

## **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.

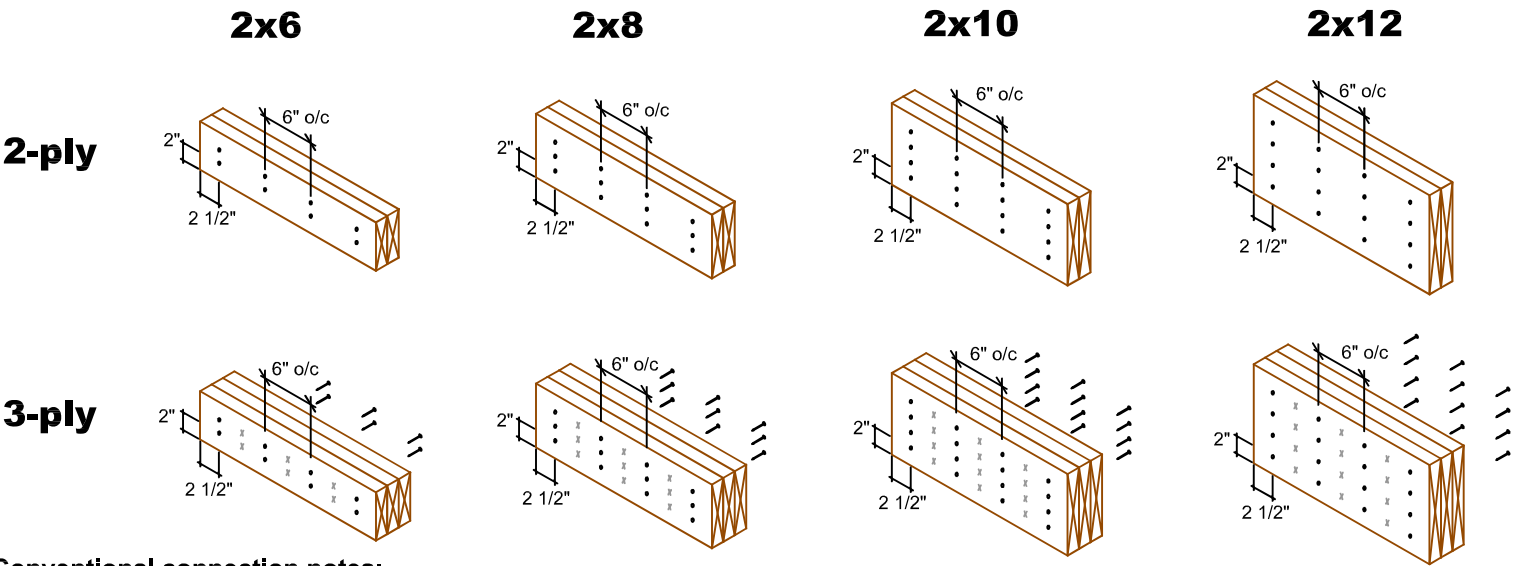
### **HANDLING AND INSTALLATION**

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

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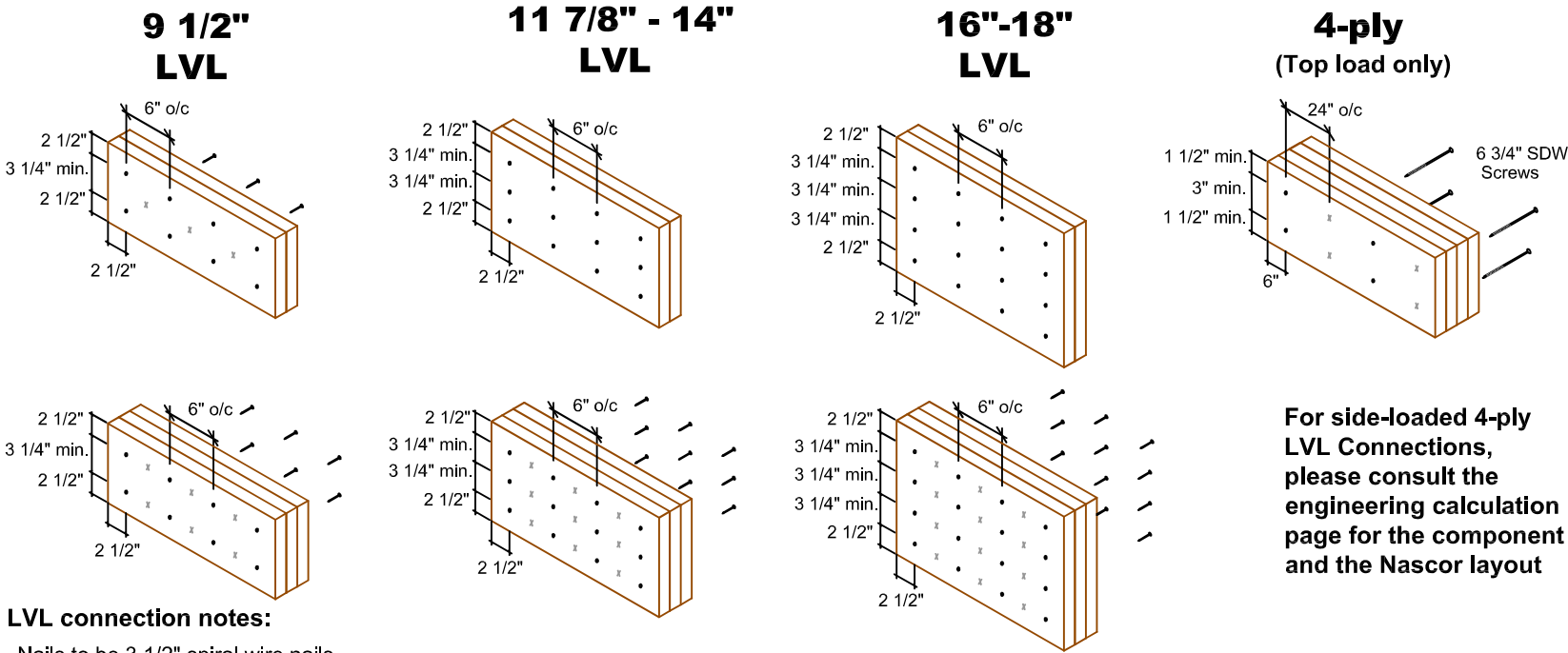
# MULTIPLE MEMBER CONNECTIONS

