

## **Engineering Note Page (ENP-2)**

REVISION 2009-10-09

**Please read all notes prior to installation of the component**

### **DESIGN INFORMATION**

This building component is certified as an individual component for the loads and conditions shown on the calculation and drawing page.

The responsibility of the undersigned engineer is only limited to the calculation of this building component for the loads and conditions shown on this drawing.

The responsibility of the undersigned is limited to the verification of the structural capacity of the NASCOR floor joists and LVL beams based on placement as shown on the layout. The loads applied are limited to the gravity effects of the specified loads. The structural integrity of the building and the effect of wind, uplift, seismic, lateral or other forces, calculation of adequate support and anchorage of components, as well as the dimensions and design loads used to calculate components are the responsibility of the overall building designer.

Floor joists and OSB rim board are designed to carry uniformly distributed loads only. Point loads should be transferred through the floor cavity with squash blocks. Structural elements such as walls, posts, connectors, and squash blocks are the responsibility of the overall building designer.

The undersigned engineer disclaims any responsibility for damages as a result of being furnished faulty or incorrect information, specifications and/or designs.

Installation of NASCOR joists is to be carried out in accordance with the current edition of the manufacturer's approved literature available at <http://www.nascor.ca>.

### **CODE**

This building component is designed in accordance with the National Building Code of Canada, the Ontario Building Code, CCMC and Canadian Standards Association guidelines.

### **COMPONENT**

1. The building component used in construction must be the same as indicated on the drawings.
2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
3. Members consisting of multiple plies must be connected as per the document "Multi-ply Connection Details".
4. Pass-thru squash block framing is required at all point loads over bearings.

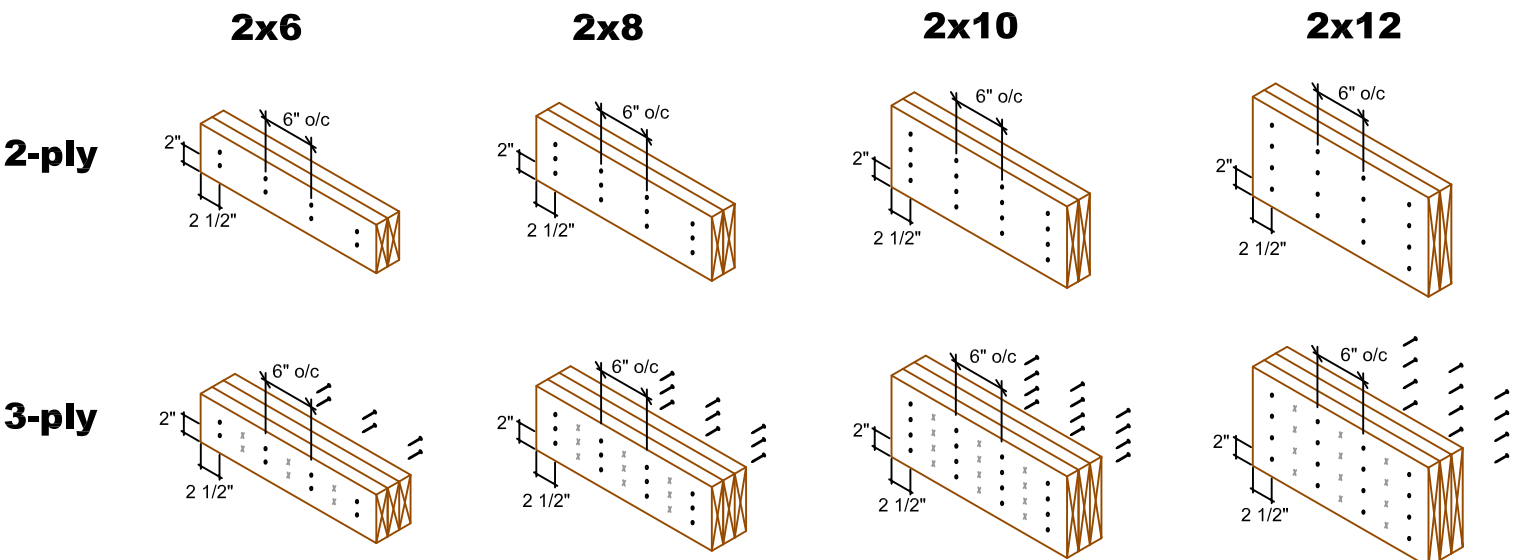
### **HANDLING AND INSTALLATION**

Do not drill any hole, cut or notch a certified building component without a written pre-authorization.

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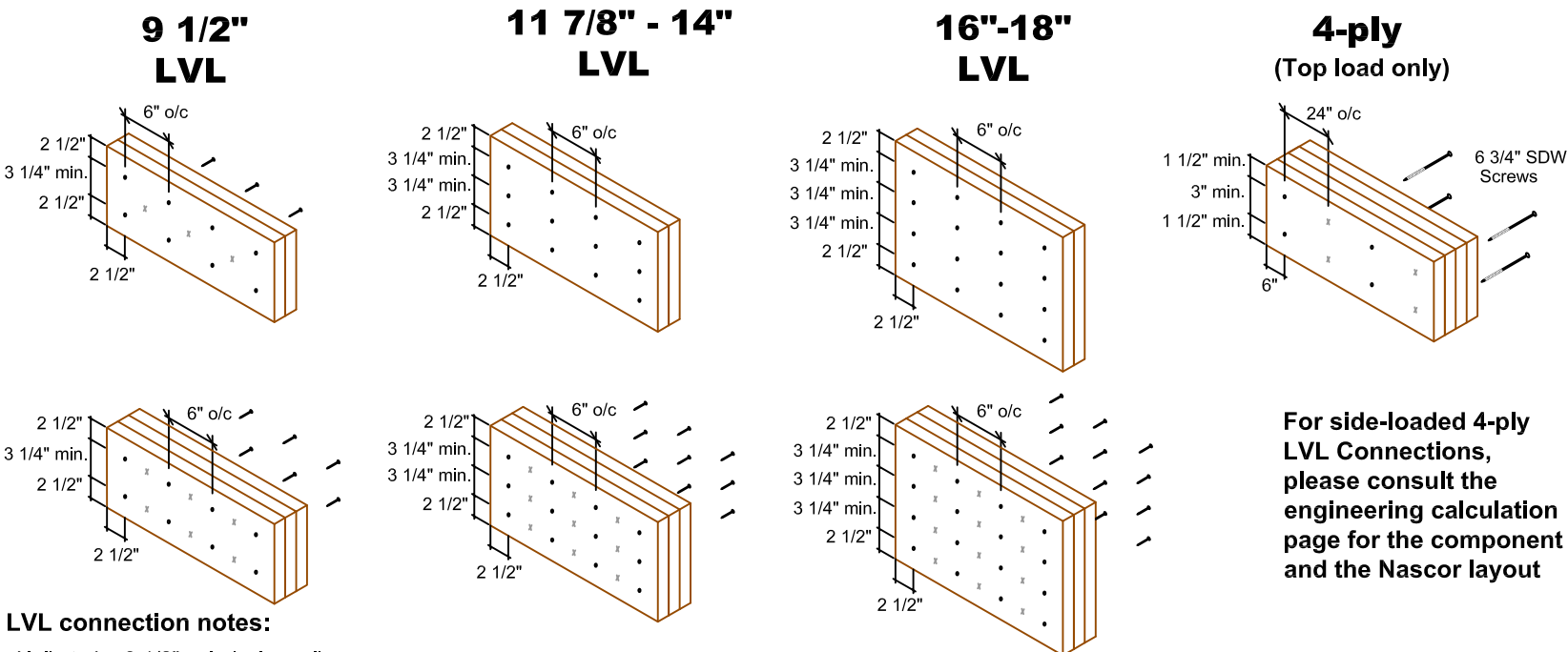
# MULTIPLE MEMBER CONNECTIONS

## Conventional Connections (for uniform distributed loads)



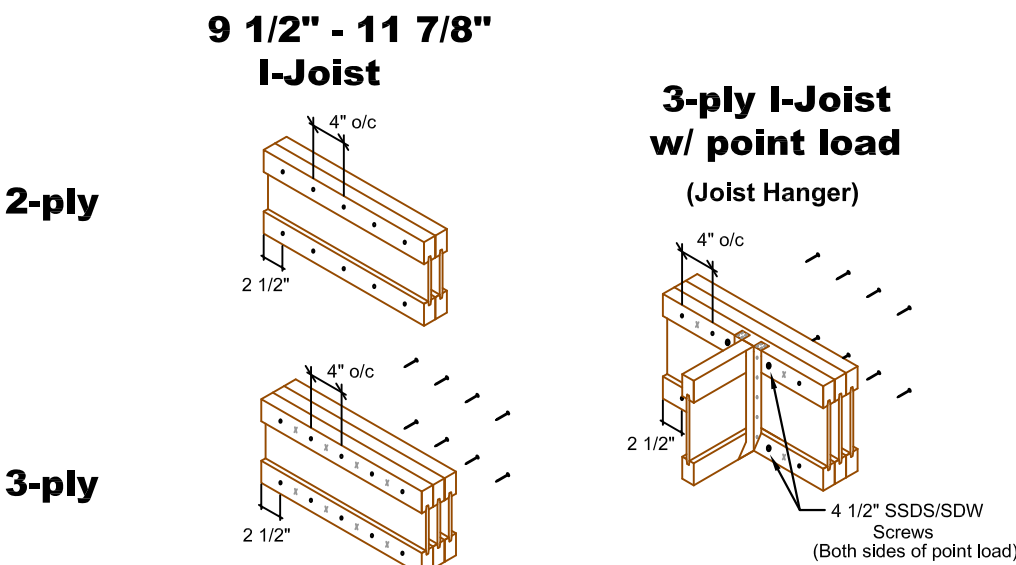
- Conventional connection notes:**
- Nails to be 3" 10d spiral wire nails.
  - Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
  - Number of rows and spacing as per details shown, unless noted otherwise.
  - "X" represents nail driven from the opposite side.

## LVL Connections (for uniform distributed loads)



- LVL connection notes:**
- Nails to be 3 1/2" spiral wire nails.
  - Nails to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
  - Minimum 3 1/4" spacing between rows.
  - Number of rows and spacing as per details shown, unless noted otherwise.
  - "X" represents nail or screw driven from the opposite side.

## Vertical I-Joist Connections (for uniform distributed loads)



- Vertical I-Joist connection notes:**
- Nails to be 3" spiral wire nails.
  - Nails to be located at centre of top and bottom flanges. Start all nails a minimum of 2 1/2" in from ends.
  - Number of rows and spacing as per details shown, unless noted otherwise.
  - "X" represents nail driven from the opposite side.

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**MULTI -PLY  
CONNECTION  
DETAILS**

Date: November 30, 2016

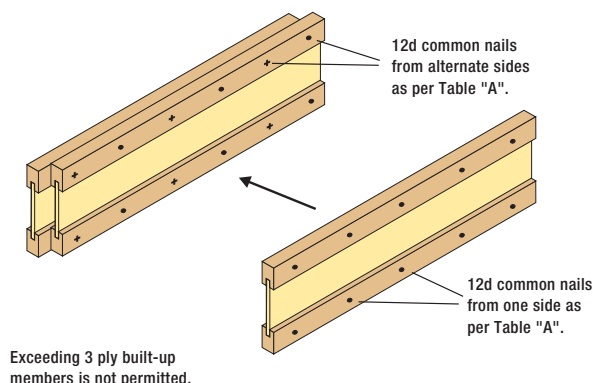
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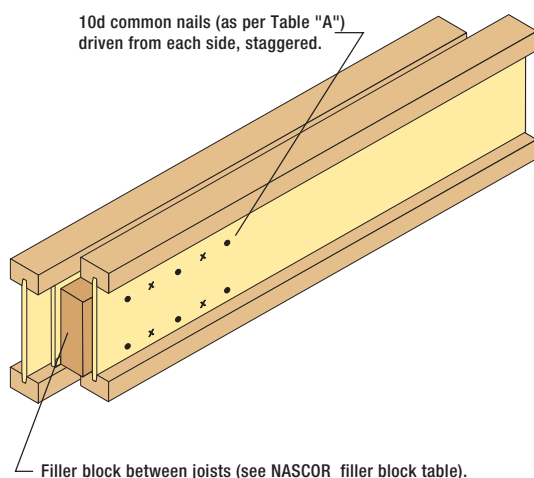
**KOTT**  
3228 Moodie Drive  
Ottawa, ON  
K2H 7V1  
Ph: 613-838-2775  
Fx: 613-838-4751

# MULTIPLE PLIES

## NJ SERIES



## NJH / NJU SERIES



**TABLE A**

NAIL SPACING	TRANSFER LOAD
16" o/c	135 PLF
12" o/c	181 PLF
8" o/c	271 PLF
6" o/c	362 PLF
	***UNFACTORED

### ADHESIVE

A 1/4" CONTINUOUS BEAD OF ADHESIVE MEETING APA AFG-01 APPLIED TO THE TOP AND BOTTOM CHORD PROVIDES 300 PLF (UNFACTORED) OF TRANSFER CAPACITY.

