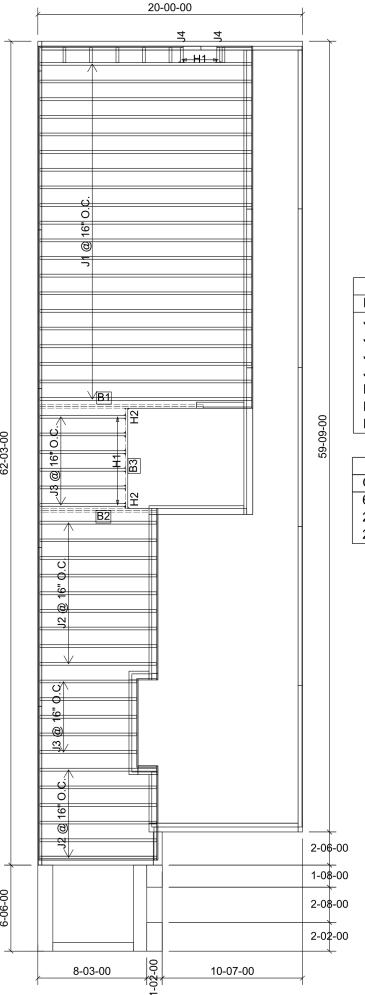
NOT THE GRANTING OF A PERMIT NOR REVIEWING OF SPECS & DRAWINGS NOR INSPECTIONS MADE DURING INSTALLATION BY THE OFFICIAL HAVING JURISDICTION SHALL RELIEVE THE OWNER FROM REQUIREMENTS OF THE ONTARIO BUILDING CODE AND ANY OTHER REFERENCED REQUIREMENTS.



		Products		
PlotID	Length	Product	Plies	Net Qty
J1	18-00-00	11 7/8" NI-40x	1	20
J2	10-00-00	11 7/8" NI-40x	1	15
J3	8-00-00	11 7/8" NI-40x	1	11
J4	2-00-00	11 7/8" NI-40x	1	2
B1	14-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
B2	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	2	2
В3	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1

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



THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan. The supporting structure is to be specified by the building designer prior to the

The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.

The building designer must review and approve this plan to acertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-07-30

1st FLOOR FRAMING

Block 120 Units 19 to 24



FROM PLAN DATED: 2022/06
BUILDER: GREENPARK HOMES
SITE: BARLASSINA CONSTRUCTION

MODEL: CHERRY 2
ELEVATION: 1,2

LOT:

CITY: CAMBRIDGE

SALESMAN: RICK DICIANO

DESIGNER: AJ REVISION:

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

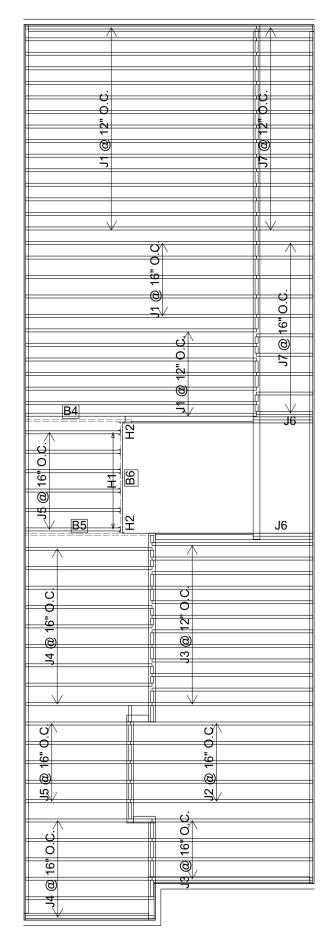
LOADING:

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: 3/4" GLUED AND NAILED

NOT THE GRANTING OF A PERMIT NOR REVIEWING OF SPECS & DRAWINGS NOR INSPECTIONS MADE DURING INSTALLATION BY THE OFFICIAL HAVING JURISDICTION SHALL RELIEVE THE OWNER FROM REQUIREMENTS OF THE ONTARIO BUILDING CODE AND ANY OTHER REFERENCED REQUIREMENTS.



		Products		
PlotID	Length	Product	Plies	Net Qty
J1	16-00-00	11 7/8" NI-40x	1	27
J2	14-00-00	11 7/8" NI-40x	1	5
J3	12-00-00	11 7/8" NI-40x	1	16
J4	10-00-00	11 7/8" NI-40x	1	15
J5	8-00-00	11 7/8" NI-40x	1	11
J6	6-00-00	11 7/8" NI-40x	2	4
J7	4-00-00	11 7/8" NI-40x	1	25
B5	10-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B4	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1
B6	8-00-00	1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL	1	1

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



THIS IS A FLOOR COMPONENT PLACEMENT PLAN ONLY.

The wood beams and joists outlined on this plan are designed as individual building components to be incorporated into the design of the building at the specification of the building designer. Please see the individual beam reports, joist reports, and/or joist span tables for each component identified on this placement plan. The supporting structure is to be specified by the building designer prior to the

The supporting structure is to be specified by the building designer prior to the installation of joist(s) and/or beam(s). The building designer is responsible for the bracing of the floor system and its integration into the bracing of the overall structure. All components labelled "by others" or "as per plan", and all steel beams, are not within the scope of work of this seal.

The building designer must review and approve this plan to acertain conformity to the overall structural plan of the building. All dimensions to be verified on site.

DATE: 2022-08-10

2nd FLOOR FRAMING

Block 120 Units 19 to 24



FROM PLAN DATED: 2022/06 BUILDER: GREENPARK HOMES

SITE: BARLASSINA CONSTRUCTION

MODEL: CHERRY 2 ELEVATION: 1,2

LOT:

CITY: CAMBRIDGE

SALESMAN: RICK DICIANO

DESIGNER: AJ REVISION:

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.

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.