## Conventional Connections (for uniform distributed loads)



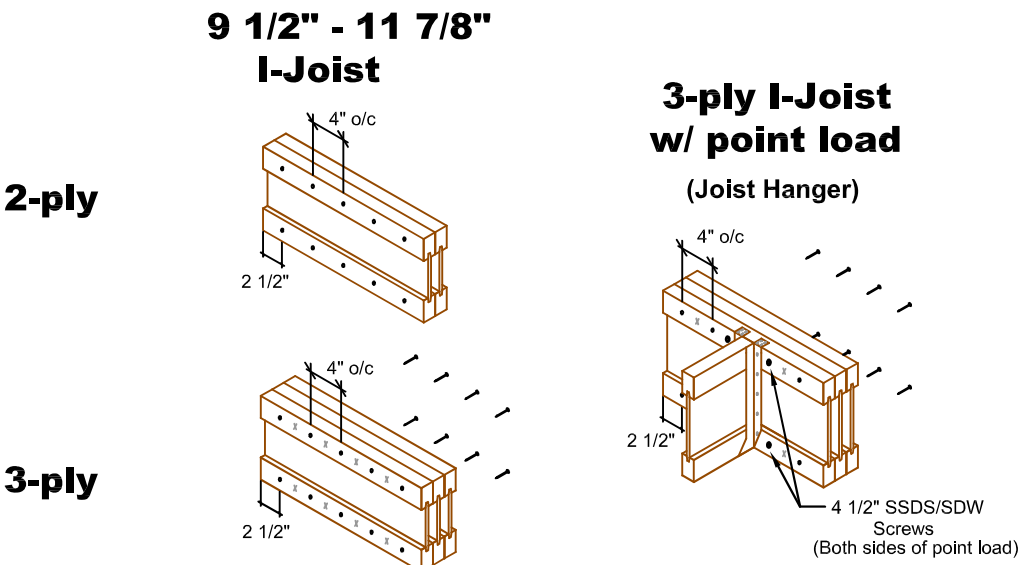
- Conventional connection notes:**
- Nails to be 3" 10d spiral wire nails.
  - Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
  - Number of rows and spacing as per details shown, unless noted otherwise.
  - "X" represents nail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



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

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

Type	Qty.	Product	Length
J1	14	NJ40U12	20' 0"
J2	1	NJ40U12	16' 0"
J3	5	NJH12	18' 0"
J4	13	NJH12	16' 0"
J5	4	NJH12	14' 0"
J6	3	NJH12	12' 0"
J7	6	NJH12	10' 0"
J8	1	NJH12	8' 0"
J9	1	NJH12	6' 0"
J10	25	NJ60H12	18' 0"
G1	2	1-3/4 x 11-7/8 2.0E Global LVL	4' 0"
G2	2	1-3/4 x 11-7/8 2.0E Global LVL	4' 0"
G3	2	NJ12	4' 0"
G4	2	NJ12	4' 0"
G5	1	1-3/4 x 11-7/8 2.0E Global LVL	4' 0"
G6	1	1-3/4 x 11-7/8 2.0E Global LVL	4' 0"
G7	1	1-3/4 x 11-7/8 2.0E Global LVL	8' 0"
G8	1	1-3/4 x 11-7/8 2.0E Global LVL	20' 0"
G9	1	1-3/4 x 11-7/8 2.0E Global LVL	10' 0"
G10	2	NJ12	18' 0"
G11	2	NJ12	18' 0"
G14	2	1-3/4 x 11-7/8 2.0E Global LVL	14' 0"
R1	16	11 7/8" RIMBOARD	12' 0"
R2	2	11 7/8" RIMBOARD	12' 0"

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HATCH AREA REPRESENTS  
CERAMIC TILED FLOOR WITH AN  
ADDITIONAL DEAD LOAD OF 5 PSF



The framing shown on this layout may deviate from the architectural drawing.  
Project engineer to review and approve the deviation prior to construction.

Architectural Drawing Info:  
REGION DESIGN INC.  
8700 Dufferin St., Concord, ON  
Date: Rev.1; Apr.2017  
Project Number: 02-10-103  
Model: Lot 317 (Juniper 9 EL2)

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.

Rim parallel to joists: 1-1/8" rimboard with  
2"x4" block (1/16" longer than rim depth @ 16"o/c.  
Rim perpendicular to joists: 1-1/8" rimboard with  
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	LT2-151188
H4	22	LT251188
H5	3	LT351188

DESIGN ASSUMPTIONS

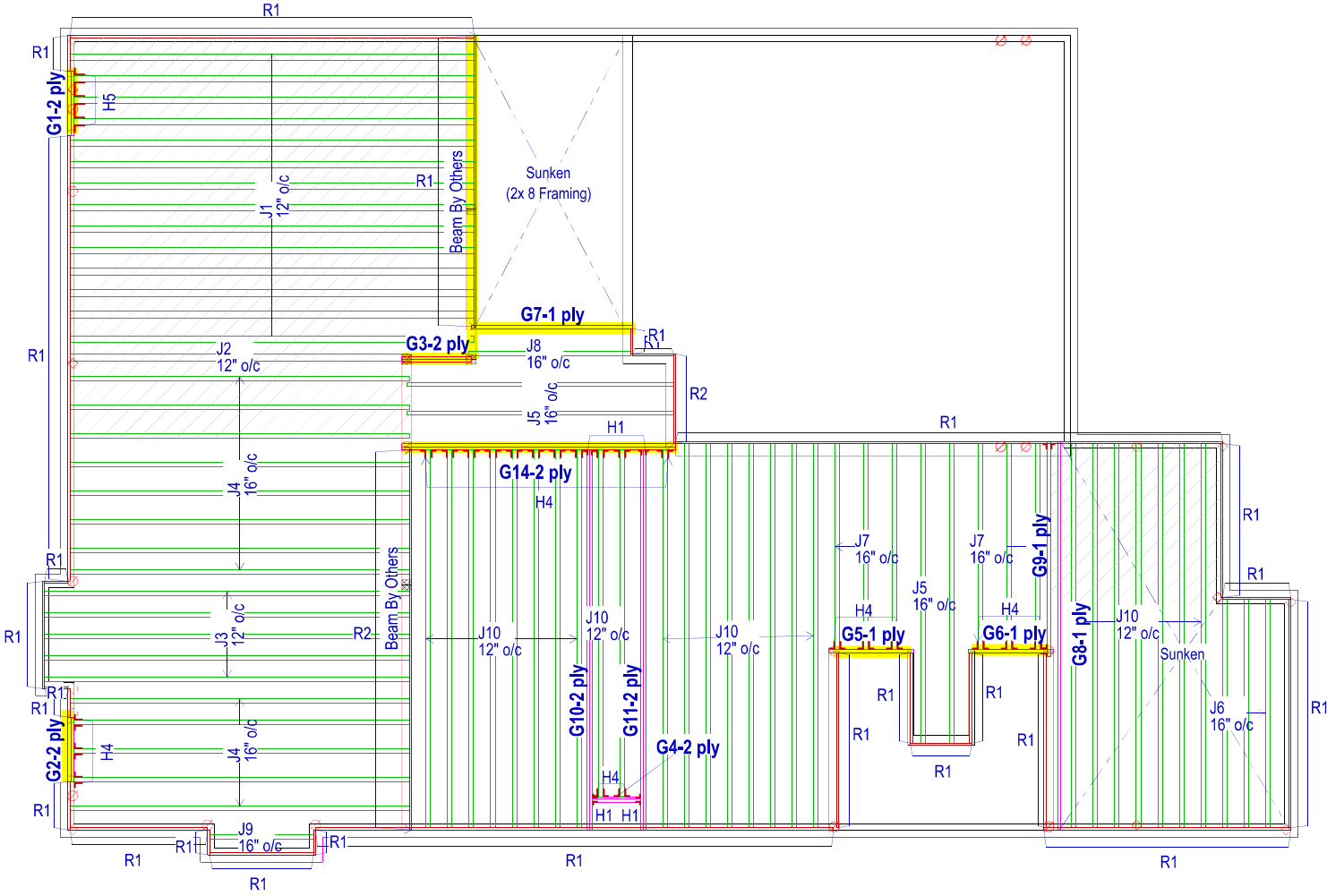
Loads:(un-factored)  
T/C Live: 40 psf B/C Live: 0 psf  
T/C Dead: 15 psf B/C Dead: 0 psf  
Load Case: Live  
Deflection Criteria:  
L/480 Live L/360 Total  
Building Code: OBC-2012 (Limit States Design)