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## BACKER AND FILLER BLOCK REQUIREMENTS

JOIST TYPE	BACKER BLOCK THICKNESS	BACKER BLOCK DEPTH	FILLER BLOCK THICKNESS	FILLER BLOCK DEPTH
NJ925	1/2"	4-1/8"	1-1/8"	4-1/8"
NJ10	1/2"	4-3/8"	1-1/8"	4-3/8"
NJ12	1/2"	6-3/4"	1-1/8"	6-3/4"
NJH10	1"	6-3/8"	2-1/8"	5-1/2"
NJH12	1"	8-3/4"	2-1/8"	7-1/4"
NJH14	1"	10-7/8"	2-1/8"	9-1/4"
NJH16	1"	12-7/8"	2-1/8"	11-1/4"
NJU10	1-1/2"	6-3/8"	3"	5-1/2"
NJU12	1-1/2"	8-3/4"	3"	7-1/4"
NJU14	1-1/2"	10-7/8"	3"	9-1/4"
NJU16	1-1/2"	12-7/8"	3"	11-1/4"

## NOTES ON LOAD TRANSFERS

### SIDE LOADED BEAMS

- BEAMS THAT HAVE LOADS WHERE 60% OR MORE OF THE LOAD IS FROM ONE SIDE SHALL BE CONSIDERED TO BE LOADED FROM ONE SIDE ONLY.
- FASTENERS, ADHESIVE OR FASTENERS & ADHESIVE MUST BE ABLE TO TRANSFER:

### LOAD FROM ONE SIDE ONLY

75% OF THE TOTAL LOAD FOR 2 PLY MEMBERS  
84% OF THE TOTAL LOAD FOR 3 PLY MEMBERS

### LOAD FROM BOTH SIDES

45% OF THE TOTAL LOAD FOR 2 PLY MEMBERS  
50% OF THE TOTAL LOAD FOR 3 PLY MEMBERS

### EXAMPLE

DETERMINE THE CONNECTION REQUIRED FOR A 2 PLY NJ10 THAT CARRIES A 600 PLF (UNFACTORED) LOAD FROM ONE SIDE ONLY.

#### STEP 1

FOR A 2 PLY BEAM THE CONNECTION MUST BE ABLE TO TRANSFER 75% OF THE TOTAL LOAD.  
 $75\% \times 600 \text{ PLF} = 450 \text{ PLF (UNFACTORED)}$

#### STEP 2

TABLE A SHOWS THAT NAILS ALONE CAN NOT TRANSFER THE LOAD.  
NAILS @ 6" o.c. = 362 PLF < 450 PLF (UNFACTORED)  
THEREFORE, ADHESIVE IS REQUIRED.

#### STEP 3

DETERMINE THE REQUIRED NAIL SPACING. ADHESIVE ALONE TRANSFERS 300 PLF (UNFACTORED). NAILS MUST TRANSFER:  
 $450 \text{ PLF} - 300 \text{ PLF} = 150 \text{ PLF (UNFACTORED)}$

FROM TABLE A, NAILS @ 12" O.C. CAN TRANSFER  
 $181 \text{ PLF} > 150 \text{ PLF (UNFACTORED)}$

----- Floor Framing Material -----			
Type	Qty.	Product	Length
J1	17	NJH12	18' 0"
J2	23	NJH12	16' 0"
J3	2	NJH12	14' 0"
J4	7	NJH12	10' 0"
J5	5	NJH12	8' 0"
J6	9	NJH12	2' 0"
G1	1	NJH12	2' 0"
G2	1	NJH12	2' 0"
G3	2	NJ12	4' 0"
G4	2	NJ12	4' 0"
G5	1	1 3/4x11 7/8 West Fraser 2.0E-	8' 0"
G6	2	1 3/4x11 7/8 West Fraser 2.0E-	10' 0"
G7	2	1 3/4x11 7/8 West Fraser 2.0E-	8' 0"
G8	2	NJ12	16' 0"
G9	2	NJ12	16' 0"
G10	2	NJ12	16' 0"
G11	2	NJ12	18' 0"
G12	2	NJ12	18' 0"
R1	16	11 7/8" RIMBOARD	12' 0"

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DESIGN ASSUMPTIONS

Loads:(un-factored)  
T/C Live: 40 psf B/C Live: 0 psf  
T/C Dead: 15 psf B/C Dead: 0 psf  
Load Case: Live  
Deflection Criteria:  
L/480 Live L/360 Total  
Building Code: OBC-2012 (Limit States Design)  
Building Type: Residential  
Importance Category: Normal (Part 9)  
Design assumes top edge continuously braced,  
and bottom edge unbraced.  
Joist Design Includes CCMC Vibration Check  
Subfloor: 3/4" OSB Glued and Nailed  
Ceiling: (None)  
Blocking: (None)

All Loads are UN-FACTORED Loads

- NOTES:
1. Framers to verify dimensions on the architectural drawings.
  2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
  3. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls.
  4. Install single-ply flush window header along inside face of rimboard/rimjoist.
  5. Refer to Nascor specifier guide for installation details.
  6. Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof.
  7. Load transfer blocks to be installed under all point loads.
  8. It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

Rim parallel to joists: 1-1/8" rimboard with 2"x4" block (1/16" longer than rim depth) @ 16" o/c.  
All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.

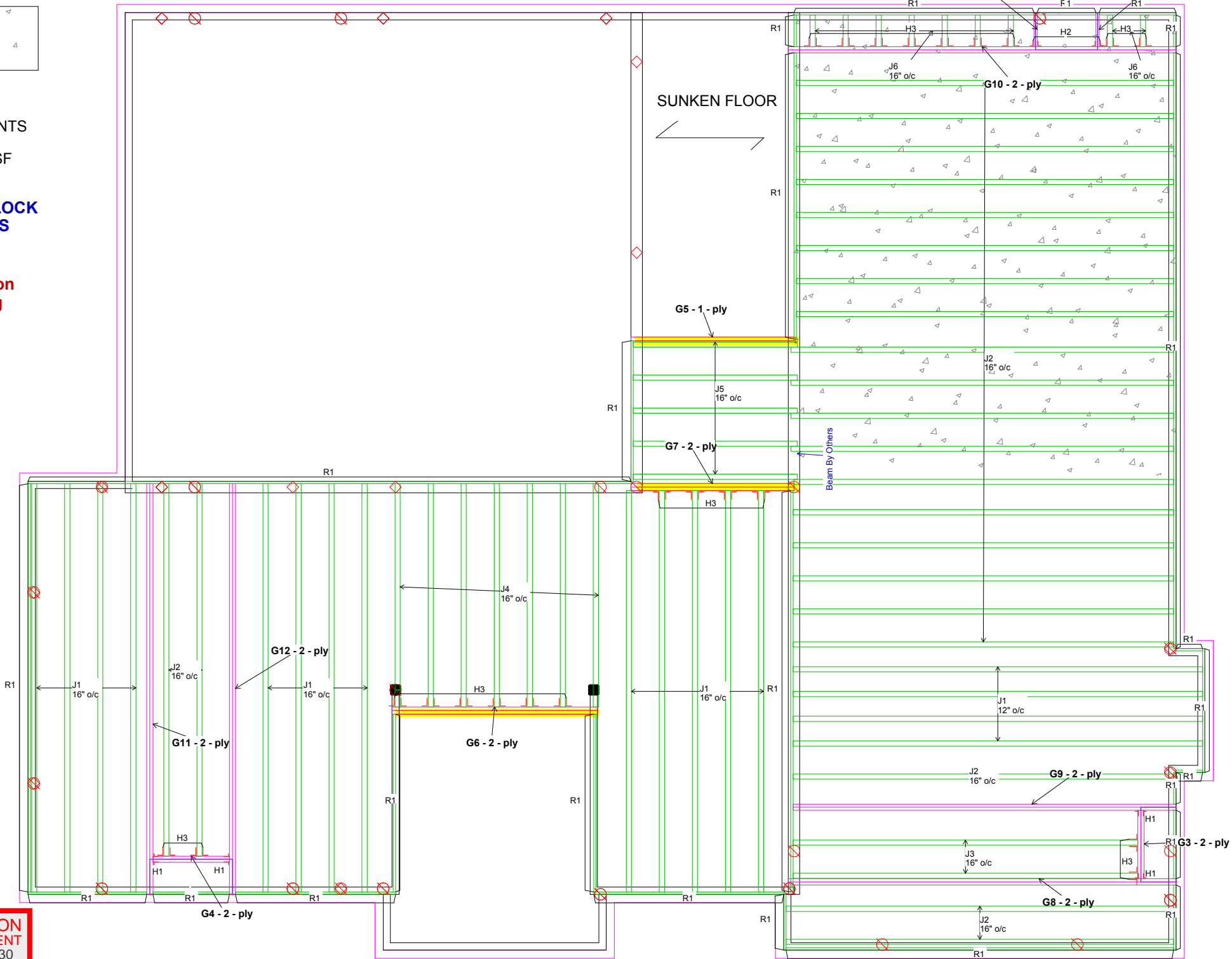
HATCH AREA INDICATED REPRESENTS CERAMIC TILED FLOOR WITH AN ADDITIONAL DEAD LOAD OF 5.00 PSF

**PASS-THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.**

**Refer to Multiple Member Connection Detail to ply to ply nailing or bolting requirements.**

----- Connector List -----

ID#	Qty	Model Number
H1	4	LT2-151188
H2	2	LT251188
H3	23	LT251188



FIRST FLOOR FRAMING



Nascor by KOTT  
14 Anderson Blvd.  
Uxbridge, ON.  
www.nascor.ca

Project Tag:

LOT 254 (JU -11-2)

GREEN PARK HOMES  
LECCO RIDGE  
MILTON, ON

SALESMAN: RM

Time: 02:02 PM  
DATE: 24/03/17  
Designer: SB  
Not Scaled  
License Name:  
KEYMARK ENTERPRISES, INC.

## Member Data

**Description:** CalcG1

**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

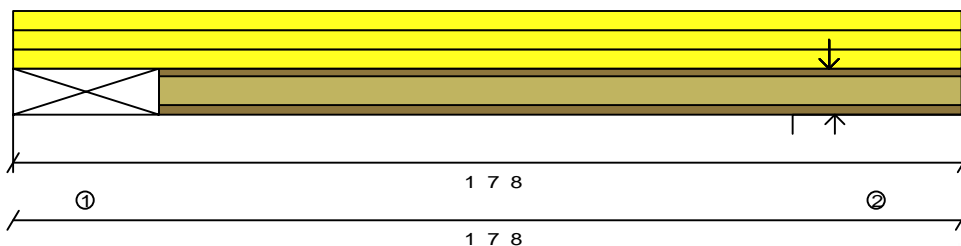
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Additional Uniform (PLF)	Top	0' 0.00"	1' 7.50"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 7.50"		9		3		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 7.50"		27		10		Live
Point (LBS)	Top	1' 4.75"			32		10		Snow
Point (LBS)	Top	1' 4.75"			0		65		Live
Point (LBS)	Top	1' 4.75"			0		65		Live
Point (LBS)	Top	1' 4.75"			29		76		Live
Point (LBS)	Top	1' 4.75"			29		76		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	45#	--
2	1' 7.500"	Wall	N/A	N/A	1.500"	510#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	21#	0#	12#
2	78#	32#	302#

Design spans

1' 1.875"



**Product: NJH12 1 ply**

**PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Lateral support is required at each bearing.

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	13.1#	5390.1#	0%	0.83'	Total Load 1.25D+1.5L
End Reaction	510.1#	1735.1#	29%	1.62'	Total Load 1.25D+1.5L+1.00*0.5S
TL Deflection	0.0010"	0.0385"	L/999+	0.83'	Total Load D+L
LL Deflection	0.0010"	0.0289"	L/999+	0.83'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Shear cannot be calculated because member's length is less than 2d.

Web stiffener and minimum bearing length requirements at hangared connections depend on the connection style and are not included in this design.

**Pass-Thru Framing Squash Block is required at all point loads over bearings**

**Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements**

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\*\*Passing is defined as when the member, floor joist, beam or girder shown on this drawing meets applicable design criteria for Loads, Loading Conditions, and Spans listed on this sheet. The design must be reviewed by a qualified designer or design professional as required for approval. This design assumes product installation according to the manufacturer's specifications.

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## Member Data

Description: CalcG2

Comments:

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Standard Load:

Live Load: 0 PLF

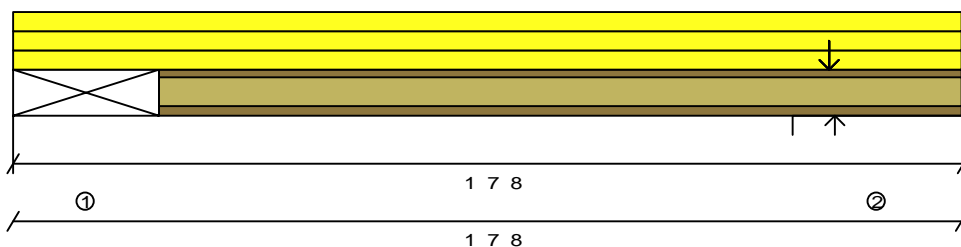
Dead Load: 0 PLF

Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Additional Uniform (PLF)	Top	0' 0.00"	1' 7.50"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 7.50"		9		3		Live
Replacement Uniform (PLF)	Top	0' 0.00"	1' 7.50"		27		10		Live
Point (LBS)	Top	1' 4.75"			0		130		Live
Point (LBS)	Top	1' 4.75"			57		151		Live
Point (LBS)	Top	1' 4.75"			172		172		Live
Point (LBS)	Top	1' 4.75"			395		0		Snow



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Upli
1	0' 0.000"	Girder	N/A	N/A	N/A	45#	--
2	1' 7.500"	Wall	N/A	N/A	1.500"	1297#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	21#	0#	12#
2	250#	395#	464#

Design spans  
 1' 1.875"



Product: NJH12 1 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Lateral support is required at each bearing.