CANTILEVERED JOISTS INCLUDING CANT' OVER

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

NORDIC

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

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

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 alignment
- Concentrated loads should only be applied to the top surface of the top flange. Concentrated loads should not be suspended from the bottom flange with the exception of light loads, such as ceiling fans or light fixtures.
- I-joists must be protected from the weather prior to installation.
- I-joists must not be used in applications where they will be permanently exposed to weather, or will reach a moisture content of 15 percent or greater, such as in swimming pool or hot tub areas. They must not be installed where they will remain in direct contact with
- End bearing length must be at least 1-3/4 inch. For multiple-span joists, intermediate bearing length must be at least 3-1/2 inches.
- I-joists installed beneath bearing walls perpendicular to the joists shall have full-depth blocking panels, rim board, or squash blocks (cripple blocks) to transfer gravity loads from above the floor system to the wall or foundation below.
- For I-inists 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).
- 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.

1b

1

2×3 S-P-F No. 2

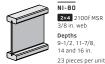
NORDIC I-JOIST SERIES RESIDENTIAL SERIES

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



1d

1k



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

Avoid Accidents by Following these Important Guidelines

of I-ioists at the end of the bay.

rim board, or cross-bridging.

Never install a damaged I-joist

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

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

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

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

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

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

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

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

RIM BOARDS

Do not walk on I-joist

Never stack building

braced or serious

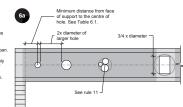
until fully fastened an

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
- materials over unsheathed I-joists Once sheathed, do no overstress I-joist with



DUCT CHASE OPENINGS

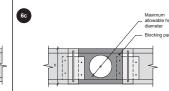
6b

Rules for Cutting Duct Chase Openings in I-joists

- The distance between the inside edge of the support and the co duct chase opening shall be in compliance with the requiremen
- 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. Holes cut into the blocking panels are subject to the following limitations The top and bottom flanges of an I-joist blocking panel must never be cut,
- All openings shall be cut in accordance with the restrictions listed above and as illustrated in detail 6b.

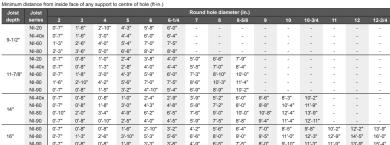
Allowable Hole Size in Lateral-restraint-only Blocking Panels

HOLES IN BLOCKING PANELS



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

TABLE 6.1 - LOCATION OF WEB HOLES



I-joist depth (in.)	Maximum depth of the opening (in.)
9-1/2	6-1/4
11-7/8	8-5/8
14	10-3/4
16	12-3/4

Minimum 1/8" space between top or bottom flange and openin

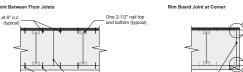
Simple or Minimum o			face of any	support to	o centre of	hole (ft-in.)										Simple spa Minimum di
Joist	Joist							Round	hole diam	eter (in.)							Joist
depth	series						6-1/4			8-5/8		10	10-3/4		12	12-3/4	depth :
	NI-20	0'-7"	1'-6"	2'-10"	4'-3"	5'-8"	6'-0"	-	-	-	-	-	-	-	-	-	
9-1/2"	NI-40x	0'-7"	1'-6"	3'-0"	4'-4"	6'-0"	6'-4"	-	-	-	-	-	-	-	-	-	9-1/2"
9-1/2	NI-60	1'-3"	2'-6"	4'-0"	5'-4"	7'-0"	7'-5"	-	-	-	-	-	-	-	-	-	9-1/2
	NI-80	2'-3"	3'-6"	5'-0"	6'-6"	8'-2"	8'-8"	-	-	-	-	-	-	-	-	-	
	NI-20	0'-7"	0'-8"	1'-0"	2'-4"	3'-8"	4'-0"	5'-0"	6'-6"	7'-9"	-	-	-	-	-	-	
	NI-40x	0'-7"	0'-8"	1'-3"	2'-8"	4'-0"	4'-4"	5'-5"	7'-0"	8'-4"	-	-	-	-	-	-	
11-7/8"	NI-60	0'-7"	1'-8"	3'-0"	4'-3"	5'-9"	6'-0"	7'-3"	8'-10"	10'-0"	-	-	-	-	-	-	11-7/8"
	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"	-	-	-	
	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"	-	-	-	

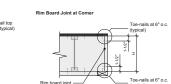
Design Criteria		
Joist spacing	Up to 24 inches	
Loads	Live load = 40 psf and dead load = 15 psf	
Deflection limits	L/480 under live load and L/240 under total load	

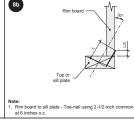
TABLE 6.2 - LOCATION OF DUCT CHASE OPENINGS

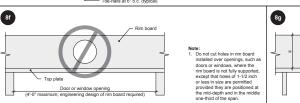
aeptn	series	8	10	12	14	16	18	20	22	24
	NI-20	4'-1"	4'-5"	4'-10"	-	-	-	-	-	-
0.4/01	NI-40x	5'-3"	5'-8"	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	-	-
9-1/2"	NI-60	5'-4"	5'-9"	6'-2"	6'-7"	7'-1"	7'-5"	8'-0"	-	-
	NI-80	5'-3"	5'-8"	6'-0"	6'-5"	6'-10"	7'-3"	7'-8"	8'-2"	8'-6"
	NI-20	5'-9"	6'-2"	6'-6"	-	-	-	-	-	-
	NI-40x	6'-8"	7'-2"	7'-6"	8'-1"	8'-6"	9'-1"	9'-6"	-	-
11-7/8"	NI-60	7'-3"	7'-8"	8'-0"	8'-6"	9'-0"	9'-3"	9'-9"	-	-
	NI-80	7'-2"	7'-7"	8'-0"	8'-5"	8'-10"	9'-3"	9'-8"	10'-2"	10'-8
	NI-90	7'-6"	7'-11"	8'-4"	8'-9"	9'-2"	9'-7"	10'-1"	10'-7"	10'-1
	NI-40x	8'-1"	8'-7"	9'-0"	9'-6"	10'-1"	10'-7"	11'-2"	-	-
14"	NI-60	8'-9"	9'-3"	9'-8"	10'-11"	10'-6"	11'-1"	11'-6"	-	-
14"	NI-80	9'-0"	9'-3"	9'-9"	10'-1"	10'-7"	11'-1"	11'-6"	12'-1"	12'-€
	NI-90	9'-2"	9'-8"	10'-0"	10'-6"	10'-11"	11'-5"	11'-9"	12'-4"	12'-1
	NI-60	10'-3"	10'-8"	11'-2"	11'-6"	12'-1"	12'-6"	13'-2"	-	-
16"	NI-80	10'-4"	10'-9"	11'-3"	11'-9"	12'-1"	12'-7"	13'-1"	13'-8"	14'-4
	NI-90	10'-9"	11'-2"	11'-8"	12'-0"	12'-6"	13'-0"	13'-6"	14'-2"	14'-1
		D! 0								
		Design C	riteria							

