22'-4"	20'-5"	19'-4"	17'-8"
11-7/8"	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 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.



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. 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	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"	-
	NI-40x	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-0"	-
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"	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.



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	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'-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"
	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	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"
	NI-40x	21'-10"	20'-4"	19'-0"	17'-0"	22'-5"	20'-6"	19'-0"	17'-0"
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"	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 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 - 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	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"	-

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



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

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

Joist depth	Joist series	Mid-span blocking with 1x4 inch strap On centre spacing				Mid-span blocking and 1/2 in. gypsum ceiling			
						On centre spacing			
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
9-1/2"	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"
	NI-40x	18'-7"	17'-2"	16'-3"	14'-11"	18'-10"	17'-2"	16'-3"	14'-11'
	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'
11-7/8"	NI-20	20'-1"	18'-5"	17'-5"	16'-1"	20'-1"	18'-5"	17'-5"	16'-1"
	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"
14"	NI-40x	24'-4"	22'-8"	20'-11"	18'-8"	25'-0"	22'-11"	20'-11"	18'-8"
	NI-60	24'-9"	23'-0"	22'-0"	20'-9"	25'-5"	23'-8"	22'-4"	20'-10'
	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"
16"	NI-60	27'-2"	25'-4"	24'-2"	22'-10"	27'-11"	26'-1"	24'-9"	23'-1"
	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.