Building Type: Residential Importance Category: Normal  
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.



## FIRST FLOOR FRAMING



TOWN OF MILTON

PLANNING AND DEVELOPMENT

BUILDING PERMIT: 17-7103

BUILDING: REVIEWED

SCOTT SHERRIFFS

PLANS EXAMINER

JUN 12, 2017

DATE

Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, By-laws of the Region of Halton and Town of Milton

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

Project Tag:

MILTON, ONT.

GREENPARK HOMES  
LECCO RIDGE  
LOT 317 (JUNIPER 9 EL2)

Customer#: Salesman#:RM

Time: 07:20 AM  
Date: 05/09/17  
Designer: SB  
Scale: 1/8" = 1'  
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

Member Weight: 10.1 PLF

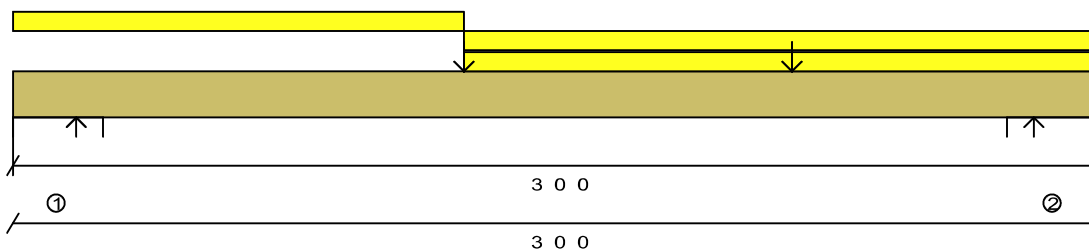
Filename: D:\Users\roc

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' 3.00"		375		188		Live
Replacement Uniform (PLF)	Top	1' 3.00"	3' 0.00"		526		0		Snow
Replacement Uniform (PLF)	Top	1' 3.00"	3' 0.00"		979		757		Live
Point (LBS)	Top	1' 3.00"			983		0		Snow
Point (LBS)	Top	1' 3.00"			1146		951		Live
Point (LBS)	Top	2' 1.88"			48		50		Live
Point (LBS)	Top	2' 1.88"			111		0		Snow

**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"	4019#	--
2	3' 0.000"	Wall	N/A	N/A	1.588"	4670#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Snow	Dead
1	1472#	858#	1106#
2	1664#	1063#	1314#

Design spans  
2' 7.750"

09 MAY 2017

**Product: 1-3/4 x 11-7/8 2.0E Global LVL 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	3846.##	37634.##	10%	1.25'	Total Load 1.25D+1.5L+1.00*0.5S
Shear	3218.##	13217.##	24%	0.19'	Total Load 1.25D+1.5L+1.00*0.5S
TL Deflection	0.0034"	0.0882"	L/999+	1.5'	Total Load D+L+0.5S
LL Deflection	0.0022"	0.0661"	L/999+	1.5'	Total Load L+0.5S

(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

**READ ALL NOTES ON THIS PAGE AND ON THE  
ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE  
IS AN INTEGRAL PART OF THIS DRAWING AS IT  
CONTAINS SPECIFICATIONS AND CRITERIA USED  
IN THE DESIGN OF THIS COMPONENT.****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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\*\*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.

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

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

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: D:\Users\roc

Importance Category: Normal (Part 9)

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 10.1 PLF

**Other Loads****Type**

(Description)

Replacement Uniform (PLF)

**Side**

Top

**Begin**

0' 0.00"

**End**

3' 0.00"

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

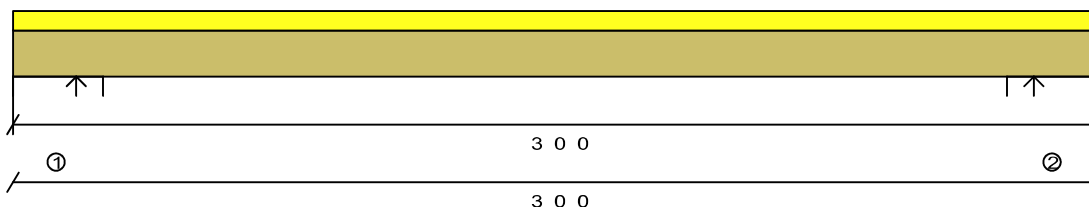
315

**End****Dead  
Start**

118

**End****Category**

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"	837#	--
2	3' 0.000"	Wall	N/A	N/A	1.500"	837#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Dead
1	417#	170#
2	417#	170#

Design spans

2' 7.750"

**Product: 1-3/4 x 11-7/8 2.0E Global LVL 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	554. #	37634. #	1%	1.5'	Total Load 1.25D+1.5L
Shear	211. #	13217. #	1%	1.9'	Total Load 1.25D+1.5L
TL Deflection	0.0010"	0.0882"	L/999+	1.5'	Total Load D+L
LL Deflection	0.0010"	0.0661"	L/999+	1.5'	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

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

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IN THE DESIGN OF THIS COMPONENT.