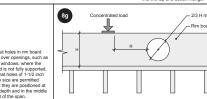
RIM BOARDS 8a

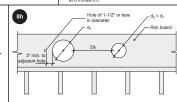




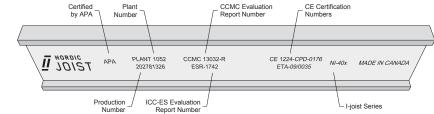




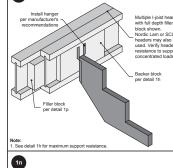


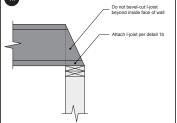


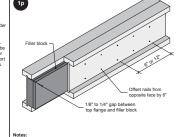
-JOIST MARKING



FOR ALL construction details







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

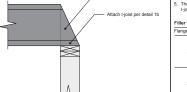
2-1/8 to 2-1/4 x 6 2x6 + 5/8" or 3/4" she

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

1s-1

 \rightarrow DC3

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





CITY:

GREENPARK HOMES BARLASSINA CONSTRUCTION

CHERRY 2 CAMBRIDGE Level:

Job Name: CHERRY 2 EL 1 **1ST FLR FRAMING**

Label: B1 - i1589 Type: **Beam**

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

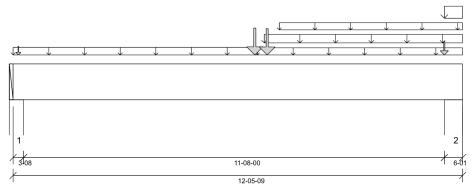
Status: Design Passed

08/17/2022 08:56

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26



DESIGN INFORMATION

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

Amendment)

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

Lateral Restraint Requirements:

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

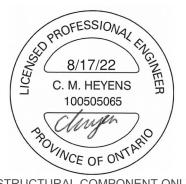
Bottom: 6'- 4 1/16" Top: 0'

Factored Resistance of Support Material:

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

PLY TO PLY CONNECTION: 4 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 # TF22081027

l	ANALYSIS RESULTS						
1	Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
l	Factored Pos. Moment:	6'- 8 7/16"	1.25D + 1.5L	1.00	18441 lb ft	35345 lb ft	Passed - 52%
l	Factored Shear:	10'- 11 5/8"	1.25D + 1.5L	1.00	3905 lb	13815 lb	Passed - 28%
l	Live Load (LL) Pos. Defl.:	6'- 4 1/16"	L		0.178"	L/360	Passed - L/786
l	Total Load (TL) Pos. Defl.:	6'- 4 1/4"	D + L		0.292"	L/240	Passed - L/480

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	3-08	1.25D + 1.5L	1.00	3379 lb		12740 lb	7536 lb	Passed - 45%	
l	2	6-01	1.25D + 1.5L	1.00	5355 lb		22131 lb	13091 lb	Passed - 41%	

SPECII	FIED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	12'- 5 9/16"	Self Weight	Тор	12 lb/ft	-	-	-
Uniform	0'	6'- 9 5/16"	FC1 Floor Decking (Plan View Fill)	Тор	13 lb/ft	27 lb/ft	-	-
Uniform	6'- 9 5/16"	12'- 5 9/16"	FC1 Floor Decking (Plan View Fill)	Тор	7 lb/ft	14 lb/ft	-	-
Uniform	6'- 11 9/16"	12'- 5 9/16"	11(i121)	Top	81 lb/ft	-	-	-
Uniform	7'- 4 9/16"	12'- 5 9/16"	11(i121)	Top	8 lb/ft	11 lb/ft	-	-
Uniform	11'- 11 1/2"	12'- 5 9/16"	User Load	Top	80 lb/ft	160 lb/ft	-	-
Point	6'- 8 7/16"	6'- 8 7/16"	B3(i1571)	Front	710 lb	1377 lb	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	E7(i105)	Тор	136 lb	80 lb	-	-
Point	7'- 9/16"	7'- 9/16"	11(i121)	Top	706 lb	1324 lb	-	-
Point	11' 11 1/2"	11' 11 1/2"	Hear Load	Ton	240 lb	490 lb		

UN	UNFACTORED REACTIONS											
	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)				
	1	0'	0'- 3 1/2"	W5(i13)	986 lb	1396 lb	-	-				
	2	11'- 11 1/2"	12'- 5 9/16"	1(i27)	1611 lb	2262 lb	_	_				

DESIGN NOTES

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

PLY TO PLY CONNECTION

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



CITY:

GREENPARK HOMES
BARLASSINA CONSTRUCTION

CHERRY 2 CAMBRIDGE Job Name: CHERRY 2 EL 1
Level: 1ST FLR FRAMI

Label: **B2 - i159**Type: **Beam**

el: 1ST FLR FRAMING el: B2 - i1596

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

Report Version: 2021.03.26

Factored

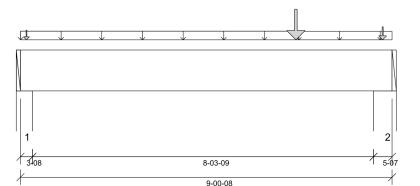
Status:

Design
Passed

08/17/2022 08:56

Illustration Not to Scale. Pitch: 0/12

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



Controlling Load

DESIGN INFORMATION

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

Amendment)

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

Lateral Restraint Requirements:

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

Top: 0' Bottom: 6'- 4 1/16"

Factored Resistance of Support Material:

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

ANALYSIS RESULTS										
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result				
Factored Pos. Moment:	6'- 8 7/16"	1.25D + 1.5L	1.00	4938 lb ft	35345 lb ft	Passed - 14%				
Factored Shear:	7'- 7 3/16"	1.25D + 1.5L	1.00	2552 lb	13815 lb	Passed - 18%				
Live Load (LL) Pos. Defl.:	4'- 10 11/16"	L		0.024"	L/360	Passed - L/999				
Total Load (TL) Pos. Defl.:	4'- 10 1/2"	D + L		0.038"	L/240	Passed - L/999				
SUPPORT AND REACTION INFORMATION										

Factored

Factored

Factored

	Bearing Length	Combin		Downward Reaction	p	Resistance of Member	Resistance of Support	Result
1	3-08	1.25D +	1.5L 1.00	1279 lb		12740 lb	7536 lb	Passed - 17%
2	5-07	1.25D +	1.5L 1.00	3338 lb		19754 lb	11685 lb	Passed - 29%
SPECI	FIED LOAD	S						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weight	0'	9'- 1/2"	Self Weight	Тор	12 lb/ft	-	-	-
Uniform	0'	6'- 9 5/16"	FC1 Floor Decking (Plan View Fill)	Тор	13 lb/ft	27 lb/ft	-	-
Uniform	6'- 9 5/16"	9'- 1/2"	FC1 Floor Decking (Plan View Fill)	Тор	11 lb/ft	22 lb/ft	-	-
Point	6'- 8 7/16"	6'- 8 7/16"	B3(i1571)	Back	728 lb	1412 lb	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	E7(i105)	Тор	112 lb	86 lb	-	-
Point	8'- 9 3/4"	8'- 9 3/4"	5(i117)	Тор	193 lb	305 lb	-	-
UNFA	CTORED RI	EACTIONS	5					
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	W5(i13)		389 lb	522 lb	-	-
2	8'- 7 1/16"	9'- 1/2"	W13(i24)		866 lb	1511 lb	-	-

DESIGN NOTES

Input

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

ROFESSIONAL FIRE BY A STATE OF ONTARIO

PLY TO PLY CONNECTION:

4 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 # TF22081028

PLY TO PLY CONNECTION

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



CITY:

GREENPARK HOMES
BARLASSINA CONSTRUCTION

CHERRY 2 CAMBRIDGE Job Name: CHERRY 2 EL 1

Label: B3 - i1571
Type: Beam

Level: 1ST FLR FRAMING

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

Report Version: 2021.03.26

Status:

Design
Passed

08/17/2022 08:56

Illustration Not to Scale. Pitch: 0/12

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

7-06-13 7-06-13

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

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

Lateral Restraint Requirements:

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

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

Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Beam @ 7'- 6 13/16"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	3'- 10 11/16"	1.25D + 1.5L	1.00	5695 lb ft	17672 lb ft	Passed - 32%
Factored Shear:	0'- 11 7/8"	1.25D + 1.5L	1.00	2261 lb	6908 lb	Passed - 33%
Live Load (LL) Pos. Defl.:	3'- 9 7/16"	L		0.058"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 9 7/16"	D + L		0.088"	L/240	Passed - L/999

SU	SUPPORT AND REACTION INFORMATION												
ID	Input Controlling Load ID Bearing Combination Length		LDF	Factored Downward Reaction	Factored Uplift Reaction	Factored Resistance of Member	Factored Resistance of Support	Result					
1	1-11	1.25D + 1.5L	1.00	3020 lb		3020 lb	-	Passed - 100%					
2	1-10	1.25D + 1.5L	1.00	2962 lb		2962 lb	-	Passed - 100%					

CONNECTOR INFORMATION

ID	Part No.	Manufacturer	Nailing Requirements			Other Information or Requirement for
			Тор	Face	Member	Reinforcement Accessories
1	HUS1.81/10		-	-	-	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.

SPECIFIED LOADS									
I	Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
	Self Weight	0'	7'- 6 13/16"	Self Weight	Тор	6 lb/ft	-	-	-
П	Uniform	0'	7'- 6 13/16"	User Load	Тор	120 lb/ft	240 lb/ft	-	-
ı	Uniform	0'- 11 1/16"	6'- 3 1/16"	Smoothed Load	Back	67 lb/ft	134 lb/ft	-	-
ı	Point	0'- 3 1/16"	0'- 3 1/16"	J3(i1590)	Back	58 lb	116 lb	-	-
ı	Point	6'- 11 1/16"	6'- 11 1/16"	J3(i1617)	Back	71 lb	142 lb	-	-
UNFACTORED REACTIONS									
I	ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)

ı	UNFA	UNFACTURED REACTIONS											
I	ID	Start Loc	End Loc	Source	Dead (D)	Live (L)	Snow (S)	Wind (W)					
I	1	0'	0'	B2(i1596)	728 lb	1412 lb	-	-					
ı	2	7'- 6 13/16"	7'- 6 13/16"	B1(i1589)	710 lb	1377 lb	-	-					

DESIGN NOTES

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



STRUCTURAL COMPONENT ONLY DWG # TF22081029



CITY:

GREENPARK HOMES
BARLASSINA CONSTRUCTION

CHERRY 2 CAMBRIDGE TION Level:

Job Name: CHERRY 2 EL 1
Level: 2ND FLR FRAMING

Label: B4 - i1501
Type: Beam

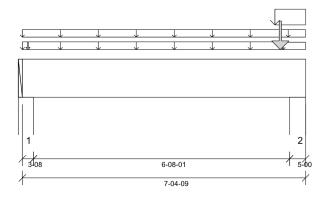
1 Ply Member 1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL Status:

Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 08/17/2022 08:56



DESIGN INFORMATION

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

Amendment)

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

Lateral Restraint Requirements:

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

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

Factored Resistance of Support Material:

- 615 psi Wall @ 0'- 2 1/2"
- 615 psi Wall @ 7'- 9/16"