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	13.7#	5390.7#	0%	0.83'	Total Load 1.25D+1.5L
End Reaction	1297.7#	1735.7#	74%	1.62'	Total Load 1.25D+1.00*1.5S+0.5L
TL Deflection	0.0010"	0.0385"	L/999+	0.83'	Total Load D+L
LL Deflection	0.0010"	0.0289"	L/999+	0.83'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Shear cannot be calculated because member's length is less than 2d.

Web stiffener and minimum bearing length requirements at hanged connections depend on the connection style and are not included in this design.

Pass-Thru Framing Squash Block is  
 required at all point loads over bearings

Refer to Multiple Member Connection  
 Detail for ply to ply nailing or bolting  
 requirements

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## Member Data

**Description:** CalcG3

**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

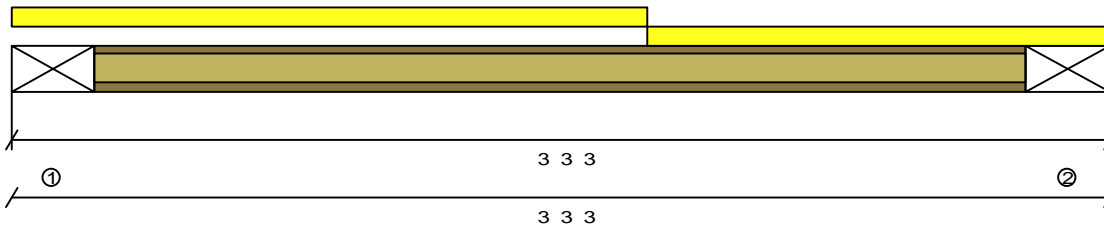
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Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 10.69"		280		105		Live
Replacement Uniform (PLF)	Top	1' 10.69"	3' 3.19"		280		105		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravit Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	762#	--
2	3' 3.188"	Girder	N/A	N/A	N/A	762#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	387#	145#
2	387#	145#

Design spans  
2' 9.188"



**Product: NJ12 2 ply**

**PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.  
Design assumes no lateral bracing along the bottom chord.  
Lateral support is required at each bearing.

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	527.#	9020.#	5%	1.63'	Total Load 1.25D+1.5L
Shear	762.#	3400.#	22%	0'	Total Load 1.25D+1.5L
TL Deflection	0.0041"	0.0922"	L/999+	1.63'	Total Load D+L
LL Deflection	0.0030"	0.0691"	L/999+	1.63'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Shear

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Web stiffener and minimum bearing length requirements at hungared connections depend on the connection style and are not included in this design.

**Pass-Thru Framing Squash Block is required at all point loads over bearings**

**Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements**

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**Member Data****Description: CalcG4**

Comments:

**Standard Load:**

Live Load: 0 PLF

Dead Load: 0 PLF

Building Type: Residential

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Importance Category: Normal (Part 9)

Application: Floor

Building Code: OBC-2012

0.720" max. LL

**Other Loads****Type**

(Description)

Replacement Uniform (PLF)

**Side**

Top

**Begin**

0' 0.00"

**End**

3' 7.00"

**Trib.  
Width****Other  
Start**

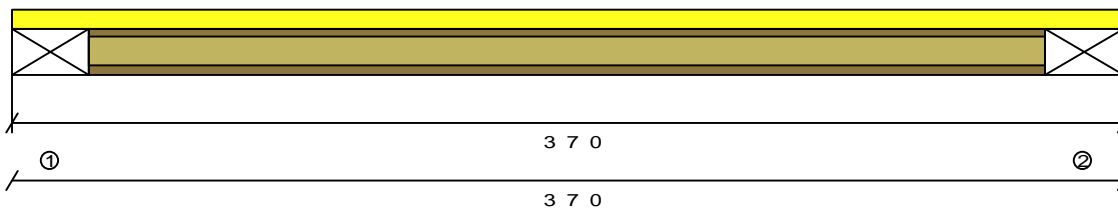
305

**End****Dead  
Start**

114

**End****Category**

Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	926#	--
2	3' 7.000"	Girder	N/A	N/A	N/A	926#	--

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	470#	176#
2	470#	176#

**Design spans**

3' 1.000"

**Product: NJ12 2 ply****PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Lateral support is required at each bearing.

**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	714. #	9020. #	7%	1.79'	Total Load 1.25D+1.5L
Shear	926. #	3400. #	27%	0'	Total Load 1.25D+1.5L
TL Deflection	0.0059"	0.1028"	L/999+	1.79'	Total Load D+L
LL Deflection	0.0043"	0.0771"	L/999+	1.79'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Shear

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Web stiffener and minimum bearing length requirements at hangared connections depend on the connection style and are not included

**Pass-Thru Framing Squash Block is required at all point loads over bearings****Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements****RECEIVED  
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**Member Data****Description:** CalcG5

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 5.9 PLF

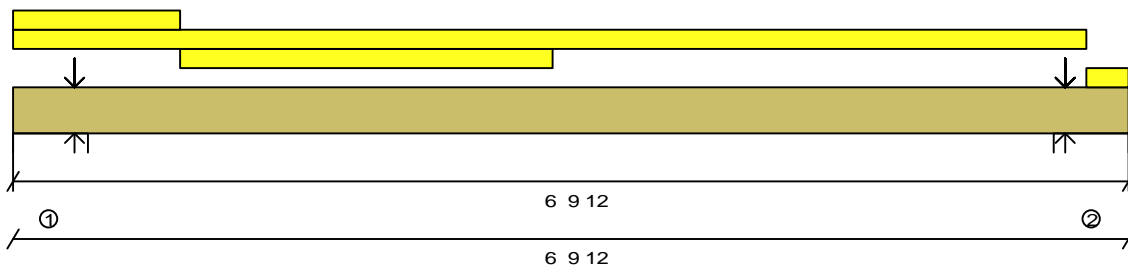
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads****Type****(Description)**

	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 0.25"		80		30		Live
Replacement Uniform (PLF)	Top	0' 0.00"	6' 6.63"		27		10		Live
Replacement Uniform (PLF)	Top	1' 0.25"	3' 3.50"		80		30		Live
Replacement Uniform (PLF)	Top	6' 6.63"	6' 9.75"		27		10		Live
Point (LBS)	Top	0' 4.63"			50		35		Live
Point (LBS)	Top	0' 4.63"			77		54		Live
Point (LBS)	Top	0' 4.63"			143		58		Live
Point (LBS)	Top	0' 4.63"			217		88		Live
Point (LBS)	Top	6' 5.13"			0		32		Live
Point (LBS)	Top	6' 5.13"			0		32		Live
Point (LBS)	Top	6' 5.13"			102		38		Live
Point (LBS)	Top	6' 5.13"			102		38		Live
Point (LBS)	Top	6' 5.13"			154		58		Live
Point (LBS)	Top	6' 5.13"			154		66		Live
Point (LBS)	Top	6' 5.13"			247		92		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Up/
1	0' 0.000"	Wall	N/A	N/A	1.500"	1552#	-
2	6' 9.750"	Wall	N/A	N/A	1.500"	1875#	-

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	744#	349#
2	895#	426#

**Pass-Thru Framing Squash Block is required at all point loads over bearings**Refer to Multiple Member Connection  
Detail for ply to ply nailing or bolting  
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Design spans  
6' 0.500"**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply****PASSES DESIGN CHECKS**Design assumes continuous lateral bracing along the top chord.  
Design assumes no lateral bracing along the bottom chord.**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	642. #	17693. #	3%	2.8'	Total Load 1.25D+1.5L
Shear	313. #	6908. #	4%	0.4'	Total Load 1.25D+1.5L
TL Deflection	0.0082"	0.2014"	L/999+	3.28'	Total Load D+L
LL Deflection	0.0056"	0.1510"	L/999+	3.28'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: Shear

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**Member Data****Description: CalcG6**

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 11.8 PLF

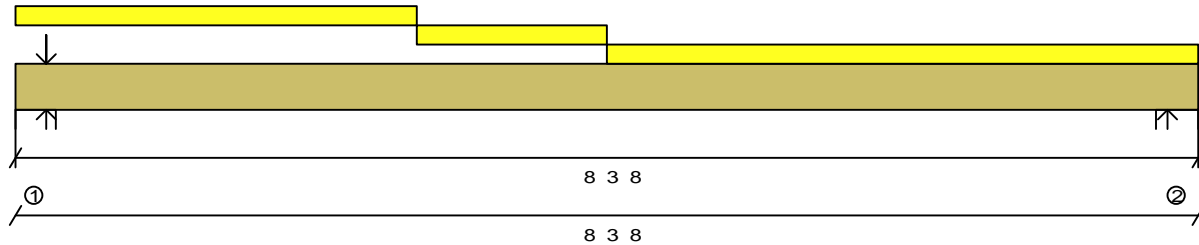
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	2' 9.88"		408		153		Live
Replacement Uniform (PLF)	Top	2' 9.88"	4' 1.75"		408		153		Live
Replacement Uniform (PLF)	Top	4' 1.75"	8' 3.50"		408		153		Live
Point (LBS)	Top	0' 2.63"			998		476		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	5307#	--
2	8' 3.500"	Wall	N/A	N/A	1.500"	3215#	--

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	2602#	1124#
2	1604#	648#

Design spans

7' 10.250"

**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 2 ply****PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Compression edge maximum unbraced length calculation is based on ply width.

**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	6313. #	35386. #	17%	4.15'	Total Load 1.25D+1.5L
Shear	2405. #	13815. #	17%	7.29'	Total Load 1.25D+1.5L
TL Deflection	0.0625"	0.2618"	L/999+	4.15'	Total Load D+L
LL Deflection	0.0445"	0.1964"	L/999+	4.15'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

**Pass-Thru Framing Squash Block is  
required at all point loads over bearings****Refer to Multiple Member Connection  
Detail for ply to ply nailing or bolting  
requirements****RECEIVED  
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www.nascor.ca

**Member Data****Description: CalcG7**

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 11.8 PLF

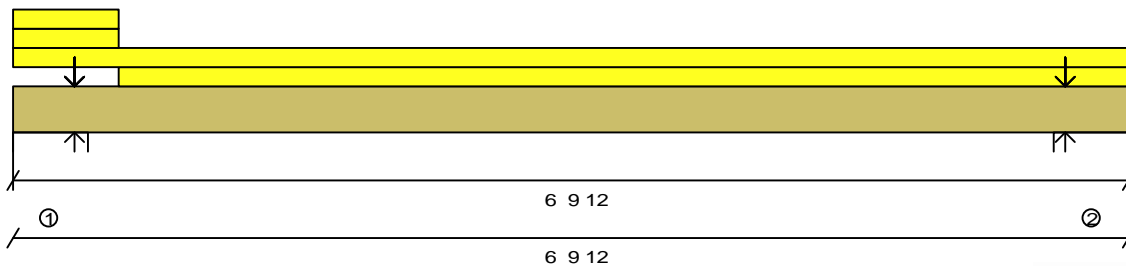
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads****Type****(Description)**

	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	0' 7.75"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	0' 7.75"		329		123		Live
Replacement Uniform (PLF)	Top	0' 0.00"	6' 9.75"		27		10		Live
Replacement Uniform (PLF)	Top	0' 7.75"	6' 9.75"		329		123		Live
Point (LBS)	Top	0' 4.63"			21		8		Live
Point (LBS)	Top	0' 4.63"			0		32		Live
Point (LBS)	Top	0' 4.63"			0		32		Live
Point (LBS)	Top	0' 4.63"			102		38		Live
Point (LBS)	Top	0' 4.63"			247		92		Live
Point (LBS)	Top	0' 4.63"			247		92		Live
Point (LBS)	Top	0' 4.63"			1044		469		Live
Point (LBS)	Top	6' 5.13"			98		69		Live
Point (LBS)	Top	6' 5.13"			277		112		Live
Point (LBS)	Top	6' 5.13"			1044		469		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravi Upli
1	0' 0.000"	Wall	N/A	N/A	1.544"	5619#	--
2	6' 9.750"	Wall	N/A	N/A	1.500"	5101#	--

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	2741#	1206#
2	2494#	1088#

**Pass-Thru Framing Squash Block is required at all point loads over bearings****Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements****RECEIVED  
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6' 0.500"**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 2 ply****PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Compression edge maximum unbraced length calculation is based on ply width.