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



**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

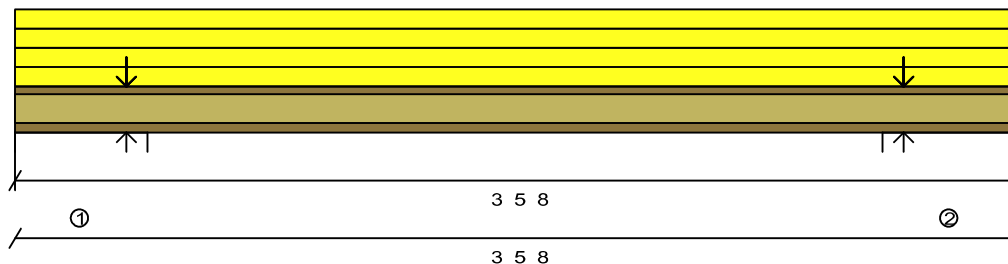
Filename: D:\Users\roc

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"	3' 5.50"		0		7		Live
Replacement Uniform (PLF)	Top	0' 0.00"	3' 5.50"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	3' 5.50"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	3' 5.50"		53		60		Live
Point (LBS)	Top	0' 4.63"			0		81		Live
Point (LBS)	Top	0' 4.63"			341		147		Live
Point (LBS)	Top	0' 4.63"			491		184		Live
Point (LBS)	Top	3' 0.88"			4		1		Live
Point (LBS)	Top	3' 0.88"			142		53		Live
Point (LBS)	Top	3' 0.88"			562		294		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"	2124#	--
2	3' 5.500"	Wall	N/A	N/A	1,500"	1860#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Dead
1	975#	529#
2	852#	466#

Design spans  
2' 8.250"

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**Product: NJ12 2 ply**

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**

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**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	243.#	9020.#	2%	1.73'	Total Load 1.25D+1.5L
Shear	361.#	3400.#	10%	0'	Total Load 1.25D+1.5L
End Reaction	2124.#	4100.#	51%	0'	Total Load 1.25D+1.5L
TL Deflection	0.0019"	0.0896"	L/999+	1.73'	Total Load D+L
LL Deflection	0.0011"	0.0672"	L/999+	1.73'	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

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

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

Dead Load: 0 PLF

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

0.720" max. LL

Deck Connection: Nailed

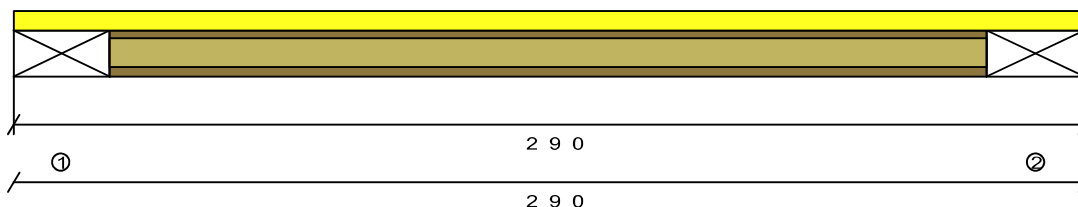
Filename: D:\Users\roc

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' 9.00"		329		123		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	728#	--
2	2' 9.000"	Girder	N/A	N/A	N/A	728#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Dead
1	370#	139#
2	370#	139#

Design spans  
2' 3.000"**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	410.#	9020.#	4%	1.38'	Total Load 1.25D+1.5L
Shear	728.#	3400.#	21%	0'	Total Load 1.25D+1.5L
TL Deflection	0.0030"	0.0750"	L/999+	1.38'	Total Load D+L
LL Deflection	0.0022"	0.0563"	L/999+	1.38'	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.

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

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

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: D:\Users\roc

Importance Category: Normal (Part 9)

Application: Floor

Building Code: OBC-2012

0.720" max. LL

Member Weight: 5.0 PLF

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

Replacement Uniform (PLF)

Point (LBS)

**Side**

Top

Top

**Begin**

0' 0.00"

0' 4.63"

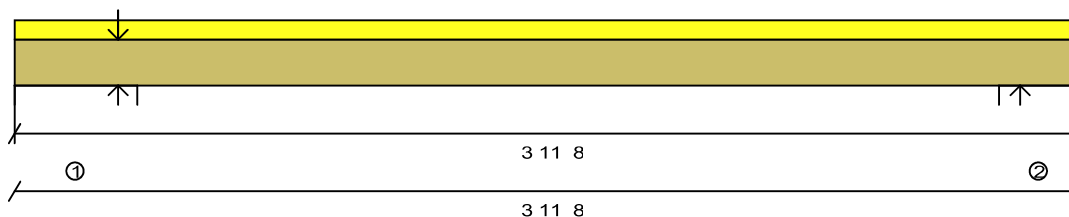
**End**

3' 11.50"

**Trib.  
Width****Other  
Start****End****Dead  
Start****End****Category**

Live

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	3.299"	4849#	--
2	3' 11.500"	Wall	N/A	N/A	1.500"	1348#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Dead
1	2414#	983#
2	679#	264#

Design spans

3' 4.250"

**Product: 1-3/4 x 11-7/8 2.0E Global LVL 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	1131.1#	18817.1#	6%	2.06'	Total Load 1.25D+1.5L
Shear	553.1#	6608.1#	8%	2.9'	Total Load 1.25D+1.5L
TL Deflection	0.0033"	0.1118"	L/999+	2.06'	Total Load D+L
LL Deflection	0.0024"	0.0839"	L/999+	2.06'	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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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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www.nascor.ca



**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

Dead Load: 0 PLF

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

0.720" max. LL

Deck Connection: Nailed

Member Weight: 5.0 PLF

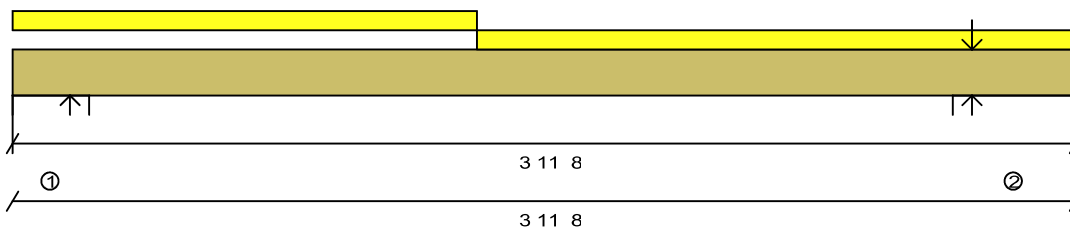
Filename: D:\Users\roc

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' 8.75"		442		166		Live
Replacement Uniform (PLF)	Top	1' 8.75"	3' 11.50"		442		166		Live
Point (LBS)	Top	3' 6.88"			1118		495		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"	1471#	--
2	3' 11.500"	Wall	N/A	N/A	2.563"	3767#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Dead
1	741#	287#
2	1859#	783#

Design spans  
3' 4.250"**Product: 1-3/4 x 11-7/8 2.0E Global LVL 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	1234. #	18817. #	6%	1.9'	Total Load 1.25D+1.5L
Shear	603. #	6608. #	9%	2.73'	Total Load 1.25D+1.5L
TL Deflection	0.0036"	0.1118"	L/999+	1.9'	Total Load D+L
LL Deflection	0.0026"	0.0839"	L/999+	1.9'	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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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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**Member Data****Description: CalcG7**

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

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Importance Category: Normal (Part 9)