ANALISIS NESCEIS										
D	esign Criteria	Loc	cation	Load	Combinatio	n LDF	Design	Limit	Result	
Factored	l Pos. Moment	t: 5'-	7 7/8"	1.2	25D + 1.5L	1.00	869 lb ft	17672 lb ft	Passed - 5%	
Factored	l Shear:	5'- 11	I 11/16"	1.2	25D + 1.5L	1.00	2443 lb	6908 lb	Passed - 35%	
Total Loa	ad (TL) Pos. D	efl.: 3'- '	11 1/8"		D + L		0.011"	L/240	Passed - L/999	
SUPP	ORT AND R	EACTION	INFORM <i>A</i>	TION						
	Input Bearing Length	Controlling Combina		LDF	Factored Downward Reaction	Factored I Uplift Reaction	Factored Resistance of Member		Result	
1	3-08	1.25D +	1.5L	1.00	351 lb		6370 lb	3768 lb	Passed - 9%	
2	5-00	1.25D +	1.5L	1.00	2921 lb		9124 lb	5397 lb	Passed - 54%	
SPECIFIED LOADS										
Туре	Start Loc	End Loc	Source		Face	Dead (D)	Live (L)	Snow (S)	Wind (W)	
Self Weight	0'	7'- 4 9/16"	Self Wei	ght	Тор	6 lb/ft	-	-	-	
Uniform	0'	7'- 4 9/16"	FC2 Floor D (Plan View		Тор	4 lb/ft	8 lb/ft	-	-	
Uniform	0'	6'- 9 1/2"	FC2 Floor D (Plan View		Тор	8 lb/ft	16 lb/ft	-	-	
Uniform	6'- 6 15/16"	7'- 4 9/16"	User Lo		Тор	120 lb/ft	240 lb/ft	-	-	
Uniform	6'- 9 1/2"	7'- 4 9/16"	FC2 Floor D (Plan Viev		Тор	3 lb/ft	6 lb/ft	-	-	
Point	6'- 8 5/8"	6'- 8 5/8"	B6(i150	3)	Front	587 lb	1127 lb	-	-	
Point	0'- 1 3/4"	0'- 1 3/4"	E10(i95	5)	Тор	15 lb	-	-	-	
UNFA	CTORED RE	ACTIONS	3							
ID	Start Loc	End Loc	Sc	urce		Dead (D)	Live (L)	Snow (S)	Wind (W)	
1	0'	0'- 3 1/2"	E7	(i105)		122 lb	168 lb	-	-	
2	6'- 11 9/16"	7'- 4 9/16"	11	(i121)		706 lb	1324 lb	-	-	
DESIG	N NOTES									

DESIGN NOTES

ANALYSIS RESULTS

- The dead loads used in the design of this member were applied to the structure as sloped dead loads.
- Analysis and Design has been performed using precision loading from actual modeled conditions. Some loads may have been modified to simplify reporting.
- Tributary Loads have been generated based on actual spacing between members in the model which may differ from the default system spacing. The actual loads applied to the member are shown in the Specified Loads table.
- Transfer reactions may differ from design results as allowed per building codes and standard load distribution practices.
- This report is based on modeled conditions input by the user. Source information for the loads and supports are provided for reference only. Verify that all loads and support conditions are correct.
- Review all loads and reactions to ensure that the member/bearing/connector/structure can resist adequately. Unless already
 specified on this report, anchorage for uplift reactions to be specified by others. Installation of member and accessories (if
 required) as per manufacturer's instruction.
- When the applied loads are coming from a member/post/wall above that does not sit directly on this beam, adequate load
 transfer elements, such as squash blocks, wall studs, or beveled plates are required to transfer the loads to this beam.
- 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=1.750". LDF=1.00, Pf=2424 lb, Q'r=5165 lb, Result=46.94%.





CITY:

GREENPARK HOMES BARLASSINA CONSTRUCTION

CHERRY 2 CAMBRIDGE

Job Name: CHERRY 2 EL 1 Level: 2ND FLR FRAMING

Label: B5 - i1525 Type: **Beam**

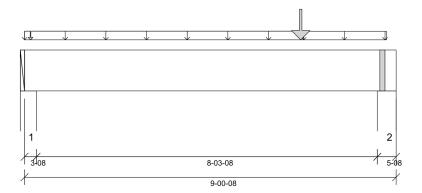
1 Ply Member 1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL

Status: Design Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 08/17/2022 08:56



DESIGN INFORMATION

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

Amendment)

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

Lateral Restraint Requirements:

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

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

Factored Resistance of Support Material:

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

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	6'- 8 5/8"	1.25D + 1.5L	1.00	2739 lb ft	17672 lb ft	Passed - 15%
Factored Shear:	7'- 7 1/8"	1.25D + 1.5L	1.00	1402 lb	6908 lb	Passed - 20%
Live Load (LL) Pos. Defl.:	4'- 10 1/16"	L		0.028"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	4'- 9 15/16"	D + L		0.044"	L/240	Passed - L/999
SUPPORT AND REAC	TION INFORM	IATION				

ID	Bearing Length	Controlling Combina	' II)⊢	Downward Reaction	I Uplift Reaction	Resistance of Member	Resistance of Support	Result
1	3-08	1.25D +	1.5L 1.00	662 lb		6370 lb	3768 lb	Passed - 18%
2	5-08	1.25D +	1.5L 1.00	1468 lb		10010 lb	5921 lb	Passed - 25%
SPE	CIFIED LOA	DS						
Туре	Start Loc	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
Self Weigh	nt 0'	9'- 1/2"	Self Weight	Тор	6 lb/ft	-	-	-
Unifor	m 0'	6'- 9 1/2"	FC2 Floor Decking (Plan View Fill)	Тор	13 lb/ft	27 lb/ft	-	-
Unifor	m 6'- 9 1/2"	8'- 9 3/4"	FC2 Floor Decking (Plan View Fill)	Тор	11 lb/ft	21 lb/ft	-	-
Point	6'- 8 5/8"	6'- 8 5/8"	B6(i1503)	Back	385 lb	724 lb	-	-
Point	0'- 1 3/4"	0'- 1 3/4"	E10(i955)	Тор	15 lb	-	-	-
UNF	ACTORED R	EACTIONS						
ID	Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
1	0'	0'- 3 1/2"	E7(i105)		186 lb	278 lb	-	-
2	8'- 7"	9'- 1/2"	5(i117)		380 lb	671 lb	-	-

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





CITY:

GREENPARK HOMES
BARLASSINA CONSTRUCTION

CHERRY 2 CAMBRIDGE Job Name: CHERRY 2 EL 1

N Level: 2ND FLR FRAM

Level: 2ND FLR FRAMING
Label: B6 - i1503
Type: Beam

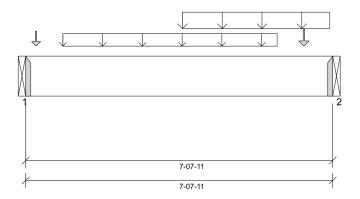
1 Ply Member 1 3/4" x 11 7/8" (2.0E 3100) WestFraser LVL Status:

Design
Passed

Illustration Not to Scale. Pitch: 0/12

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

Report Version: 2021.03.26 08/17/2022 08:56



DESIGN INFORMATION

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

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

Lateral Restraint Requirements:

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

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

Factored Resistance of Support Material:

- 615 psi Beam @ 0'
- 615 psi Beam @ 7'- 7 11/16"

ANALYSIS RESULTS						
Design Criteria	Location	Load Combination	LDF	Design	Limit	Result
Factored Pos. Moment:	4'- 3 1/8"	1.25D + 1.5L	1.00	4072 lb ft	17672 lb ft	Passed - 23%
Factored Shear:	6'- 7 13/16"	1.25D + 1.5L	1.00	1653 lb	6908 lb	Passed - 24%
Live Load (LL) Pos. Defl.:	3'- 11 3/4"	L		0.040"	L/360	Passed - L/999
Total Load (TL) Pos. Defl.:	3'- 11 11/16"	D + L		0.061"	L/240	Passed - L/999

SUP	PORT AND	REACTION INFORM	NOITAN					
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	1561 lb		2730 lb	-	Passed - 57%
2	1-08	1.25D + 1.5L	1.00	2431 lb		2730 lb	-	Passed - 89%

CONNECTOR INFORMATION	

ID	Part No.	Manufacturer	N	ailing Requireme	ents	Other Information or Requirement for
טו	Fait No.	Manufacturei	Тор	Face	Member	Reinforcement Accessories
1	HUS1.81/10		-	-	-	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.

Start Loc							
	End Loc	Source	Face	Dead (D)	Live (L)	Snow (S)	Wind (W)
0'	7'- 7 11/16"	Self Weight	Тор	6 lb/ft	-	-	-
0'- 11 1/8"	6'- 3 1/8"	Smoothed Load	Back	68 lb/ft	134 lb/ft	-	-
- 10 13/16"	7'- 6 13/16"	User Load	Front	120 lb/ft	240 lb/ft	-	-
0'- 3 1/8"	0'- 3 1/8"	J5(i1480)	Back	56 lb	112 lb	-	-
6'- 11 1/8"	6'- 11 1/8"	J5(i1495)	Back	71 lb	143 lb	-	-
ORED RE	ACTIONS						
Start Loc	End Loc	Source		Dead (D)	Live (L)	Snow (S)	Wind (W)
0'	0'	B5(i1525)		385 lb	724 lb	-	-
"- 7 11/16"	7'- 7 11/16"	B4(i1501)		587 lb	1127 lb	-	-
6	0'- 11 1/8" · 10 13/16" 0'- 3 1/8" 5'- 11 1/8" DRED RE Start Loc 0'	0'-111/8" 6'-31/8" -1013/16" 7'-613/16" 0'-31/8" 0'-31/8" 6'-111/8" 6'-111/8" DRED REACTIONS Start Loc End Loc 0' 0'	0'-11 1/8" 6'- 3 1/8" Smoothed Load 10 13/16" 7'- 6 13/16" User Load 0'- 3 1/8" 0'- 3 1/8" J5(i1480) 0'- 11 1/8" 6'- 11 1/8" J5(i1495) DRED REACTIONS Start Loc End Loc Source 0' 0' B5(i1525)	0'-111/8" 6'-31/8" Smoothed Load Back -1013/16" 7'-613/16" User Load Front 0'-31/8" 0'-31/8" J5(i1480) Back 6'-111/8" 6'-111/8" J5(i1495) Back DRED REACTIONS Start Loc End Loc Source 0' 0' B5(i1525)	0'-111/8" 6'-31/8" Smoothed Load Back 68 lb/ft 10 13/16" 7'-6 13/16" User Load Front 120 lb/ft 0'-31/8" 0'-31/8" J5(i1480) Back 56 lb 6'-111/8" 6'-111/8" J5(i1495) Back 71 lb ORED REACTIONS	0'-111/8" 6'-31/8" Smoothed Load Back 68 lb/ft 134 lb/ft 10 13/16" 7'-6 13/16" User Load Front 120 lb/ft 240 lb/ft 10'-31/8" 0'-31/8" J5(i1480) Back 56 lb 112 lb 112 lb 1143 lb 1143 lb 115 CRED REACTIONS Start Loc End Loc Source Dead (D) Live (L) 0' 0' B5(i1525) 385 lb 724 lb	0'- 11 1/8" 6'- 3 1/8" Smoothed Load Back 68 lb/ft 134 lb/ft - 10 13/16" 7'- 6 13/16" User Load Front 120 lb/ft 240 lb/ft - 10 13/16" 0'- 3 1/8" J5(i1480) Back 56 lb 112 lb - 10'- 11 1/8" 6'- 11 1/8" J5(i1495) Back 71 lb 143 lb - DRED REACTIONS Start Loc End Loc Source Dead (D) Live (L) Snow (S) 0' 0' B5(i1525) 385 lb 724 lb -

DESIGN NOTES

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



STRUCTURAL COMPONENT ONLY DWG # TF22081032



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"	-
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'-2"	-
11-7/8"	NI-60	21'-4"	19'-9"	18'-11"	-	21'-11"	20'-5"	19'-6"	-
	NI-80	22'-9"	21'-1"	20'-2"	-	23'-3"	21'-8"	20'-8"	-
	NI-90	23'-3"	21'-6"	20'-6"	-	23'-9"	22'-0"	21'-0"	-
	NI-40x	23'-8"	21'-11"	20'-11"	-	24'-4"	22'-8"	21'-8"	-
14"	NI-60	24'-0"	22'-3"	21'-3"	-	24'-8"	22'-11"	21'-11"	-
14	NI-80	25'-7"	23'-9"	22'-7"	-	26'-2"	24'-4"	23'-3"	-
	NI-90	26'-1"	24'-2"	23'-0"	-	26'-8"	24'-9"	23'-7"	-
	NI-60	26'-5"	24'-6"	23'-5"	-	27'-2"	25'-3"	24'-2"	-
16"	NI-80	28'-2"	26'-1"	24'-10"	-	28'-10"	26'-9"	25'-6"	-
	NI-90	28'-8"	26'-6"	25'-3"	-	29'-3"	27'-2"	25'-11"	_

