Layout Name

Design Method

Description

LSD

Revised

Builder

RM

HEMLOCK 4-1 & 4-2

MINNISALE HOMES

BRAMPTON, ONT.

August 13, 2018

**GREENPARK** 

Sales Rep

Designer

Shipping

Project

Job Path

**Builder's Project** 

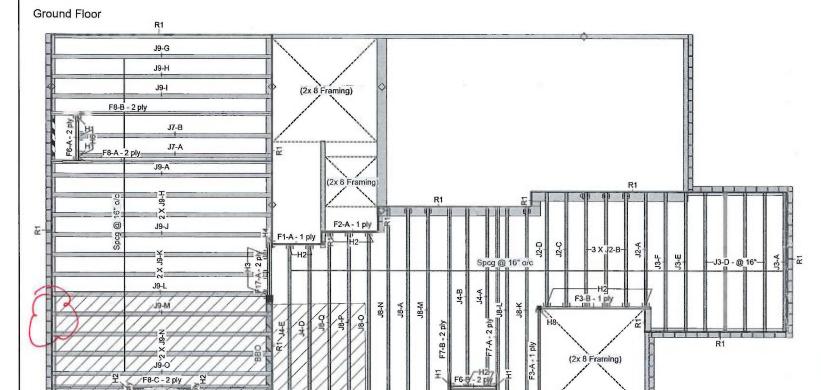
14 Anderson Blvd

Stouffville, Ontario Canada L4A 7X4 905-642-4400

**Kott Lumber Company** 

D:\Users\rochavillo\WORK FROM HOME\GREENPARK\MINNISALE HOMES\HEMLOCK 4\HEMLOCK 4-1 \FLOOR\REV\HEMLOCK 4-1.isl

**RCO** 



Engineered floor joists shall be installed in accordance with the supplier's layout and fications forming part of the permit drawing

CITY OF BRAMPTON BUILDING DIVISION REVIEWED

JAN 05 2019

MARY FRENETTE

All work shall conform to the Ontario Building Code O. Reg. 332/12 as amende

Legend

Load from Above Wall Wall Opening Norbord Rimboard Plus 1.125 X 9.5 NJ 9.5 NJ60U 9.5 NJH 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9.5

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -14056-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

# THIS CERTIFICATION IS TO CONFIRM THAT:

- 1. THE LOADS USED IN THE CALCULATION OF THE ATTACHED APPROVED COMPONENTS CONFORM TO THE FLOOR ASSEMBLY SHOWN ON THIS LAYOUT.
- 2. THE FLOOR JOISTS COMPLY WITH THE NASCOR SPAN TABLE FOR THE LOADS AND SPACING SHOWN ON THIS LAYOUT.

THE FLOOR SYSTEM MUST BE ASSEMBLED IN ACCORDANCE TO THE NASCOR SPECIFIER GUIDE. MULTI-PLY MEMBERS MUST BE ATTACHED TOGETHER AS PER THE INCLUDED MULTIPLE MEMBER CONNECTION DETAIL.

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.



REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

READ ALL NOTES ON THIS PAGE AND ON ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT

**CONTAINS SPECIFICATIONS AND CRITERIA** USED IN THE DESIGN OF THIS COMPONENT.

Pcs Length Label Description Width Depth Qty Plies F3 1.75 9.5 Forex 2.0E-3000Fb LVL F2 6-0-0 Forex 1.75 9.5 2.0E-3000Fb LVL F17 1.75 9.5 4-0-0 2.0E-3000Fb LVL 4-0-0 1.75 9.5 Forex 2.0E-3000Fb LVL Joist (Flush) Label Description Width Depth Qty Plies Pcs Length F8 N.I 1.5 9.5 3 2 6 16-0-0 F7 NJ 1.5 9.5 4 14-0-0 F6 NJ 9.5 4 4-0-0 1.5 2 2 F5 NJ 1.5 9.5 4 2-0-0 J9 NJ60U 3.5 9.5 14 16-0-0 J7 NJ60U 3.5 9.5 2 14-0-0 J8 NJH 2.5 9.5 14-0-0 J4 NJH 2.5 9.5 4 12-0-0 J3 NJH 2.5 9.5 7 10-0-0 J2 NJH 2.5 9.5 8-0-0 6 J1 NJH 2.5 9.5 2 6-0-0 Rim Board Label Description Pcs Length Width Depth Qty Plies Norbord Rimboard 1.125 9.5 13 Plus 1.125 X 9.5