**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	3261.1#	35386.1#	9%	3.41'	Total Load 1.25D+1.5L
Shear	1452.1#	13815.1#	10%	5.52'	Total Load 1.25D+1.5L
TL Deflection	0.0217"	0.2014"	L/999+	3.41'	Total Load D+L
LL Deflection	0.0154"	0.1510"	L/999+	3.41'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

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**Member Data****Description:** CalcG8**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

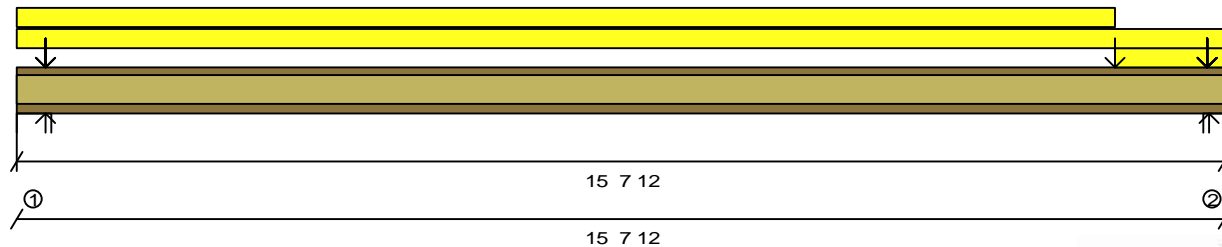
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	14' 2.75"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	15' 7.75"		27		10		Live
Replacement Uniform (PLF)	Top	14' 2.75"	15' 7.75"		9		3		Live
Point (LBS)	Top	0' 4.63"			35		13		Live
Point (LBS)	Top	0' 4.63"			35		13		Live
Point (LBS)	Top	0' 4.63"			0		53		Live
Point (LBS)	Top	14' 2.75"			422		179		Live
Point (LBS)	Top	15' 5.00"			31		0		Snow
Point (LBS)	Top	15' 5.00"			27		18		Live
Point (LBS)	Top	15' 5.00"			0		65		Live
Point (LBS)	Top	15' 5.00"			7		68		Live
Point (LBS)	Top	15' 5.00"			91		0		Snow
Point (LBS)	Top	15' 5.00"			53		45		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravi Upli
1	0' 0.000"	Wall	N/A	N/A	1.500"	1059#	--
2	15' 7.750"	Wall	N/A	N/A	1.500"	1974#	--

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	503#	0#	243#
2	856#	122#	503#

**Pass-Thru Framing Squash Block is  
required at all point loads over bearings****Refer to Multiple Member Connection  
Detail for ply to ply nailing or bolting  
requirements**Design spans  
15' 0.500"**Product: NJ12 2 ply**

**NOTE:** Web stiffeners are required at point loads > 0#.  
Design assumes continuous lateral bracing along the top chord.  
Design assumes no lateral bracing along the bottom chord.  
Lateral support is required at each bearing.

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**PASSES DESIGN CHECKS****Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	3491. #	9020. #	38%	8.66'	Total Load 1.25D+1.5L
Shear	1539. #	3400. #	45%	15.65'	Total Load 1.25D+1.5L
End Reaction	1974. #	4100. #	48%	15.65'	Total Load 1.25D+1.5L+1.00*0.5S
TL Deflection	0.2242"	0.5014"	L/805	7.91'	Total Load D+L
LL Deflection	0.1621"	0.3760"	L/999+	7.91'	Total Load L

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## Member Data

**Description:** CalcG9

**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

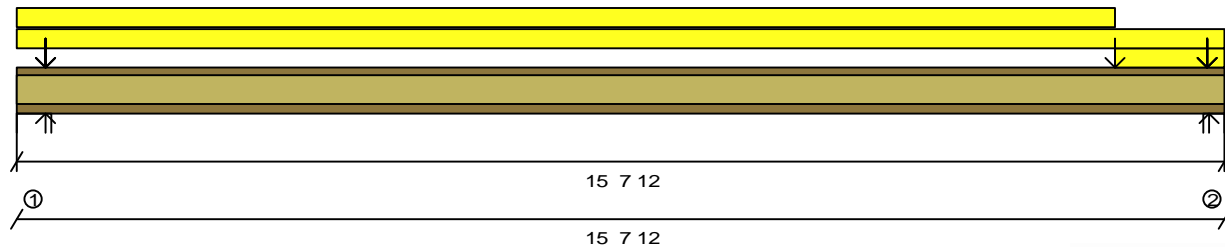
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	14' 2.75"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	15' 7.75"		27		10		Live
Replacement Uniform (PLF)	Top	14' 2.75"	15' 7.75"		9		3		Live
Point (LBS)	Top	0' 4.63"			43		16		Live
Point (LBS)	Top	0' 4.63"			0		65		Live
Point (LBS)	Top	0' 4.63"			493		185		Live
Point (LBS)	Top	14' 2.75"			422		179		Live
Point (LBS)	Top	15' 5.00"			49		0		Snow
Point (LBS)	Top	15' 5.00"			0		65		Live
Point (LBS)	Top	15' 5.00"			268		179		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Up
1	0' 0.000"	Wall	N/A	N/A	1.500"	1992#	-
2	15' 7.750"	Wall	N/A	N/A	1.500"	2270#	-

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	970#	0#	430#
2	1037#	49#	551#

**Pass-Thru Framing Squash Block is required at all point loads over bearings**

**Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements**

Design spans  
 15' 0.500"



**Product: NJ12 2 ply**

**NOTE: Web stiffeners are required at point loads > 0#.**  
**Design assumes continuous lateral bracing along the top chord.**  
**Design assumes no lateral bracing along the bottom chord.**  
**Lateral support is required at each bearing.**

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**PASSES DESIGN CHECKS**

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	3491.#	9020.#	38%	8.66'	Total Load 1.25D+1.5L
Shear	1539.#	3400.#	45%	15.65'	Total Load 1.25D+1.5L
End Reaction	2270.#	4100.#	55%	15.65'	Total Load 1.25D+1.5L+1.00*0.5S
TL Deflection	0.2242"	0.5014"	L/805	7.91'	Total Load D+L
LL Deflection	0.1621"	0.3760"	L/999+	7.91'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Manufacturer's installation guide MUST be consulted to determine if web stiffeners are required at point loads

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 www.nascor.ca





**Member Data****Description: CalcG10**

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

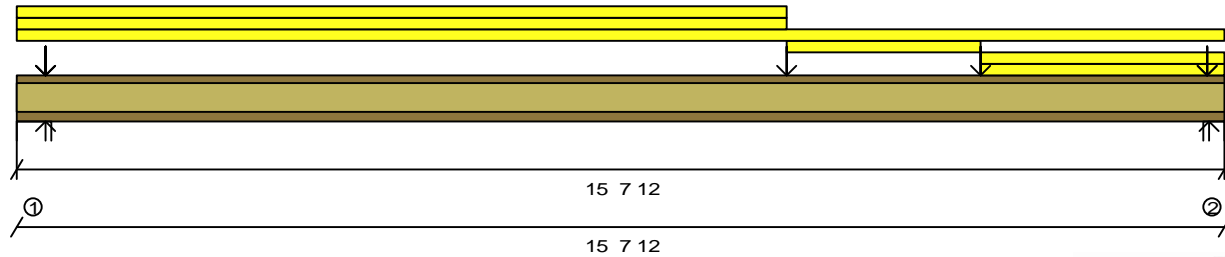
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	9' 11.75"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	9' 11.75"		30		15		Live
Additional Uniform (PLF)	Top	0' 0.00"	15' 7.75"		0		7		Live
Replacement Uniform (PLF)	Top	9' 11.75"	12' 5.75"		9		3		Live
Replacement Uniform (PLF)	Top	12' 5.75"	15' 7.75"		27		10		Live
Replacement Uniform (PLF)	Top	12' 5.75"	15' 7.75"		30		15		Live
Point (LBS)	Top	0' 4.63"			0		32		Live
Point (LBS)	Top	0' 4.63"			102		38		Live
Point (LBS)	Top	0' 4.63"			247		105		Live
Point (LBS)	Top	9' 11.75"			0		11		Live
Point (LBS)	Top	12' 5.75"			0		11		Live
Point (LBS)	Top	15' 5.00"			49		65		Snow
Point (LBS)	Top	15' 5.00"			268		206		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	1618#	--
2	15' 7.750"	Wall	N/A	N/A	1.500"	1543#	--

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	741#	0#	405#
2	608#	49#	485#

**Pass-Thru Framing Squash Block is  
required at all point loads over bearings****Refer to Multiple Member Connection  
Detail for ply to ply nailing or bolting  
requirements**Design spans  
15' 0.500"**Product: NJ12 2 ply**

**NOTE: Web stiffeners are required at point loads > 0#.**  
**Design assumes continuous lateral bracing along the top chord.**  
**Design assumes no lateral bracing along the bottom chord.**  
**Lateral support is required at each bearing.**

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**PASSES DESIGN CHECKS****Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	3072. #	9020. #	34%	7.15'	Total Load 1.25D+1.5L
Shear	875. #	3400. #	25%	0'	Total Load 1.25D+1.5L
End Reaction	1618. #	4100. #	39%	0'	Total Load 1.25D+1.5L
TL Deflection	0.1940"	0.5014"	L/930	7.91'	Total Load D+L
LL Deflection	0.1202"	0.3760"	L/999+	7.91'	Total Load L

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Uxbridge, ON.  
www.nascor.ca



## Member Data

**Description:** CalcG11

**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

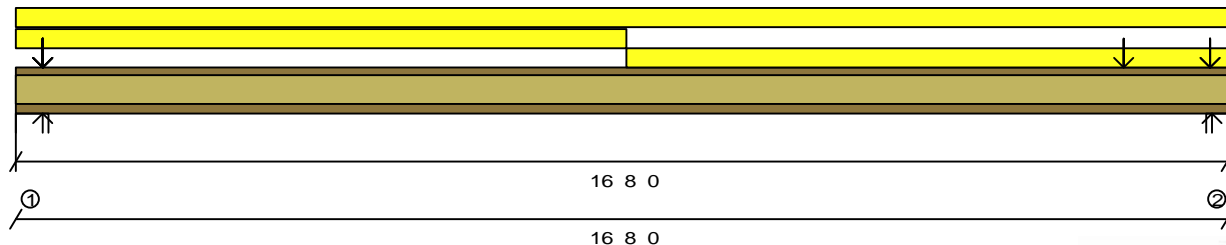
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	16' 8.00"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	8' 5.00"		27		10		Live
Replacement Uniform (PLF)	Top	8' 5.00"	16' 8.00"		27		10		Live
Point (LBS)	Top	0' 4.63"			20		7		Live
Point (LBS)	Top	0' 4.63"			0		65		Live
Point (LBS)	Top	0' 4.63"			185		0		Snow
Point (LBS)	Top	0' 4.63"			247		92		Live
Point (LBS)	Top	0' 4.63"			428		295		Live
Point (LBS)	Top	15' 3.00"			508		214		Live
Point (LBS)	Top	16' 5.25"			0		130		Live
Point (LBS)	Top	16' 5.25"			574		215		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Upli
1	0' 0.000"	Wall	N/A	N/A	1.500"	2628#	--
2	16' 8.000"	Wall	N/A	N/A	1.500"	3088#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	1160#	185#	636#
2	1472#	0#	703#

**Pass-Thru Framing Squash Block is required at all point loads over bearings**

**Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements**

Design spans  
 16' 0.750"



**Product: NJ12 2 ply**

**NOTE: Web stiffeners are required at point loads > 0#.**  
**Design assumes continuous lateral bracing along the top chord.**  
**Design assumes no lateral bracing along the bottom chord.**  
**Lateral support is required at each bearing.**

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**PASSES DESIGN CHECKS**

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4031.1#	9020.1#	44%	9.22'	Total Load 1.25D+1.5L
Shear	1796.1#	3400.1#	52%	16.67'	Total Load 1.25D+1.5L
End Reaction	3088.1#	4100.1#	75%	16.67'	Total Load 1.25D+1.5L
TL Deflection	0.2921"	0.5354"	L/659	8.43'	Total Load D+L
LL Deflection	0.2112"	0.4016"	L/912	8.43'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Manufacturer's installation guide MUST be consulted to determine if web stiffeners are required at point loads

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## Member Data

Description: CalcG12

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

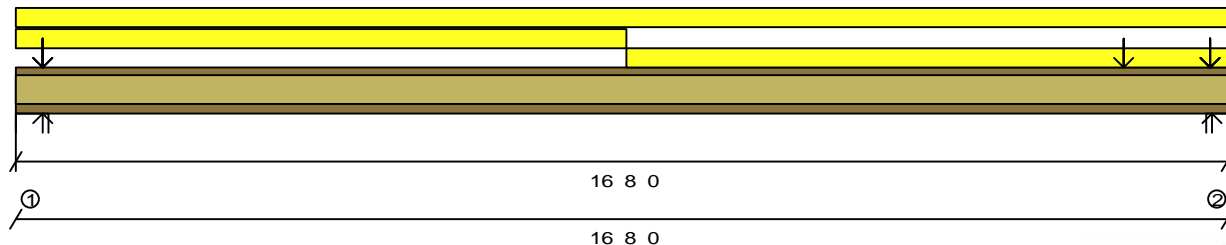
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	16' 8.00"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	8' 5.00"		27		10		Live
Replacement Uniform (PLF)	Top	8' 5.00"	16' 8.00"		27		10		Live
Point (LBS)	Top	0' 4.63"			43		16		Live
Point (LBS)	Top	0' 4.63"			0		65		Live
Point (LBS)	Top	0' 4.63"			526		197		Live
Point (LBS)	Top	15' 3.00"			508		214		Live
Point (LBS)	Top	16' 5.25"			0		65		Live
Point (LBS)	Top	16' 5.25"			0		65		Live
Point (LBS)	Top	16' 5.25"			287		108		Live
Point (LBS)	Top	16' 5.25"			287		108		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravi Upli
1	0' 0.000"	Wall	N/A	N/A	1.500"	2120#	--
2	16' 8.000"	Wall	N/A	N/A	1.500"	3088#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	1035#	454#
2	1472#	703#

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection  
 Detail for ply to ply nailing or bolting requirements

Design spans  
 16' 0.750"



Product: NJ12 2 ply

NOTE: Web stiffeners are required at point loads > 0#.  
 Design assumes continuous lateral bracing along the top chord.  
 Design assumes no lateral bracing along the bottom chord.  
 Lateral support is required at each bearing.

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PASSES DESIGN CHECKS

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4031. #	9020. #	44%	9.22'	Total Load 1.25D+1.5L
Shear	1796. #	3400. #	52%	16.67'	Total Load 1.25D+1.5L
End Reaction	3088. #	4100. #	75%	16.67'	Total Load 1.25D+1.5L
TL Deflection	0.2921"	0.5354"	L/659	8.43'	Total Load D+L
LL Deflection	0.2112"	0.4016"	L/912	8.43'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Control: Max End React.