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



Maximum Floor Spans - S4.1

Design Criteria

Spans: Simple span

Live load = 40 psf and dead load = 15 psf

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

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

Maximum Floor Spans

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

		Mi	d-span blocking	with 1x4 inch	strap	Mid-sp	oan blocking an	d 1/2 in. gypsui	m ceiling
Joist depth	Joist series		On cent	re spacing			On 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"	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"
11-7/8"	NI-40x	21'-10"	20'-4"	19'-4"	17'-8"	22'-5"	20'-6"	19'-4"	17'-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 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 - 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. gyr	sum ceiling	
Joist depth	Joist series		On cent	re spacing			On cent	re spacing	
		12"	16"	19.2"	24"	12"	16"	19.2"	24"
	NI-20	14'-11"	14'-1"	13'-7"	-	15'-4"	14'-6"	14'-1"	-
0.4/0"	NI-40x	15'-11"	15'-0"	14'-6"	-	16'-4"	15'-5"	14'-11"	-
9-1/2"	NI-60	16'-1"	15'-2"	14'-8"	-	16'-6"	15'-7"	15'-1"	-
	NI-80	17'-1"	16'-1"	15'-6"	-	17'-5"	16'-5"	15'-10"	-
	NI-20	16'-9"	15'-10"	15'-4"	-	17'-4"	16'-4"	15'-10"	-
	NI-40x	17'-10"	16'-10"	16'-3"	-	18'-6"	17'-4"	16'-9"	-
11-7/8"	NI-60	18'-1"	17'-0"	16'-5"	-	18'-9"	17'-6"	16'-11"	-
	NI-80	19'-6"	18'-0"	17'-4"	-	20'-1"	18'-7"	17'-9"	-
	NI-90	19'-11"	18'-4"	17'-8"	-	20'-5"	18'-11"	18'-1"	-
	NI-40x	19'-10"	18'-4"	17'-8"	-	20'-6"	19'-1"	18'-3"	-
14"	NI-60	20'-2"	18'-8"	17'-11"	-	20'-10"	19'-4"	18'-6"	-
14	NI-80	21'-8"	20'-0"	19'-1"	-	22'-4"	20'-8"	19'-9"	-
	NI-90	22'-1"	20'-5"	19'-6"	-	22'-9"	21'-0"	20'-1"	-
	NI-60	22'-0"	20'-4"	19'-6"	-	22'-9"	21'-1"	20'-2"	-
16"	NI-80	23'-7"	21'-10"	20'-10"	-	24'-4"	22'-6"	21'-6"	-
	NI-90	24'-1"	22'-2"	21'-2"	-	24'-9"	22'-11"	21'-10"	-

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

		Mi	d-span blocking	with 1x4 inch	strap	Mid-sp	an blocking an	d 1/2 in. gypsu	ım ceiling	
Joist depth	Joist series		On cent	re spacing		On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"	
9-1/2"	NI-40x	18'-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"	19.2" 14'-6" 16'-3"	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	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"	-
0.4/0"	NI-40x	16'-2"	15'-3"	14'-8"	-	16'-7"	15'-8"	15'-1"	-
9-1/2"	NI-60	16'-4"	15'-4"	14'-10"	-	16'-9"	15'-9"	15'-3"	-
	NI-80	17'-3"	16'-3"	15'-8"	-	17'-8"	16'-7"	19.2" 14'-3" 15'-1"	-
	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	19'-9"	-	23'-0"	21'-4"	20'-4"	-	
	NI-60	22'-4"	20'-8"	19'-9"	-	23'-1"	21'-5"	20'-6"	-
16"	NI-80	23'-11"	22'-1"	21'-1"	-	24'-8"	22'-10"	21'-9"	-
	NI-90	24'-5"	22'-6"	21'-6"	-	25'-1"	23'-2"	22'-2"	-

		Mi	d-span blocking	g with 1x4 inch s	trap	Mid-sp	oan blocking an	d 1/2 in. gypsum	ceiling	
Joist depth	Joist series		On cent	re spacing		On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-8"	15'-3"	14'-5"	-	16'-8"	15'-3"	14'-5"	-	
9-1/2"	NI-40x	17'-11"	17'-0"	16'-1"	-	18'-5"	17'-1"	16'-1"	-	
9-1/2	NI-60	18'-2"	17'-1"	16'-4"	-	18'-8"	17'-4"	16'-4"	-	
	NI-80	19'-5"	18'-0"	17'-5"	-	19'-10"	18'-5"	17'-8"	-	
	NI-20	19'-7"	18'-2"	17'-3"	-	19'-11"	18'-3"	17'-3"	-	
	NI-40x	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-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"	14'-6" 15'-10" 16'-0" 16'-9" 16'-10" 17'-9" 17'-11" 19'-0" 19'-5" 19'-7" 19'-11" 21'-2" 21'-6" 23'-1"	14'-11'
9-1/2"	NI-60	17'-2"	16'-2"	15'-7"	14'-11"	17'-7"	16'-7"		15'-4"
	NI-80	18'-3"	17'-1"	16'-5"	15'-9"	18'-8"	17'-5"		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	oan blocking an	d 1/2 in. gypsur	n ceiling	
Joist depth	Joist series		On cent	re spacing		On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"	
0.4/0!!	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"	e spacing 19.2" 14'-6" 16'-3" 16'-6" 18'-2" 17'-5" 19'-0" 19'-8" 21'-6" 20'-11" 22'-4" 24'-1" 24'-6" 24'-9" 26'-5"	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 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 - 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"	19.2" 14'-1" 14'-11" 15'-10" 15'-10" 16'-9" 16'-11" 17'-9" 18'-1" 18'-3" 18'-6" 19'-9" 20'-1" 20'-2" 21'-6"	-
	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"	spacing 19.2" 14'-1" 14'-11" 15'-1" 15'-10" 15'-10" 16'-9" 16'-11" 17'-9" 18'-1" 18'-3" 18'-6" 19'-9" 20'-1" 20'-2"	-
	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 st	rap	Mid-sp	oan blocking an	d 1/2 in. gypsum	ceiling	
Joist depth	Joist series		On cent	re spacing		On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-6"	15'-1"	14'-3"	-	16'-6"	15'-1"	14'-3"	-	
0.4/0"	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"	spacing 19.2" 14'-3" 15'-11"	-	
	NI-20	19'-4"	18'-0"	17'-1"	-	19'-9"	18'-1"	17'-1"	-	
9-1/2" 11-7/8"	NI-40x	20'-10"	19'-4"	18'-6"	-	21'-5"	19'-11"	19'-0"	-	
	NI-60	21'-1"	19'-7"	18'-8"	-	21'-8"	20'-2"	19'-3"	-	
	NI-80	22'-6"	20'-10"	19'-11"	-	23'-1"	21'-5"	20'-5"	-	
	NI-90	23'-0"	21'-3"	20'-4"	-	23'-6"	21'-10"	20'-10"	-	
	NI-40x	23'-5"	21'-8"	20'-9"	-	24'-0"	22'-5"	20'-11"	-	
1.4"	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 - M7.1