Application: Floor

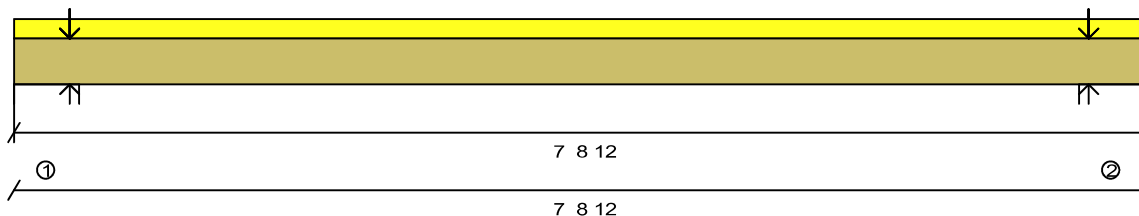
Building Code: OBC-2012

0.720" max. LL

Member Weight: 5.0 PLF

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

	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	7' 8.75"		27		10		Live
Point (LBS)	Top	0' 4.63"			215		81		Live
Point (LBS)	Top	0' 4.63"			291		109		Live
Point (LBS)	Top	0' 4.63"			562		294		Live
Point (LBS)	Top	0' 4.63"			750		392		Live
Point (LBS)	Top	7' 4.13"			0		51		Live
Point (LBS)	Top	7' 4.13"			182		68		Live
Point (LBS)	Top	7' 4.13"			333		125		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	2.739"	4026#	--
2	7' 8.750"	Wall	N/A	N/A	1.500"	1281#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Dead
1	1911#	927#
2	608#	296#

Design spans

6' 11.500"

**Product: 1-3/4 x 11-7/8 2.0E Global LVL 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	356.7#	18817.7#	1%	3.86'	Total Load 1.25D+1.5L
Shear	146.7#	6608.7#	2%	0.4'	Total Load 1.25D+1.5L
TL Deflection	0.0045"	0.2319"	L/999+	3.86'	Total Load D+L
LL Deflection	0.0029"	0.1740"	L/999+	3.86'	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:** CalcG8**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

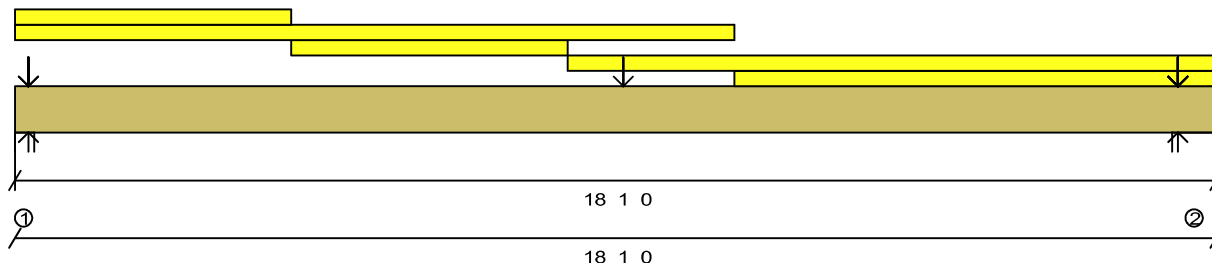
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**Importance Category:** Normal (Part 9)**Application:** Floor**Building Code:** OBC-2012

0.720" max. LL

**Member Weight:** 5.0 PLF**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	4' 2.00"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	10' 10.00"		27		10		Live
Replacement Uniform (PLF)	Top	4' 2.00"	8' 4.00"		27		10		Live
Replacement Uniform (PLF)	Top	8' 4.00"	18' 1.00"		9		3		Live
Replacement Uniform (PLF)	Top	10' 10.00"	18' 1.00"		27		10		Live
Point (LBS)	Top	0' 2.75"			0		162		Live
Point (LBS)	Top	0' 2.75"			475		0		Snow
Point (LBS)	Top	0' 2.75"			885		609		Live
Point (LBS)	Top	9' 2.00"			112		42		Live
Point (LBS)	Top	17' 5.88"			0		20		Live
Point (LBS)	Top	17' 5.88"			0		20		Live
Point (LBS)	Top	17' 5.88"			0		40		Live
Point (LBS)	Top	17' 5.88"			119		0		Snow
Point (LBS)	Top	17' 5.88"			119		0		Snow
Point (LBS)	Top	17' 5.88"			119		0		Snow
Point (LBS)	Top	17' 5.88"			147		132		Live
Point (LBS)	Top	17' 5.88"			205		152		Live
Point (LBS)	Top	17' 5.88"			205		152		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	2.389"	3511#	--
2	18' 1.000"	Wall	N/A	N/A	1.700"	2499#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Snow	Dead	Pass-Thru Framing Squash Block is required at all point loads over bearings
1	1357#	475#	991#	
2	955#	357#	710#	

Design spans  
17' 3.250"

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

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**Product:** 1-3/4 x 11-7/8 2.0E Global LVL 1 ply**PASSES DESIGN CHECKS**

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

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**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4351.1#	18817.1#	23%	9.17'	Total Load 1.25D+1.5L
Shear	873.1#	6608.1#	13%	0.23'	Total Load 1.25D+1.5L
TL Deflection	0.3249"	0.5757"	L/637	8.85'	Total Load D+L
LL Deflection	0.2213"	0.4318"	L/936	8.85'	Total Load L

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

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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: 5.0 PLF

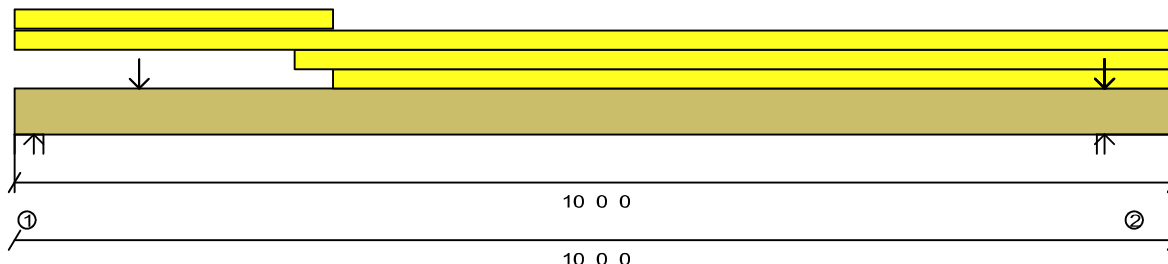
Filename: D:\Users\roc

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' 9.00"		9		3		Live
Replacement Uniform (PLF)	Top	0' 0.00"	10' 0.00"		27		10		Live
Additional Uniform (PLF)	Top	2' 5.00"	10' 0.00"		0		7		Live
Replacement Uniform (PLF)	Top	2' 9.00"	10' 0.00"		9		3		Live
Point (LBS)	Top	1' 1.00"			247		93		Live
Point (LBS)	Top	9' 4.88"			0		20		Live
Point (LBS)	Top	9' 4.88"			0		81		Live
Point (LBS)	Top	9' 4.88"			119		0		Snow
Point (LBS)	Top	9' 4.88"			205		152		Live
Point (LBS)	Top	9' 4.88"			475		0		Snow
Point (LBS)	Top	9' 4.88"			588		528		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"	814#	--
2	10' 0.000"	Wall	N/A	N/A	1.971"	2898#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Snow	Dead
1	387#	0#	187#
2	981#	594#	904#