Hanger

Ground Floor LVL/LSL (Flush)

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	6	LT2-159			4 10dx1 1/2	2 10dx1 1/2
H2	15	LT259			4 10dx1 1/2	2 10dx1 1/2
НЗ	3	LT359			4 10d	2 10dx1 1/2
H4	1	HUCQ1.81/9- SDS				
H6	2	MIT49.5			4 10dx1 1/2	4 10dx1 1/2
H8	1	L90				

- Framer to verify dimensions on the architectural drawings.
- . Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.
- . Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls. . Install single-ply flush window header along inside face of rimboard/rimjoist.
- . Refer to Nascor specifier guide for installation works.
- . 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
- Load transfer blocks to be installed under all point loads.
- . It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

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

Rim parallel to joists: 1-1/8" rimboard with 2"x 4" 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 represents ceramic tiled floor with an additional dead load

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

# ARCHITECTURAL DRAWINGS

VA3 DESIGN 255 Consumers Rd., Suite 120, Toronto, ON Date: Rev.6; July 23,2018 Project No: 18012

Ground Floor Design Method LSD Building Code NBCC 2010 / OBC 2012 Floor Loads 40 Live 15 Dead Deflection Joist LL Span L/ 480 TL Span L/ 360 LL Cant 2L/ 480 TL Cant 2L/ 360 **Deflection Girder** LL Span L/ 360 TL Span L/ 240 LL Cant 2L/ 480 TL Cant 2L/ 360 Decking Deck SPF Plywood Thickness 3/4" Fastener Nailed & Glued Vibration

15 36L

18-411409-000-00 RR KOT



Version 18.40.162 Powered by iStruct™

This layout is to be used as an installation guide only. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them

Layout Name HEMLOCK 4-1 & 4-2 Design Method

Revised August 13, 2018

Builder GREENPARK Sales Rep

RM

Designer RCO Shipping Project Builder's Project

**Kott Lumber Company** 

D:\Users\rochavillo\WORK FROM HOME\GREENPARK\MINNISALE-HOMES\HEMLOCK 4\HEMLOCK 4-\ \FLOOR\REV\HEMLOCK 4-1.isl

Building Code NBCC 2010 / OBC

LSD

2012

40

15

480

360

480

360

360

240 480

360

SPF Plywood

Nailed & Glued

14 Anderson Blvd Stouffville, Ontario Canada L4A 7X4 905-642-4400 Job Path

Second Floor

Design Method

**Deflection Joist** 

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/ Decking

Thickness

Fastener Vibration

Deck

**Deflection Girder** 

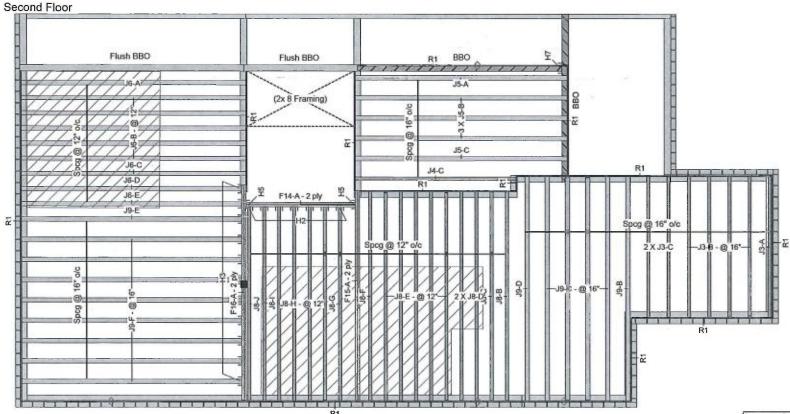
Floor

Loads

Live

Dead

Description
MINNISALE HOMES
BRAMPTON, ONT.