Design Criteria

Spans: Simple span

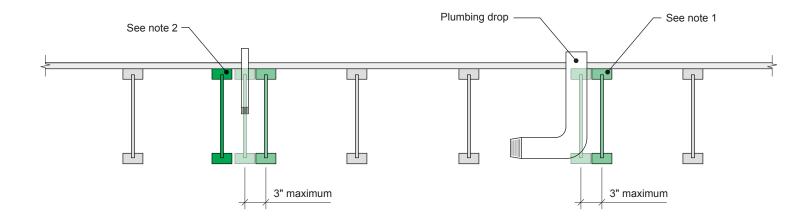
Loads: Live load = 40 psf and dead load = 20 psf
Deflection limits: L/480 under live load and L/240 under total load
Sheathing: 3/4 in. nailed-glued Canadian softwood plywood

Maximum Floor Spans

			В	are			1/2 in. 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"	14'-11'
9-1/2"	NI-60	17'-1"	16'-1"	15'-6"	14'-10"	17'-6"	16'-6"	15'-11"	15'-3"
	NI-80	18'-1"	17'-0"	16'-4"	15'-8"	18'-7"	17'-4"	19.2" 14'-6" 15'-9"	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. gypsur	m ceiling	
Joist depth	Joist series		On cent	re spacing		On centre spacing				
		12"	16"	19.2"	24"	12"	16"	19.2"	24"	
	NI-20	16'-10"	15'-5"	14'-6"	13'-5"	16'-10"	15'-5"	14'-6"	13'-5"	
9-1/2"	NI-40x	18'-7"	17'-2"	16'-3"	14'-11"	18'-10"	17'-2"	16'-3"	14'-11'	
9-1/2	NI-60	18'-10"	17'-6"	16'-6"	15'-5"	19'-1"	17'-6"	16'-6"	15'-5"	
	NI-80	20'-2"	18'-9"	17'-11"	16'-10"	20'-7"	19'-2"	re spacing 19.2" 14'-6" 16'-3" 16'-6" 18'-2" 17'-5" 19'-0" 19'-8" 21'-4" 21'-9" 20'-11" 22'-4" 24'-0" 24'-5"	16'-10'	
	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"	
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"	20'-11"	18'-8"	25'-0"	22'-11"	20'-11"	18'-8"	
14"	NI-60	24'-9"	23'-0"	22'-0"	20'-9"	25'-5"	23'-8"	22'-4"	20'-10'	
14	NI-80	26'-5"	24'-6"	23'-4"	22'-1"	27'-0"	25'-2"	24'-0"	22'-8"	
	NI-90	26'-11"	25'-0"	23'-10"	22'-6"	27'-5"	25'-7"	24'-5"	23'-1"	
	NI-60	27'-2"	25'-4"	24'-2"	22'-10"	27'-11"	26'-1"	24'-9"	23'-1"	
16"	NI-80	29'-0"	26'-11"	25'-8"	24'-3"	29'-7"	27'-7"	26'-4"	24'-11'	
	NI-90	29'-6"	27'-5"	26'-1"	24'-8"	30'-1"	28'-1"	26'-9"	25'-4"	

- 1. The tabulated clear spans are based on CSA 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.



Notes:

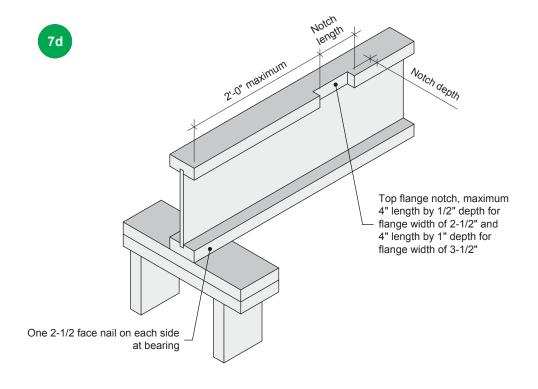
- 1. To prevent interference with plumbing, a joist may be shifted up to 3 inches if the edge of the floor panel is supported and the span rating is not exceeded.
- 2. In all other cases, an additional joist is required.

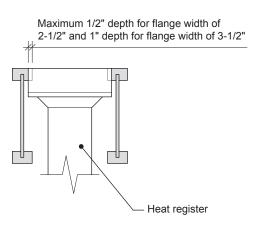
All nails shown in the details are assumed to be common nails unless otherwise noted. Nails shall have a diameter not less than 0.128 inch for 2-1/2-inch nails, or 0.144 inch for 3-inch nails. Individual components not shown to scale for clarity.





Allowance for Piping		7c	
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Notes:

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

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





TITLE		DRAWING		
Notch in I-joist for Heat Register		7d		
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