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Manufacturer's installation guide MUST be consulted to determine if web stiffeners are required at point loads

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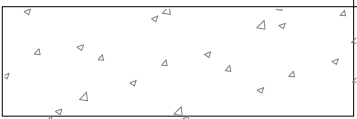
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----- Floor Framing Material -----

Type	Qty.	Product	Length
J1	15	NJH12	18' 0"
J2	28	NJH12	16' 0"
J3	19	NJH12	8' 0"
J4	5	NJH12	6' 0"
J5	16	NJH12	4' 0"
J6	13	NJ60H12	20' 0"
J7	4	NJ60H12	18' 0"
G1	2	1 3/4x11 7/8 West Fraser 2.0E-	8' 0"
G2	2	1 3/4x11 7/8 West Fraser 2.0E-	8' 0"
G3	1	1 3/4x11 7/8 West Fraser 2.0E-	8' 0"
G4	1	1 3/4x11 7/8 West Fraser 2.0E-	8' 0"
G5	1	1 3/4x11 7/8 West Fraser 2.0E-	8' 0"
G6	1	1 3/4x11 7/8 West Fraser 2.0E-	20' 0"
G7	1	1 3/4x11 7/8 West Fraser 2.0E-	20' 0"
G8	2	1 3/4x11 7/8 West Fraser 2.0E-	18' 0"
G9	2	1 3/4x11 7/8 West Fraser 2.0E-	10' 0"
G10	1	1 3/4x11 7/8 West Fraser 2.0E-	6' 0"
G11	1	1 3/4x11 7/8 West Fraser 2.0E-	6' 0"
G12	1	1 3/4x11 7/8 West Fraser 2.0E-	18' 0"
G13	1	1 3/4x11 7/8 West Fraser 2.0E-	6' 0"
G14	1	1 3/4x11 7/8 West Fraser 2.0E-	6' 0"
G16	1	1 3/4x11 7/8 West Fraser 2.0E-	16' 0"
G17	1	1 3/4x11 7/8 West Fraser 2.0E-	18' 0"
R1	14	11 7/8" RIMBOARD	12' 0"



HATCH AREA INDICATED REPRESENTS  
CERAMIC TILED FLOOR WITH AN  
ADDITIONAL DEAD LOAD OF 5.00 PSF

**PASS-THRU FRAMING SQUASH BLOCK  
IS REQUIRED AT ALL POINT LOADS  
OVER BEARINGS.**

Refer to Multiple Member Connection  
Detail to ply to ply nailing or bolting  
requirements.

----- Miscellaneous Materials -----

Type	Qty.	Product	Length
XXX	1	NJH12	20' 0"
XXX	1	NJ60H12	12' 0"

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DESIGN ASSUMPTIONS  
=====

Loads:(un-factored)  
T/C Live: 40 psf B/C Live: 0 psf  
T/C Dead: 15 psf B/C Dead: 0 psf  
Load Case: Live  
Deflection Criteria:  
L/480 Live L/360 Total  
Building Code: OBC-2012 (Limit States Design)  
Building Type: Residential  
Importance Category: Normal (Part 9)  
Design assumes top edge continuously braced,  
and bottom edge unbraced.  
Joist Design Includes CCMC Vibration Check  
Subfloor: 5/8" OSB Glued and Nailed  
Ceiling: 1/2" gypsum  
Blocking: (None)

All Loads are UN-FACTORED Loads

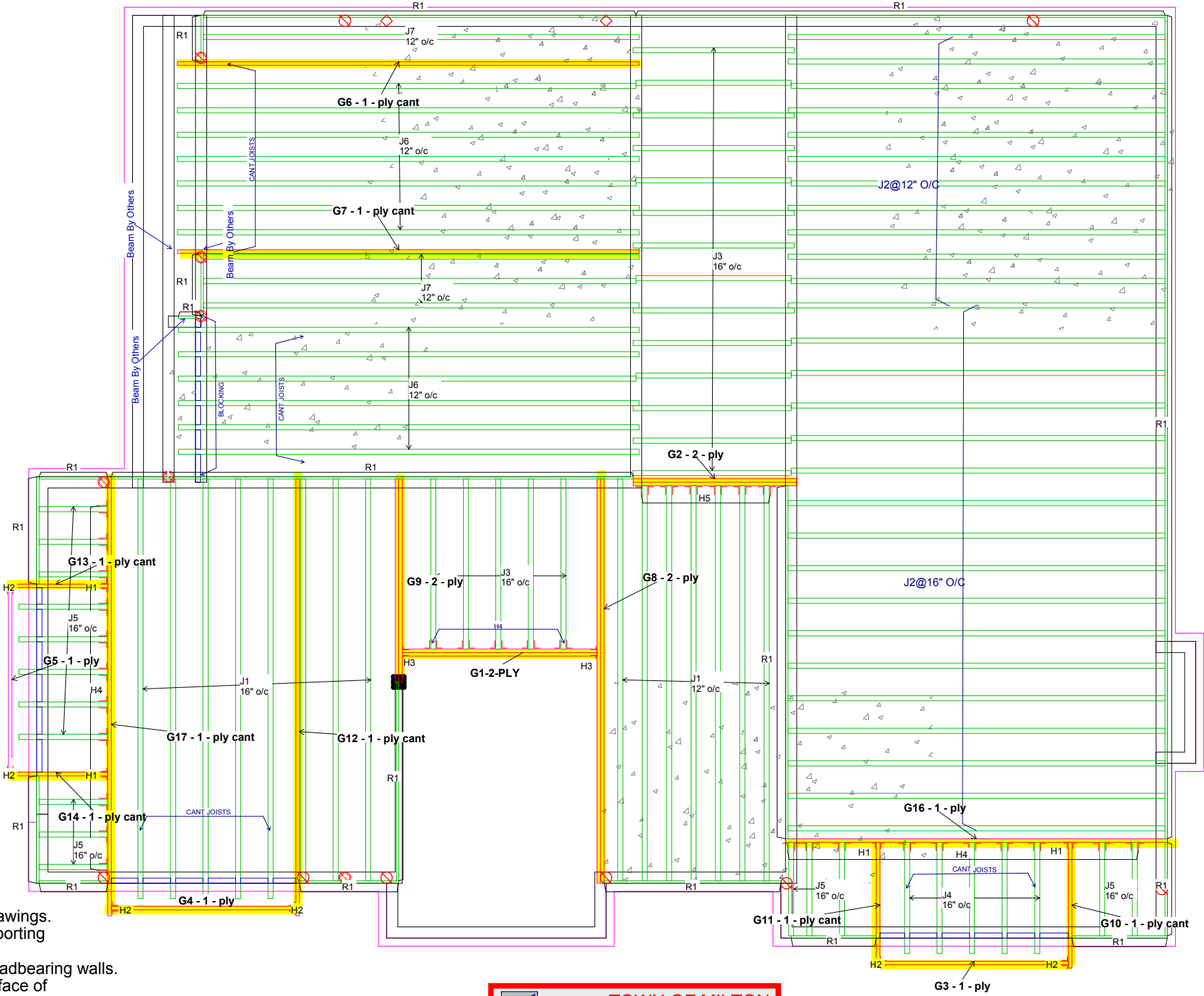
Rim parallel to joists: 1-1/8" rimboard with  
2"x4" block (1/16" longer than rim depth) @ 16" o/c.  
All other components and structural elements supporting  
the floor system such as beams, walls, columns and  
foundation walls and footings including anchorage of  
components and bracing for lateral stability are the  
responsibility of others.

---- Connector List ----

ID#	Qty	Model Number
H1	4	HUS1.81/10
H2	6	HUCQ1.81/9-SDS
H3	2	HGUS410
H4	21	LT251188
H5	11	LT251188

NOTES:

1. Framers to verify dimensions on the architectural drawings.
2. Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
3. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls.
4. Install single-ply flush window header along inside face of rimboard/rimjoist.
5. Refer to Nascor specifier guide for installation details.
6. Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof.
7. Load transfer blocks to be installed under all point loads.
8. It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.



**SECOND FLOOR FRAMING**



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Project Tag:

LOT 254 (JU-11-2)

**GREEN PARK HOMES**  
**LECCO RIDGE**  
**MILTON, ON**

**SALESMAN: RM**

Time: 08:23 AM  
DATE: 24/03/17  
Designer: SB  
Not Scaled  
License Name:  
KEYMARK ENTERPRISES, INC.



## Member Data

**Description:** CalcG1

**Comments:**

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Importance Category: Normal (Part 9)

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 11.8 PLF

Standard Load:

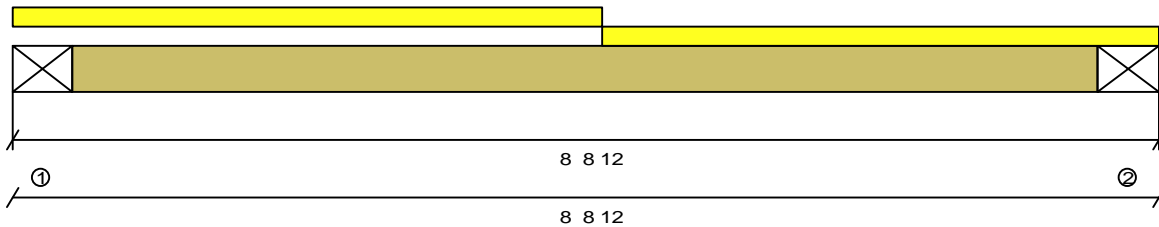
Live Load: 0 PLF

Dead Load: 0 PLF

Building Type: Residential

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	4' 6.00"		367		138		Live
Replacement Uniform (PLF)	Top	4' 6.00"	8' 8.75"		127		48		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	2451#	--
2	8' 8.750"	Girder	N/A	N/A	N/A	1529#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	1216#	502#
2	747#	326#

Design spans  
7' 9.750"

**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 2 ply**

**PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.  
Design assumes no lateral bracing along the bottom chord.  
Compression edge maximum unbraced length calculation is based on ply width.

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4058. #	35386. #	11%	3.97'	Total Load 1.25D+1.5L
Shear	1721. #	13815. #	12%	0.47'	Total Load 1.25D+1.5L
TL Deflection	0.0386"	0.2604"	L/999+	4.36'	Total Load D+L
LL Deflection	0.0271"	0.1953"	L/999+	4.36'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

Minimum bearing length requirements at hangared connections depend on the connection style and are not included in this design.

Pass-Thru Framing Squash Block is  
required at all point loads over bearings

Refer to Multiple Member Connection  
Detail for ply to ply nailing or bolting  
requirements

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**Member Data****Description: CalcG2**

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 11.8 PLF

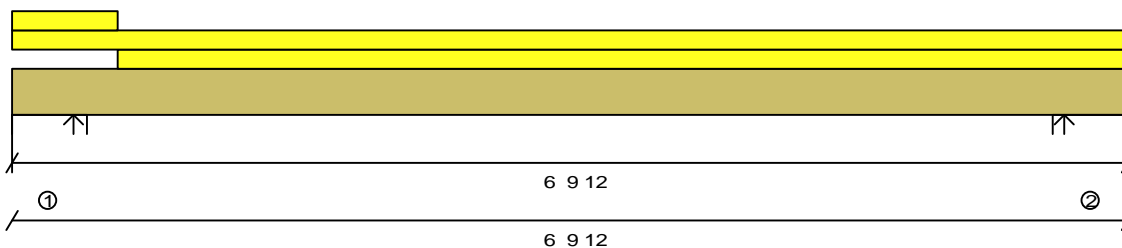
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads****Type****(Description)**

	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	0' 7.75"		329		134		Live
Replacement Uniform (PLF)	Top	0' 0.00"	6' 9.75"		27		10		Live
Replacement Uniform (PLF)	Top	0' 7.75"	6' 9.75"		329		134		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	2197#	--
2	6' 9.750"	Wall	N/A	N/A	1.500"	2197#	--

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	1074#	470#
2	1074#	470#

Design spans

6' 0.500"

**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 2 ply****PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Compression edge maximum unbraced length calculation is based on ply width.

**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	3319.1#	35386.1#	9%	3.41'	Total Load 1.25D+1.5L
Shear	1478.1#	13815.1#	10%	0.4'	Total Load 1.25D+1.5L
TL Deflection	0.0221"	0.2014"	L/999+	3.41'	Total Load D+L
LL Deflection	0.0154"	0.1510"	L/999+	3.41'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

**Pass-Thru Framing Squash Block is required at all point loads over bearings****Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements****RECEIVED**  
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Member Data

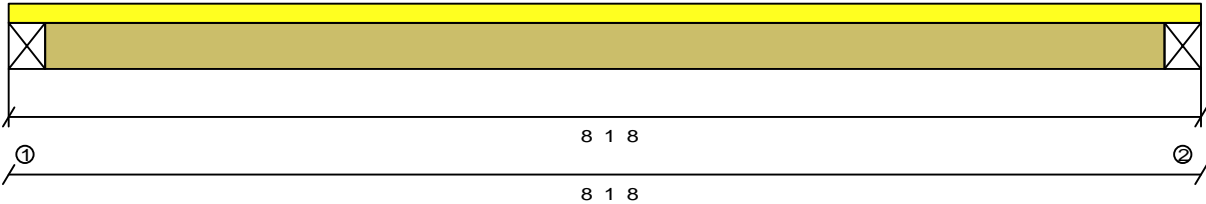
**Description:** CalcG3  
**Comments:**  
  
Standard Load:  
Live Load: 0 PLF  
Dead Load: 0 PLF  
  
Building Type: Residential

Member Type: Girder  
Top Lateral Bracing: Continuous  
Bottom Lateral Bracing: None  
Moisture Condition: Dry  
Deflection Criteria: L/480 live, L/360 total  
Deck Connection: Nailed  
Filename: S:\CUSTOMERS  
Importance Category: Normal (Part 9)

Application: Floor  
  
Building Code: OBC-2012  
0.720" max. LL  
Member Weight: 5.9 PLF

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	8' 1.50"		0		81		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	464#	--
2	8' 1.500"	Girder	N/A	N/A	N/A	464#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Dead
1	331#
2	331#

Design spans  
7' 7.500"

Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.  
Design assumes no lateral bracing along the bottom chord.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	884. #	11500. #	7%	4.06'	Total Load 1.4D
Shear	343. #	4490. #	7%	0.26'	Total Load 1.4D
TL Deflection	0.0170"	0.2542"	L/999+	4.06'	Total Load D+L

(Actual is factored load effects, Limit is design resistance)  
Bearing length from point load of top loaded beams assumed to be 3.50"  
Control: Positive Moment  
Minimum bearing length requirements at hangared connections depend on the connection style and are not included in this design.