Design spans  
9' 2.750"**Product: 1-3/4 x 11-7/8 2.0E Global LVL 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	1123. #	18817. #	5%	4.33'	Total Load 1.25D+1.5L
Shear	352. #	6608. #	5%	8.48'	Total Load 1.25D+1.5L
TL Deflection	0.0257"	0.3076"	L/999+	4.79'	Total Load D+L
LL Deflection	0.0161"	0.2307"	L/999+	4.79'	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  
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**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

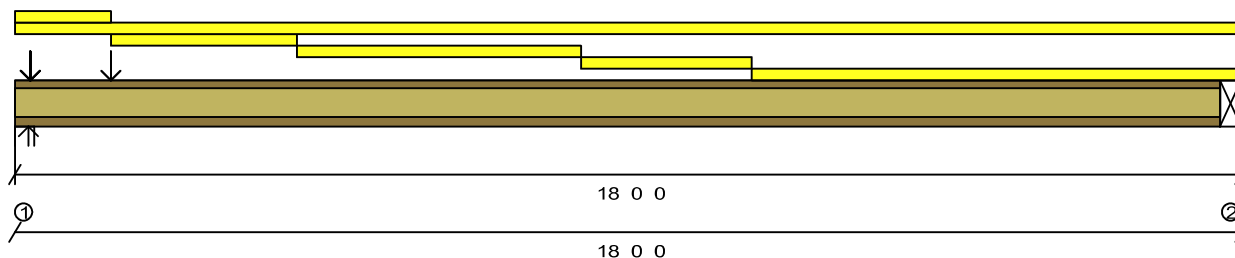
Filename: D:\Users\roc

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' 5.00"		27		10		Live
Replacement Uniform (PLF)	Top	0' 0.00"	18' 0.00"		27		10		Live
Replacement Uniform (PLF)	Top	1' 5.00"	4' 2.00"		27		10		Live
Replacement Uniform (PLF)	Top	4' 2.00"	8' 4.00"		27		10		Live
Replacement Uniform (PLF)	Top	8' 4.00"	10' 10.00"		27		10		Live
Replacement Uniform (PLF)	Top	10' 10.00"	18' 0.00"		27		10		Live
Point (LBS)	Top	0' 2.75"			0		162		Live
Point (LBS)	Top	0' 2.75"			194		0		Snow
Point (LBS)	Top	0' 2.75"			387		265		Live
Point (LBS)	Top	1' 5.00"			411		172		Live

**Bearings and Factored Reactions**

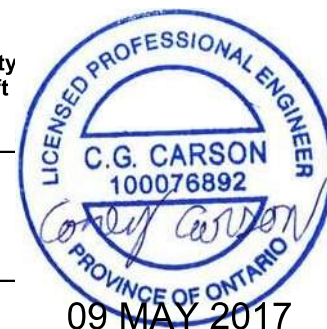
	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Wall	N/A	N/A	1,500"	2902#	--
2	18' 0.000"	Girder	N/A	N/A	N/A	975#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Snow	Dead
1	1236#	194#	761#
2	495#	0#	187#

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Design spans  
17' 5.875"**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**

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

**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4528.##	9020.##	50%	8.34'	Total Load 1.25D+1.5L
Shear	1692.##	3400.##	49%	0'	Total Load 1.25D+1.5L
End Reaction	2902.##	4100.##	70%	0'	Total Load 1.25D+1.5L+1.00*0.5S
TL Deflection	0.3820"	0.5830"	L/549	8.96'	Total Load D+L
LL Deflection	0.2767"	0.4372"	L/758	8.96'	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

Web stiffener and 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

Application: Floor

Top Lateral Bracing: Continuous

Bottom Lateral Bracing: None

Moisture Condition: Dry

Building Code: OBC-2012

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

0.720" max. LL

Deck Connection: Nailed

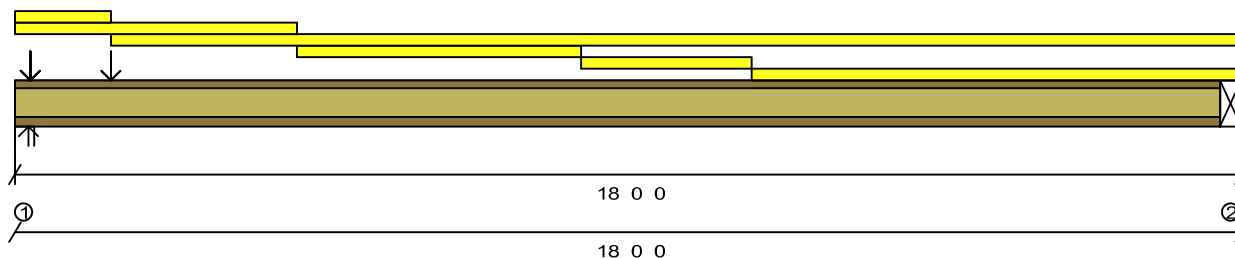
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Building Type: Residential

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' 5.00"		9		3		Live
Replacement Uniform (PLF)	Top	0' 0.00"	4' 2.00"		27		10		Live
Replacement Uniform (PLF)	Top	1' 5.00"	18' 0.00"		27		10		Live
Replacement Uniform (PLF)	Top	4' 2.00"	8' 4.00"		27		10		Live
Replacement Uniform (PLF)	Top	8' 4.00"	10' 10.00"		27		10		Live
Replacement Uniform (PLF)	Top	10' 10.00"	18' 0.00"		27		10		Live
Point (LBS)	Top	0' 2.75"			0		162		Live
Point (LBS)	Top	0' 2.75"			194		0		Snow
Point (LBS)	Top	0' 2.75"			714		488		Live
Point (LBS)	Top	1' 5.00"			411		172		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	1.758"	3633#	--
2	18' 0.000"	Girder	N/A	N/A	N/A	974#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Snow	Dead
1	1543#	194#	977#
2	494#	0#	186#

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Design spans  
17' 5.875"**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**

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

**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	4514.##	9020.##	50%	8.34'	Total Load 1.25D+1.5L
Shear	1652.##	3400.##	48%	0'	Total Load 1.25D+1.5L
End Reaction	3633.##	4100.##	88%	0'	Total Load 1.25D+1.5L+1.00*0.5S
TL Deflection	0.3808"	0.5830"	L/551	8.96'	Total Load D+L
LL Deflection	0.2758"	0.4372"	L/760	8.96'	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

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

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

**Member Data****Description: CalcG14**

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: D:\Users\roc

Importance Category: Normal (Part 9)