Legend ♦

Load from Above Wall Norbord Rimboard Plus 1.125 X 9.5 NJ40U 9.5 NJ60U 9.5 NJH 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9.5

to construction

VA3 DESIGN

Project No: 18012

ARCHITECTURAL DRAWINGS:

255 Consumers Rd., Suite 120, Toronto, ON Date: Rev.2; May 18,2018

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -14056-R
- 4. CAN/CSA-O86-09
- 5. CCMC -12787-R APA PR-L310(C)

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REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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

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

F16												
Label   Description   Width   Depth   Qty   Plies   Pcs   Length	Second	Floor										
Label   Description   Width   Depth   Qty   Plies   Pcs   Length			h)									
2.0E-3000Fb LVL				Wic	lth	De	pth	(	Qty	Plies	Pcs	Length
Forex	F16		000Fb LVL	1.	75		9.5		1	2	2	16-0-0
F14 Forex 2.0E-3000Fb LVL	F15	Forex		1.	75		9.5		1	2	2	14-0-0
Joist (Flush)	F14	Forex		1.	75		9.5		1	2	2	8-0-0
Label   Description   Width   Depth   Qty   Plies   Pcs   Length   J6   NJ40U   3.5   9.5   9.5   9.16-0-0	Joist (						1					No.
J6 NJ40U 3.5 9.5 9.5 14-0-0  J5 NJ40U 3.5 9.5 5 14-0-0  J9 NJ60U 3.5 9.5 5 15 14-0-0  J8 NJH 2.5 9.5 17 14-0-0  J4 NJH 2.5 9.5 17 14-0-0  J3 NJH 2.5 9.5 17 10-0-0  Rim Board  Label Description Width Depth Qty Plies Pcs Length Plus 1.125 X 9.5 13 12  Hanger  Beam/Girder Supported Member  R1 Norbord Rimboard 1.125 9.5 13 13 12  Plus 1.125 X 9.5 13 13 12  Hanger  Beam/Girder Supported Member  Label Pcs Description Skew Slope fasteners fasteners  H2 7 L1259 4 10dx 11/2 2 10dx 11/2  H3 11 L7359 4 10d 2 10dx 11/2  H3 11 L7359 4 4 10d 2 10dx 11/2  H5 2 HGUS410 466 16d 16 16d  H7 1 Unknown Hanger  NOTES:  1. Framer 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" ofc under parallel non-load bearing walls. 4. Install single-ply flush window header along inside face of rimboard/rimjoist. 5. Refer to Nascor specifier guide for installation works. 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. Refer to Multiple Member Connection Detail to ply to ply nailing or botting requirements. Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than tim 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 bractural elements supporting the floor system such as beams, walls, columns, and foundation walls and footings including anchorage of components and bractural elements supporting the floor system such as beams, walls, columns, and foundation walls and footings including anchorage of components and bractural elements			-	Wic	lth	De	pth	(	Otv	Plies	Pcs	Length
J5 NJ40U 3.5 9.5 15 14-0-0  J8 NJH 2.5 9.5 17 14-0-0  J8 NJH 2.5 9.5 17 14-0-0  Rim Board  Label Description Width Depth Qty Plies Pcs Length R1 Norbord Rimboard Plus 1.125 9.5 13 12  Hanger  Beam/Girder Supported Member  Label Pcs Description Skew Slope fasteners fasteners  H2 7 LT259 410dx 11/2 210dx 11/2  H3 11 LT359 410dx 210dx 11/2  H5 2 HGUS410 46 16d 16 16d 16 16d  H7 1 Unknown Hanger  NOTES:  1. Framer 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" ofc under parallel non-load bearing walls. 4. Install single-ply flush window header along inside face of rimboard/rimjoist. 5. Refer to Nascor specifier guide for installation works. 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.  Refer to Multiple Member Connection Detail to ply to ply nailing or bootting requirements.  Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than tim 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 bracking for lateral stability are the responsibility of Others.  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			Puon			_	•		٠,٠,	1 1100		