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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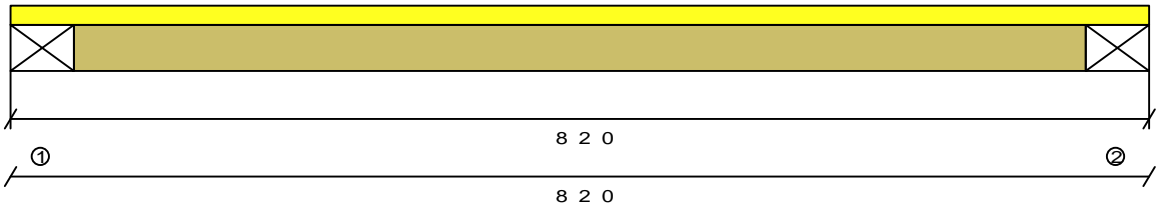


Member Data

<b>Description:</b> CalcG4		Member Type: Girder	Application: Floor
Comments:		Top Lateral Bracing: Continuous	
		Bottom Lateral Bracing: None	
Standard Load:		Moisture Condition: Dry	Building Code: OBC-2012
Live Load: 0 PLF		Deflection Criteria: L/480 live, L/360 total	0.720" max. LL
Dead Load: 0 PLF		Deck Connection: Nailed	Member Weight: 5.9 PLF
		Filename: S:\CUSTOMERS	
Building Type: Residential		Importance Category: Normal (Part 9)	

Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	8' 2.00"		0		81		Live



Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	441#	--
2	8' 2.000"	Girder	N/A	N/A	N/A	441#	--

Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

Dead	
1	315#
2	315#

Design spans  
7' 3.000"

Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply **PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.  
Design assumes no lateral bracing along the bottom chord.

Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	799. #	11500. #	6%	4.08'	Total Load 1.4D
Shear	320. #	4490. #	7%	0.47'	Total Load 1.4D
TL Deflection	0.0142"	0.2417"	L/999+	4.08'	Total Load D+L

(Actual is factored load effects, Limit is design resistance)  
Bearing length from point load of top loaded beams assumed to be 3.50"  
Control: Shear  
Minimum bearing length requirements at hangared connections depend on the connection style and are not included in this design.

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements



**Member Data****Description: CalcG5**

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 5.9 PLF

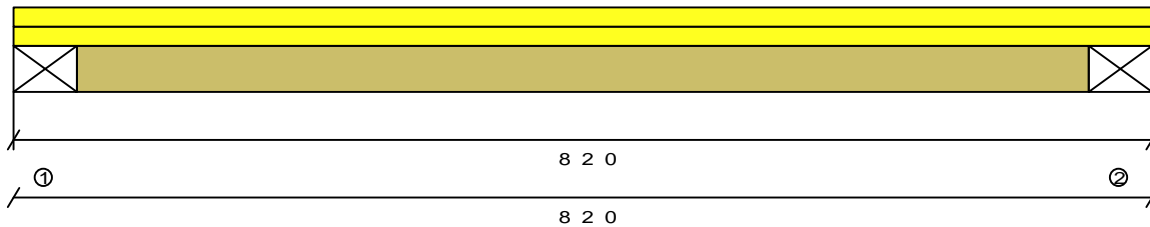
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads****Type****(Description)**

	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	8' 2.00"		44		0		Snow
Replacement Uniform (PLF)	Top	0' 0.00"	8' 2.00"		19		100		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	751#	--
2	8' 2.000"	Girder	N/A	N/A	N/A	751#	--

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	69#	158#	384#
2	69#	158#	384#

Design spans

7' 3.000"

**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply****PASSES DESIGN CHECKS**Design assumes continuous lateral bracing along the top chord.  
Design assumes no lateral bracing along the bottom chord.**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	973.1#	11500.1#	8%	4.08'	Total Load 1.4D
Shear	390.1#	4490.1#	8%	0.47'	Total Load 1.4D
TL Deflection	0.0260"	0.2417"	L/999+	4.08'	Total Load D+S+0.5L
LL Deflection	0.0087"	0.1812"	L/999+	4.08'	Total Load S+0.5L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

Minimum bearing length requirements at hungared connections depend on the connection style and are not included in this design.

Pass-Thru Framing Squash Block is  
required at all point loads over bearingsRefer to Multiple Member Connection  
Detail for ply to ply nailing or bolting  
requirementsRECEIVED  
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## Member Data

Description: CalcG6

Comments:

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Importance Category: Normal (Part 9)

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 5.9 PLF

Standard Load:

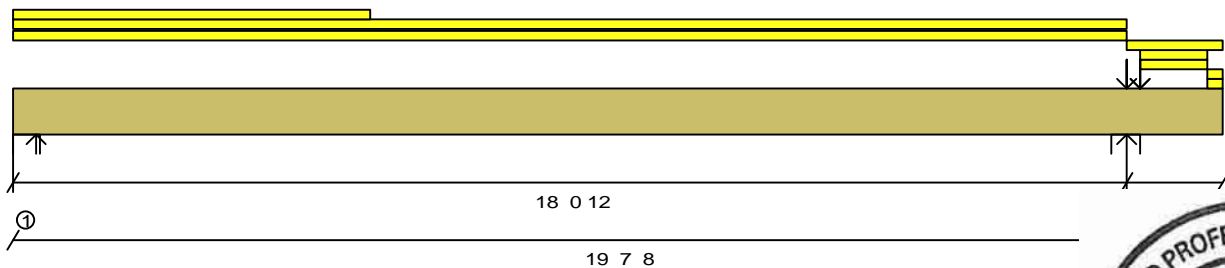
Live Load: 0 PLF

Dead Load: 0 PLF

Building Type: Residential

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Additional Uniform (PLF)	Top	0' 0.00"	5' 9.50"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	18' 0.75"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	18' 0.75"		27		10		Live
Replacement Uniform (PLF)	Top	18' 0.75"	19' 7.50"		27		10		Live
Replacement Uniform (PLF)	Top	18' 3.50"	19' 4.38"		94		0		Snow
Replacement Uniform (PLF)	Top	18' 3.50"	19' 4.38"		41		122		Live
Replacement Uniform (PLF)	Top	19' 4.38"	19' 7.50"		94		0		Snow
Replacement Uniform (PLF)	Top	19' 4.38"	19' 7.50"		41		122		Live
Point (LBS)	Top	18' 0.75"			31		72		Snow
Point (LBS)	Top	18' 3.50"			146		146		Live
Point (LBS)	Top	18' 3.50"			336		0		Snow



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Upl
1	0' 0.000"	Wall	N/A	N/A	1.500"	1025#	--
2	18' 0.750"	Wall	N/A	N/A	1.500"	2005#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	471#	-3#	254#
2	690#	460#	592#

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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Design spans

17' 8.125" 1' 2.125" (right cant)

Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.  
 Design assumes no lateral bracing along the bottom chord.

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4393.1#	17693.1#	24%	9.22'	Odd Spans 1.25D+1.5L
Negative Moment	232.1#	17693.1#	1%	18.06'	Total Load 1.25D+1.00*1.5S+0.5L
Negative Unbrcd	232.1#	16099.1#	1%	18.06'	Cants Only 1.25D+1.00*1.5S+0.5L
Shear	905.1#	6908.1#	13%	0.4'	Odd Spans 1.25D+1.5L
TL Deflection	0.3735"	0.5892"	L/567	9.22'	Odd Spans D+L
LL Deflection	0.2515"	0.4419"	L/843	9.22'	Odd Spans L
TL Defl., Rt.	-0.0747"	0.2000"	2L/378	19.63'	Odd Spans D+L
LL Defl., Rt.	-0.0511"	0.2000"	2L/552	19.63'	Odd Spans L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

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**Member Data****Description:** CalcG7**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 5.9 PLF

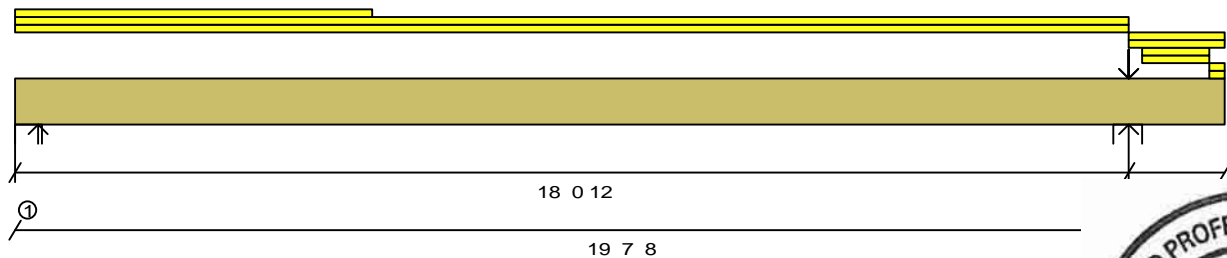
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Additional Uniform (PLF)	Top	0' 0.00"	5' 9.50"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	18' 0.75"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	18' 0.75"		27		10		Live
Replacement Uniform (PLF)	Top	18' 0.75"	19' 7.50"		27		10		Live
Replacement Uniform (PLF)	Top	18' 0.75"	19' 7.50"		27		10		Live
Replacement Uniform (PLF)	Top	18' 3.50"	19' 4.38"		94		0		Snow
Replacement Uniform (PLF)	Top	18' 3.50"	19' 4.38"		41		122		Live
Replacement Uniform (PLF)	Top	19' 4.38"	19' 7.50"		94		0		Snow
Replacement Uniform (PLF)	Top	19' 4.38"	19' 7.50"		41		122		Live
Point (LBS)	Top	18' 0.75"			53		0		Snow
Point (LBS)	Top	18' 0.75"			23		86		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Upl
1	0' 0.000"	Wall	N/A	N/A	1.500"	1024#	--
2	18' 0.750"	Wall	N/A	N/A	1.500"	1562#	--

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	471#	-3#	254#
2	600#	146#	471#

Pass-Thru Framing Squash Block is  
required at all point loads over bearingsRefer to Multiple Member Connection  
Detail for ply to ply nailing or bolting  
requirementsRECEIVED  
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BUILDING DIVISIONDesign spans  
17' 8.125"      1' 2.125" (right cant)**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply****PASSES DESIGN CHECKS**Design assumes continuous lateral bracing along the top chord.  
Design assumes no lateral bracing along the bottom chord.**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4388.1#	17693.1#	24%	9.22'	Odd Spans 1.25D+1.5L
Negative Moment	251.1#	17693.1#	1%	18.06'	Total Load 1.25D+1.5L+1.00*0.5S
Negative Unbrcd	251.1#	15993.1#	1%	18.06'	Cants Only 1.25D+1.5L+1.00*0.5S
Shear	905.1#	6908.1#	13%	0.4'	Odd Spans 1.25D+1.5L
TL Deflection	0.3730"	0.5892"	L/568	9.22'	Odd Spans D+L
LL Deflection	0.2515"	0.4419"	L/843	9.22'	Odd Spans L
TL Defl., Rt.	-0.0745"	0.2000"	2L/379	19.63'	Odd Spans D+L
LL Defl., Rt.	-0.0511"	0.2000"	2L/552	19.63'	Odd Spans L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

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**Member Data****Description:** CalcG8**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 11.8 PLF

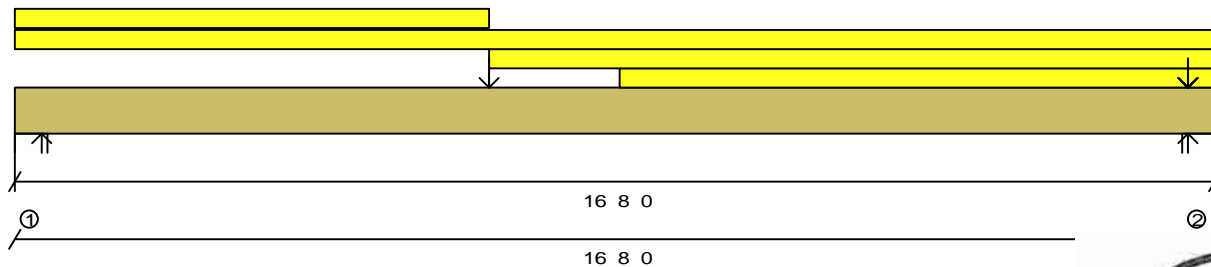
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads****Type****(Description)**

	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	6' 7.00"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	16' 8.00"		27		10		Live
Replacement Uniform (PLF)	Top	6' 7.00"	16' 8.00"		27		10		Live
Additional Uniform (PLF)	Top	8' 5.00"	16' 8.00"		0		7		Live
Point (LBS)	Top	6' 7.00"			790		354		Live
Point (LBS)	Top	16' 3.38"			315		0		Snow
Point (LBS)	Top	16' 3.38"			137		200		Live
Point (LBS)	Top	16' 3.38"			801		803		Live
Point (LBS)	Top	16' 3.38"			1842		0		Snow

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Upli
1	0' 0.000"	Wall	N/A	N/A	1.500"	1961#	--
2	16' 8.000"	Wall	N/A	N/A	1.610"	5862#	--

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	906#	0#	482#
2	1670#	2158#	1432#

Design spans

15' 10.750"

**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 2 ply****PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Compression edge maximum unbraced length calculation is based on ply width.