Application: Floor

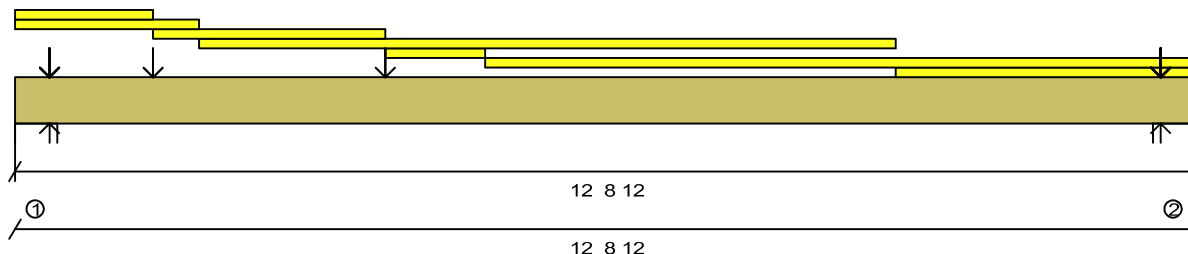
Building Code: OBC-2012

0.720" max. LL

Member Weight: 10.1 PLF

**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	1' 6.00"		357		134		Live
Replacement Uniform (PLF)	Top	0' 0.00"	2' 0.00"		27		10		Live
Replacement Uniform (PLF)	Top	1' 6.00"	4' 0.00"		329		123		Live
Replacement Uniform (PLF)	Top	2' 0.00"	9' 6.00"		27		10		Live
Replacement Uniform (PLF)	Top	4' 0.00"	5' 1.00"		357		134		Live
Replacement Uniform (PLF)	Top	5' 1.00"	12' 8.75"		357		134		Live
Replacement Uniform (PLF)	Top	9' 6.00"	12' 8.75"		27		10		Live
Point (LBS)	Top	0' 4.63"			490		184		Live
Point (LBS)	Top	0' 4.63"			613		311		Live
Point (LBS)	Top	0' 4.63"			2191		918		Live
Point (LBS)	Top	1' 6.00"			33		139		Live
Point (LBS)	Top	4' 0.00"			33		139		Live
Point (LBS)	Top	12' 4.13"			53		20		Live
Point (LBS)	Top	12' 4.13"			0		81		Live
Point (LBS)	Top	12' 4.13"			0		81		Live
Point (LBS)	Top	12' 4.13"			491		184		Live
Point (LBS)	Top	12' 4.13"			630		236		Live
Point (LBS)	Top	12' 4.13"			630		236		Live
Point (LBS)	Top	12' 4.13"			2191		931		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	3.927"	11544#	--
2	12' 8.750"	Wall	N/A	N/A	4.373"	12857#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Dead
1	5584#	2534#
2	6288#	2740#

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Design spans  
11' 11.500"**Product: 1-3/4 x 11-7/8 2.0E Global LVL 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.

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  
requirements**Limit States Design**

	Actual	Limit	Capacity	Location	Loading
Positive Moment	14091. #	37634. #	37%	6.36'	Total Load 1.25D+1.5L
Shear	4077. #	13217. #	30%	0.4'	Total Load 1.25D+1.5L
TL Deflection	0.2615"	0.3986"	L/548	6.36'	Total Load D+L
LL Deflection	0.1805"	0.2990"	L/795	6.36'	Total Load L

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Uxbridge, ON.  
www.nascor.ca

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

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

Type	Qty.	Product	Length
J1	19	NJH12	16' 0"
J2	3	NJH12	14' 0"
J3	3	NJH12	12' 0"
J4	8	NJH12	10' 0"
J5	11	NJH12	8' 0"
J6	15	NJ60U12	20' 0"
J7	12	NJ60H12	20' 0"
J8	29	NJ60H12	18' 0"
J9	1	NJ60H12	10' 0"
G1	2	1-3/4 x 11-7/8 2.0E Global LVL	12' 0"
G2	2	1-3/4 x 11-7/8 2.0E Global LVL	14' 0"
G3	3	1-3/4 x 11-7/8 2.0E Global LVL	12' 0"
R1	15	11 7/8" RIMBOARD	12' 0"
R2	4	11 7/8" RIMBOARD	12' 0"
R3	2	11 7/8" RIMBOARD	12' 0"

HATCH AREA REPRESENTS  
CERAMIC TILED FLOOR WITH AN  
ADDITIONAL DEAD LOAD OF 5 PSF



The framing shown on this layout may deviate from the architectural drawing.  
Project engineer to review and approve the deviation prior to construction.

Architectural Drawing Info:  
REGION DESIGN INC.  
8700 Dufferin St., Concord, ON  
Date: Rev.1; Apr.2017  
Project Number: 02-10-103  
Model: Lot 317 (Juniper 9 EI2)

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.

Rim parallel to joists: 1-1/8" rimboard with  
2"x4" block (1/16" longer than rim depth @ 16"o/c.  
Rim perpendicular to joists: 1-1/8" rimboard with  
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.

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

Type	Qty.	Product	Length
XXX	(R/L)	NJH12	10' 0"