**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	9855. #	35386. #	27%	6.58'	Total Load 1.25D+1.5L
Shear	1843. #	13815. #	13%	0.4'	Total Load 1.25D+1.5L
TL Deflection	0.3051"	0.5299"	L/625	8.33'	Total Load D+L
LL Deflection	0.1987"	0.3974"	L/960	8.33'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

**Pass-Thru Framing Squash Block is required at all point loads over bearings****Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements****RECEIVED**  
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**Member Data****Description:** CalcG9**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 11.8 PLF

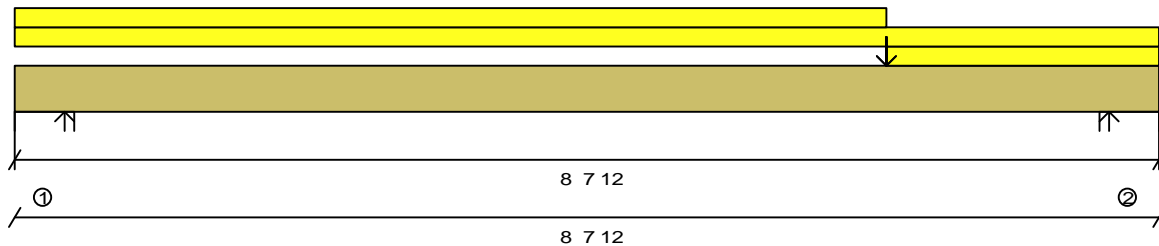
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	6' 7.00"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	8' 7.75"		27		10		Live
Replacement Uniform (PLF)	Top	6' 7.00"	8' 7.75"		27		10		Live
Point (LBS)	Top	6' 7.00"			192		72		Live
Point (LBS)	Top	6' 7.00"			1286		540		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Wall	N/A	N/A	1.500"	1107#	--
2	8' 7.750"	Wall	N/A	N/A	1.500"	2818#	--

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Dead
1	525#	256#
2	1373#	607#

Design spans  
7' 10.500"**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 2 ply****PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Compression edge maximum unbraced length calculation is based on ply width.

**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4558.>#	35386.>#	12%	6.58'	Total Load 1.25D+1.5L
Shear	2700.>#	13815.>#	19%	7.47'	Total Load 1.25D+1.5L
TL Deflection	0.0378"	0.2625"	L/999+	4.72'	Total Load D+L
LL Deflection	0.0260"	0.1969"	L/999+	4.72'	T

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: Shear

Manufacturer's installation guide MUST be consulted for multi-ply connection details and alternatives

**Pass-Thru Framing Squash Block is  
required at all point loads over bearings****Refer to Multiple Member Connection  
Detail for ply to ply nailing or bolting  
requirements****RECEIVED  
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## Member Data

Description: CalcG10

Comments:

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Importance Category: Normal (Part 9)

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 5.9 PLF

Standard Load:

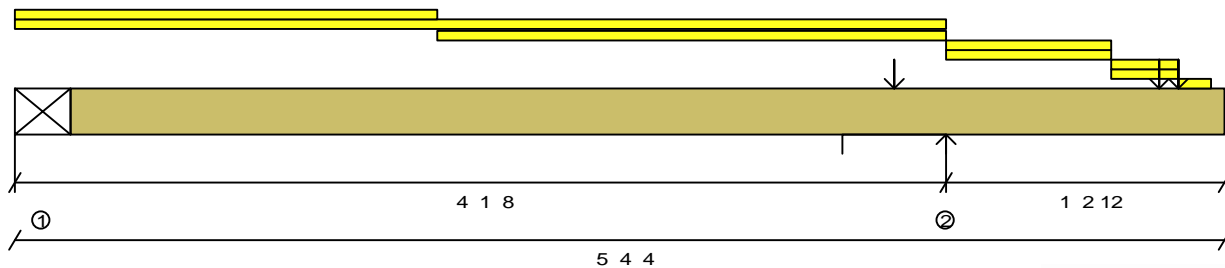
Live Load: 0 PLF

Dead Load: 0 PLF

Building Type: Residential

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 10.50"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	4' 1.50"		27		10		Live
Replacement Uniform (PLF)	Top	1' 10.50"	4' 1.50"		27		10		Live
Replacement Uniform (PLF)	Top	4' 1.50"	4' 10.25"		27		10		Live
Replacement Uniform (PLF)	Top	4' 1.50"	4' 10.25"		0		81		Live
Replacement Uniform (PLF)	Top	4' 10.25"	5' 1.75"		9		3		Live
Replacement Uniform (PLF)	Top	4' 10.25"	5' 1.75"		0		81		Live
Replacement Uniform (PLF)	Top	5' 1.75"	5' 3.50"		0		81		Live
Point (LBS)	Top	3' 10.75"			35		80		Snow
Point (LBS)	Top	5' 0.75"			0		65		Live
Point (LBS)	Top	5' 1.75"			0		374		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gra Up
1	0' 0.000"	Girder	N/A	N/A	N/A	83#	-1
2	4' 1.500"	Wall	N/A	N/A	1.500"	1220#	

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	103#	0#	-79#
2	128#	35#	809#

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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Design spans

3' 10.500"

1' 2.750" (right cant)

Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	33.7#	17693.7#	0%	1.02'	Odd Spans 0.9D+1.5L
Negative Moment	708.7#	11500.7#	6%	4.12'	Total Load 1.4D
Negative Unbrcd	708.7#	8576.7#	8%	4.12'	Total Load 1.4D
Shear	546.7#	4490.7#	12%	4.13'	Total Load 1.4D
TL Deflection	-0.0030"	0.1292"	L/999+	2.57'	Cants Only D+L
LL Deflection	0.0011"	0.0969"	L/999+	2.19'	Odd Spans L
TL Defl., Rt.	0.0034"	0.2000"	2L/999+	5.35'	Cants Only D+L
LL Defl., Rt.	0.0010"	0.2000"	2L/999+	5.35'	Odd Spans L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: Shear

Minimum bearing length requirements at hungared connections depend on the connection style and are not included in this design.

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## Member Data

Description: CalcG11

Comments:

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 5.9 PLF

Standard Load:

Live Load: 0 PLF

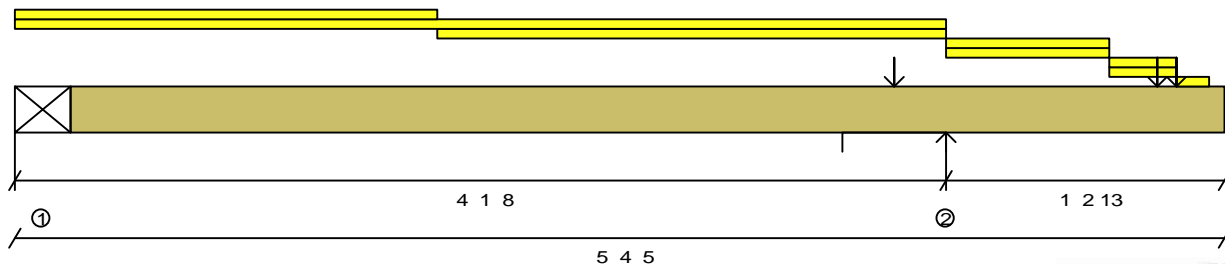
Dead Load: 0 PLF

Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 10.50"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	4' 1.50"		27		10		Live
Replacement Uniform (PLF)	Top	1' 10.50"	4' 1.50"		27		10		Live
Replacement Uniform (PLF)	Top	4' 1.50"	4' 10.25"		27		10		Live
Replacement Uniform (PLF)	Top	4' 1.50"	4' 10.25"		0		81		Live
Replacement Uniform (PLF)	Top	4' 10.25"	5' 1.75"		9		3		Live
Replacement Uniform (PLF)	Top	4' 10.25"	5' 1.75"		0		81		Live
Replacement Uniform (PLF)	Top	5' 1.75"	5' 3.50"		0		81		Live
Point (LBS)	Top	3' 10.75"			35		80		Snow
Point (LBS)	Top	5' 0.75"			0		65		Live
Point (LBS)	Top	5' 1.75"			0		374		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravi Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	83#	-11'
2	4' 1.500"	Wall	N/A	N/A	1.500"	1220#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	103#	0#	-79#
2	128#	35#	809#

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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Design spans

3' 10.500"

1' 2.812" (right cant)

Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	33.7#	17693.7#	0%	1.02'	Odd Spans 0.9D+1.5L
Negative Moment	708.7#	11500.7#	6%	4.12'	Total Load 1.4D
Negative Unbrcd	708.7#	8566.7#	8%	4.12'	Total Load 1.4D
Shear	546.7#	4490.7#	12%	4.13'	Total Load 1.4D
TL Deflection	-0.0030"	0.1292"	L/999+	2.57'	Cants Only D+L
LL Deflection	0.0011"	0.0969"	L/999+	2.19'	Odd Spans L
TL Defl., Rt.	0.0034"	0.2000"	2L/999+	5.36'	Cants Only D+L
LL Defl., Rt.	0.0010"	0.2000"	2L/999+	5.36'	Odd Spans L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: Shear

Minimum bearing length requirements at hungared connections depend on the connection style and are not included in this design.

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## Member Data

### Description: CalcG12

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 5.9 PLF

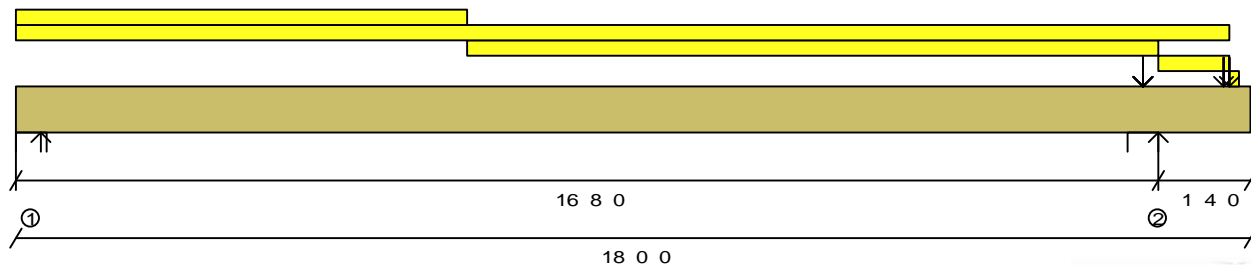
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	6' 7.00"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	17' 8.25"		27		10		Live
Replacement Uniform (PLF)	Top	6' 7.00"	16' 8.00"		27		10		Live
Replacement Uniform (PLF)	Top	16' 8.00"	17' 8.25"		0		81		Live
Replacement Uniform (PLF)	Top	17' 8.25"	17' 10.00"		0		81		Live
Point (LBS)	Top	16' 5.25"			0		62		Live
Point (LBS)	Top	16' 5.25"			89		89		Live
Point (LBS)	Top	16' 5.25"			205		0		Snow
Point (LBS)	Top	16' 5.25"			361		363		Live
Point (LBS)	Top	16' 5.25"			831		0		Snow
Point (LBS)	Top	17' 7.25"			0		65		Live
Point (LBS)	Top	17' 8.25"			0		366		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Up
1	0' 0.000"	Wall	N/A	N/A	1.500"	876#	-
2	16' 8.000"	Wall	N/A	N/A	1.997"	3634#	-

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	434#	0#	180#
2	912#	1035#	1299#

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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Design spans

16' 3.375" 1' 4.000" (right cant)

Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.  
 Design assumes no lateral bracing along the bottom chord.

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	3411. #	17693. #	19%	8.53'	Odd Spans 1.25D+1.5L
Negative Moment	700. #	11500. #	6%	16.67'	Total Load 1.4D
Negative Unbrcd	700. #	9959. #	7%	16.67'	Total Load 1.4D
Shear	843. #	6908. #	12%	15.85'	Total Load 1.25D+1.5L
TL Deflection	0.2401"	0.5427"	L/813	8.53'	Odd Spans D+L
LL Deflection	0.1824"	0.4070"	L/999+	8.53'	Odd Spans L
TL Defl., Rt.	-0.0536"	0.2000"	2L/597	18'	Odd Spans D+L
LL Defl., Rt.	-0.0452"	0.2000"	2L/707	18'	Odd Spans L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: LL Deflection

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**Member Data****Description: CalcG13**

Comments:

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 5.9 PLF

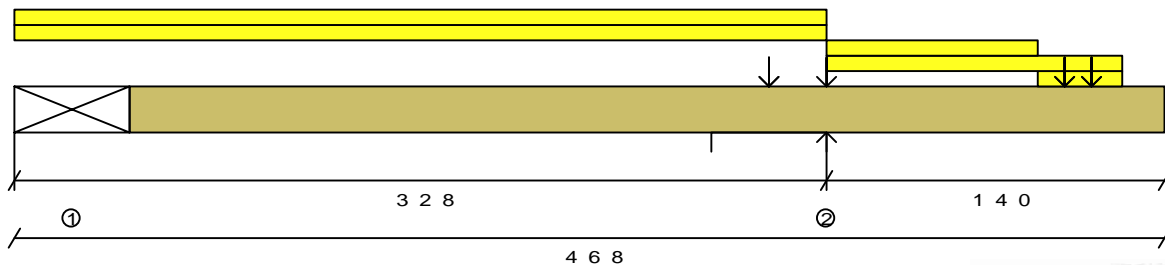
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	3' 2.50"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	3' 2.50"		27		10		Live
Replacement Uniform (PLF)	Top	3' 2.50"	4' 0.50"		41		93		Snow
Replacement Uniform (PLF)	Top	3' 2.50"	4' 4.50"		27		10		Live
Replacement Uniform (PLF)	Top	4' 0.50"	4' 4.50"		41		93		Snow
Point (LBS)	Top	2' 11.75"			23		0		Snow
Point (LBS)	Top	2' 11.75"			10		73		Live
Point (LBS)	Top	3' 2.50"			0		0		Live
Point (LBS)	Top	4' 1.75"			35		0		Snow
Point (LBS)	Top	4' 1.75"			15		80		Live
Point (LBS)	Top	4' 3.00"			168		0		Snow
Point (LBS)	Top	4' 3.00"			73		439		Live

**Bearings and Factored Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gr U
1	0' 0.000"	Girder	N/A	N/A	N/A	--	
2	3' 2.500"	Wall	N/A	N/A	1.500"	1880#	

**Maximum Unfactored Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	73#	-85#	-184#
2	242#	359#	976#

Pass-Thru Framing Squash Block is required at all point loads over bearings

Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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Design spans

2' 9.000"

1' 4.000" (right cant)

**Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply****PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Review gravity uplift reaction force of 379lbs at bearing 1 and ensure that the structure can resist appropriately.

**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	0. #	11500. #	0%	4.54'	Total Load 1.4D
Negative Moment	851. #	11500. #	7%	3.21'	Total Load 1.4D
Negative Unbrd	1167. #	11188. #	10%	3.21'	Total Load 1.25D+1.00*1.5S+0.5L
Shear	643. #	4490. #	14%	3.22'	Total Load 1.4D
TL Deflection	-0.0044"	0.0917"	L/999+	2.11'	Cants Only D+S+0.5L
LL Deflection	-0.0015"	0.0688"	L/999+	2.11'	Cants Only S+0.5L
TL Defl., Rt.	0.0053"	0.2000"	2L/999+	4.54'	Cants Only D+S+0.5L
LL Defl., Rt.	0.0018"	0.2000"	2L/999+	4.54'	Cants Only S+0.5L

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## Member Data

Description: CalcG14

Comments:

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 5.9 PLF

Standard Load:

Live Load: 0 PLF

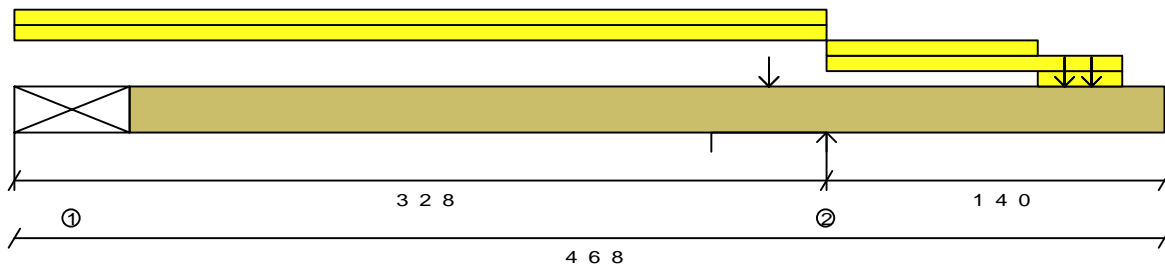
Dead Load: 0 PLF

Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	3' 2.50"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	3' 2.50"		27		10		Live
Replacement Uniform (PLF)	Top	3' 2.50"	4' 0.50"		41		93		Snow
Replacement Uniform (PLF)	Top	3' 2.50"	4' 4.50"		27		10		Live
Replacement Uniform (PLF)	Top	4' 0.50"	4' 4.50"		41		93		Snow
Point (LBS)	Top	2' 11.75"			23		0		Snow
Point (LBS)	Top	2' 11.75"			10		73		Live
Point (LBS)	Top	4' 1.75"			35		0		Snow
Point (LBS)	Top	4' 1.75"			15		80		Live
Point (LBS)	Top	4' 3.00"			168		0		Snow
Point (LBS)	Top	4' 3.00"			73		439		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Girder	N/A	N/A	N/A	--	-379#
2	3' 2.500"	Wall	N/A	N/A	1.500"	1880#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	73#	-85#	-184#
2	242#	359#	976#

Design spans

2' 9.000"

1' 4.000" (right cant)

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Product: 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply

PASSES DESIGN CHECKS

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

Review gravity uplift reaction force of 379lbs at bearing 1 and ensure that the structure can resist appropriately.

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	0. #	11500. #	0%	4.54'	Total Load 1.4D
Negative Moment	851. #	11500. #	7%	3.21'	Total Load 1.4D
Negative Unbrcd	1167. #	11188. #	10%	3.21'	Total Load 1.25D+1.00*1.5S+0.5L
Shear	643. #	4490. #	14%	3.22'	Total Load 1.4D
TL Deflection	-0.0044"	0.0917"	L/999+	2.11'	Cants Only D+S+0.5L
LL Deflection	-0.0015"	0.0688"	L/999+	2.11'	Cants Only S+0.5L
Passing Defl. Rl.	0.0053"	0.2000"	2L/999+	4.54'	Cants Only D+S+0.5L
LL Defl. Rl.	0.0018"	0.2000"	2L/999+	4.54'	Cants Only S+0.5L

Passing Defl. Rl. is required at all point loads over bearings

Refer to Multiple Member Connection  
Detail for ply to ply nailing or bolting  
requirements

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## Member Data

**Description:** CalcG16

**Comments:**

Member Type: Girder

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

Standard Load:

Live Load: 0 PLF

Deflection Criteria: L/480 live, L/360 total

0.720" max. LL

Dead Load: 0 PLF

Deck Connection: Nailed

Member Weight: 5.9 PLF

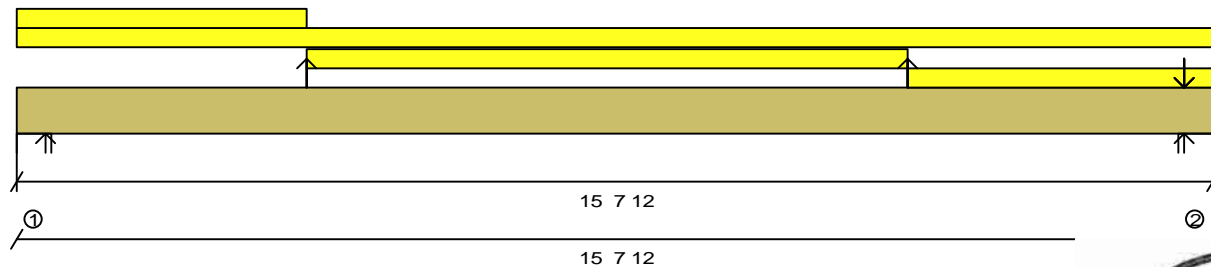
Filename: S:\CUSTOMERS

Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	3' 9.50"		80		30		Live
Replacement Uniform (PLF)	Top	0' 0.00"	15' 7.75"		27		10		Live
Replacement Uniform (PLF)	Top	3' 9.50"	11' 8.00"		80		29		Live
Replacement Uniform (PLF)	Top	11' 8.00"	15' 7.75"		80		30		Live
Point (LBS)	Top	3' 9.50"			0		-84		Live
Point (LBS)	Top	11' 8.00"			0		-84		Live
Point (LBS)	Top	15' 3.13"			22		22		Live
Point (LBS)	Top	15' 3.13"			49		0		Snow
Point (LBS)	Top	15' 3.13"			0		65		Live



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Grav Upl
1	0' 0.000"	Wall	N/A	N/A	1.500"	1612#	-5:
2	15' 7.750"	Wall	N/A	N/A	1.500"	1777#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	793#	0#	338#
2	815#	49#	424#

Design spans

14' 10.500"



**Product:** 1 3/4x11 7/8 West Fraser 2.0E-3100F 1 ply

**PASSES DESIGN CHECKS**

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

## Limit States Design

	Actual	Limit	Capacity	Location	Loading
Positive Moment	5986. #	17693. #	33%	7.82'	Total Load 1.25D+1.5L
Negative Moment	246. #	11500. #	2%	11.67'	Total Load 1.4D
Negative Unbrcd	246. #	3021. #	8%	11.67'	Total Load 1.4D
Shear	1397. #	6908. #	20%	14.52'	Total Load 1.25D+1.5L
TL Deflection	0.3657"	0.4958"	L/488	7.82'	Total Load D+L
LL Deflection	0.2569"	0.3719"	L/694	7.82'	Total Load L

(Actual is factored load effects, Limit is design resistance)

Bearing length from point load of top loaded beams assumed to be 3.50"

Control: TL Deflection

**Pass-Thru Framing Squash Block is required at all point loads over bearings**

**Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements**

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## Member Data

**Description:** CalcG17

**Comments:**

Member Type: Girder

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Deflection Criteria: L/480 live, L/360 total

Deck Connection: Nailed

Filename: S:\CUSTOMERS

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 5.9 PLF

Standard Load:

Live Load: 0 PLF

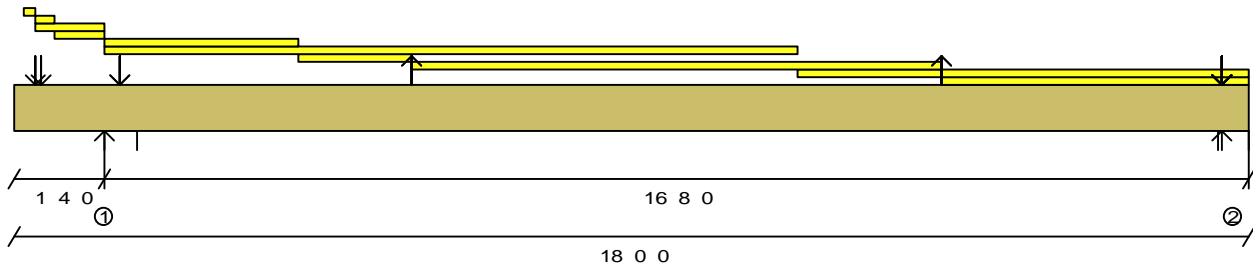
Dead Load: 0 PLF

Building Type: Residential

Importance Category: Normal (Part 9)

## Other Loads

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 2.00"	0' 3.75"		0		81		Live
Replacement Uniform (PLF)	Top	0' 3.75"	0' 7.25"		0		81		Live
Replacement Uniform (PLF)	Top	0' 3.75"	1' 4.00"		27		10		Live
Replacement Uniform (PLF)	Top	0' 7.25"	1' 4.00"		0		81		Live
Replacement Uniform (PLF)	Top	1' 4.00"	4' 2.00"		60		22		Live
Replacement Uniform (PLF)	Top	1' 4.00"	11' 5.00"		27		10		Live
Replacement Uniform (PLF)	Top	4' 2.00"	5' 9.75"		60		22		Live
Replacement Uniform (PLF)	Top	5' 9.75"	13' 6.25"		60		21		Live
Replacement Uniform (PLF)	Top	11' 5.00"	18' 0.00"		27		10		Live
Replacement Uniform (PLF)	Top	13' 6.25"	18' 0.00"		60		22		Live
Point (LBS)	Top	0' 3.75"			0		366		Live
Point (LBS)	Top	0' 4.75"			0		65		Live
Point (LBS)	Top	1' 6.75"			431		431		Live
Point (LBS)	Top	1' 6.75"			991		0		Snow
Point (LBS)	Top	5' 9.75"			-26		-158		Live
Point (LBS)	Top	5' 9.75"			-68		0		Snow
Point (LBS)	Top	13' 6.25"			-26		-158		Live
Point (LBS)	Top	13' 6.25"			-68		0		Snow
Point (LBS)	Top	17' 7.38"			0		5		Live
Point (LBS)	Top	17' 7.38"			5		5		Live
Point (LBS)	Top	17' 7.38"			11		0		Snow
Point (LBS)	Top	17' 7.38"			0		65		Live
Point (LBS)	Top	17' 7.38"			61		61		Live
Point (LBS)	Top	17' 7.38"			141		0		Snow
Point (LBS)	Top	17' 7.38"			157		157		Live
Point (LBS)	Top	17' 7.38"			362		0		Snow



## Bearings and Factored Reactions

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	1' 4.000"	Wall	N/A	N/A	2.129"	3875#	--
2	18' 0.000"	Wall	N/A	N/A	1.500"	2354#	--

## Maximum Unfactored Load Case Reactions

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	1161#	925#	1310#
2	925#	444#	567#

Design spans

1' 4.000" (left cant)

16' 3.375"

**Pass-Thru Framing Squash Block is required at all point loads over bearings**

**Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements**

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