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

ID#	Qty	Model Number
H1	20	LT251188

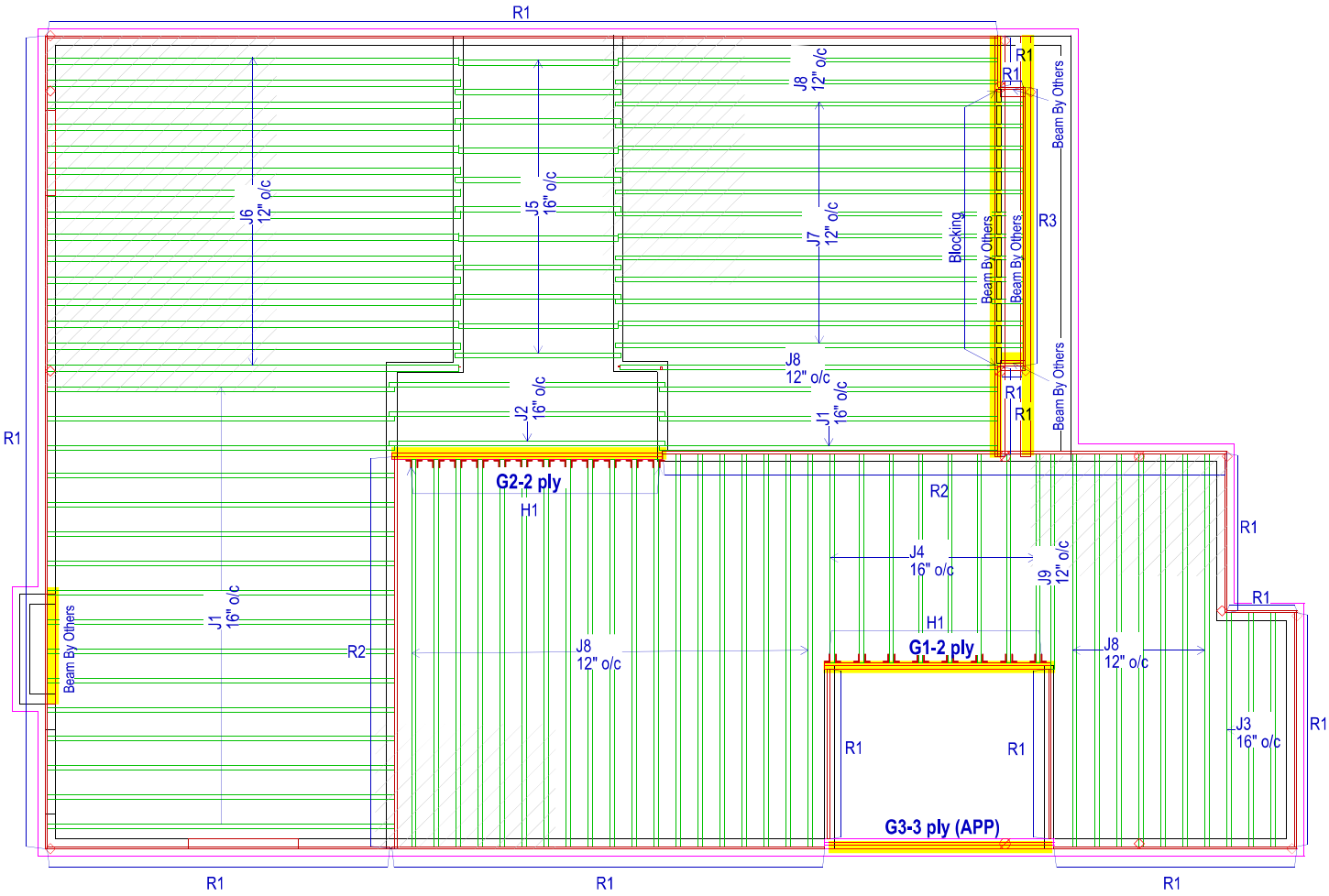
DESIGN ASSUMPTIONS  
=====

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  
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

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



TOWN OF MILTON

PLANNING AND DEVELOPMENT

BUILDING PERMIT: 17-7103

BUILDING: REVIEWED

SCOTT SHERRIFFS

PLANS EXAMINER

JUN 12, 2017

DATE

Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, By-laws of the Region of Halton and Town of Milton

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www.nascor.ca

Project Tag:

MILTON, ONT.

GREENPARK HOMES  
LECCO RIDGE  
LOT 317 (JUNIPER 9 EL2)

Customer#: Salesman#:RM

Time: 07:20 AM  
Date: 05/09/17  
Designer: SB  
Scale: 1/8" = 1'  
License Name:  
KEYMARK ENTERPRISES, INC.



**Member Data****Description:** CalcG1**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

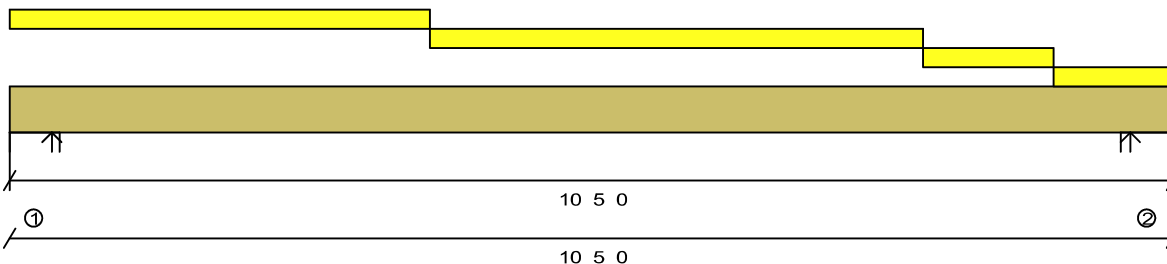
Filename: D:\Users\roc

**Importance Category:** Normal (Part 9)**Application:** Floor**Building Code:** OBC-2012

0.720" max. LL

**Member Weight:** 10.1 PLF**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF)	Top	0' 0.00"	3' 9.25"		460		172		Live
Replacement Uniform (PLF)	Top	3' 9.25"	8' 2.25"		190		71		Live
Replacement Uniform (PLF)	Top	8' 2.25"	9' 4.25"		190		71		Live
Replacement Uniform (PLF)	Top	9' 4.25"	10' 5.00"		190		79		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"	3352#	--
2	10' 5.000"	Wall	N/A	N/A	1.500"	2191#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Dead
1	1672#	675#
2	1079#	458#

**Design spans**  
9' 7.750"**Product:** 1-3/4 x 11-7/8 2.0E Global LVL 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	6154.4#	37634.4#	16%	4.24'	Total Load 1.25D+1.5L
Shear	2443.4#	13217.4#	18%	0.4'	Total Load 1.25D+1.5L
TL Deflection	0.0743"	0.3215"	L/999+	5.21'	Total Load D+L
LL Deflection	0.0526"	0.2411"	L/999+	5.21'	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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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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14 Anderson Blvd.  
Uxbridge, ON.  
www.nascor.ca

**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: 10.1 PLF

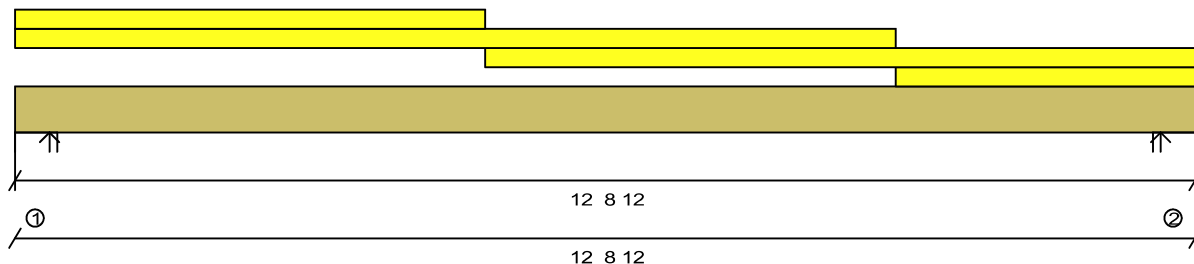
Filename: D:\Users\roc

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"	5' 1.00"		357		134		Live
Replacement Uniform (PLF)	Top	0' 0.00"	9' 6.00"		27		10		Live
Replacement Uniform (PLF)	Top	5' 1.00"	12' 8.75"		357		138		Live
Replacement Uniform (PLF)	Top	9' 6.00"	12' 8.75"		27		10		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	1.566"	4605#	--
2	12' 8.750"	Wall	N/A	N/A	1.572"	4621#	--

**Maximum Unfactored Load Case Reactions**

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

	Live	Dead
1	2295#	931#
2	2295#	944#

Design spans  
11' 11.500"**Product: 1-3/4 x 11-7/8 2.0E Global LVL 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	13800.##	37634.##	36%	6.36'	Total Load 1.25D+1.5L
Shear	3856.##	13217.##	29%	11.75'	Total Load 1.25D+1.5L
TL Deflection	0.2547"	0.3986"	L/563	6.36'	Total Load D+L
LL Deflection	0.1808"	0.2990"	L/793	6.36'	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

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