J9 NJ60U 3.5 9.5 15 16-0-0 J8 NJH 2.5 9.5 17 14-0-0 J4 NJH 2.5 9.5 17 10-0-0 RIM BOARD RIM BOARD RIM DOSCRIPTION Width Depth Qty Plies PCs Length R1 Norbord Rimboard 1.125 9.5 13 13 12  Hanger    Beam/Girder   Supported Member					_		_					
J8 NJH						_						
All NJH 2.5 9.5 1 1 12-0-0  RIM Board  Label Description Width Depth Qty Plies Pcs Length R1 Norbord Rimboard 1.125 9.5 1 13 12  Hanger  Beam/Girder Supported Member  Label Pcs Description Skew Slope fasteners fasteners H2 7 LT259 4 10dx1 1/2 2 10dx1 1/2 H3 11 LT359 4 10dx 11/2 2 10dx1 1/2 H5 2 HGUS410 46 16d 16 16d H7 1 Unknown Hanger  NOTES:  1. Framer 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-load 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. 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.  Refer to Multiple Member Connection Detail to ply to ply nailing or bolting requirements.  Rim parallel to joists: 1-1/8" rimboard with 2"x 4" 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 represents ceramic tiled floor with an additional dead load of 5 PSF  The framing shown on this layout may deviate from the architectural												
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Rim Board  Label Description Width Depth Qty Plies Pcs Length R1 Norbord Rimboard Plus 1.125 X 9.5							_					
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R1 Norbord Rimboard Plus 1.125 X 9.5			ntion	Wic	lth	De	nth		)tv	Plies	Pre	Length
Hanger  Label Pcs Description Skew Slope fasteners fasteners  H2 7 LT259 4 10dxt 1/2 2 10dxt 1/2  H3 11 LT359 4 10d 2 10dxt 1/2  H5 2 HGUS410 46 16d 16 16d  H7 1 Unknown Hanger  NOTES:  1. Framer 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-load bearing walls.  4. Install single-ply flush window header along inside face of rimboard/rimjoist.  5. Refer to Nascor specifier guide for installation works.  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.  Refer to Multiple Member Connection Detail to ply to ply nailing or booting requirements.  Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than find 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 represents ceramic tiled floor with an additional dead load of 5 PSF  The framing shown on this layout may deviate from the architectural		Norbon	d Rimboard			-	_		ary .	riics		12
Label Pcs Description Skew Slope fasteners fasteners H2 7 LT259 4 10dx1 1/2 2 10dx1 1/2 H3 11 LT359 4 10d 2 10dx1 1/2 H5 2 HGUS410 46 16d 16 16d H7 1 Unknown Hanger  NOTES:  1. Framer 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-load bearing walls. 4. Install single-ply flush window header along inside face of rimboard/rimjoist. 5. Refer to Nascor specifier guide for installation works. 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.  Refer to Multiple Member Connection Detail to ply to ply nailing or bootting requirements.  Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than fim 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 represents ceramic tiled floor with an additional dead load of 5 PSF  The framing shown on this layout may deviate from the architectural	Hanne		12070.0	-								8
Label   Pcs   Description   Skew   Slope   fasteners   fasteners	lango								Bea	am/Girde		
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**KOTT** 

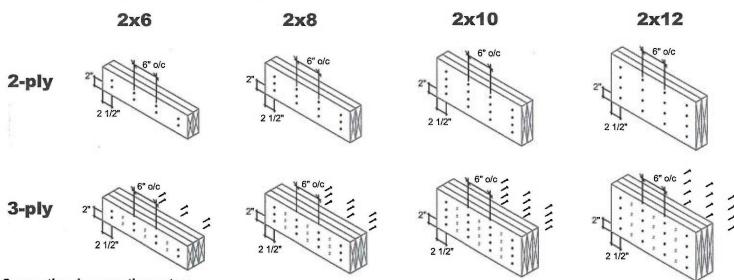
# IPLE MEMBER CONNECTIONS

GREENPARK-MINNISALE HOMES

MODEL HEMLOCK 4-1 & 4-2

-LET 36L EL. 2

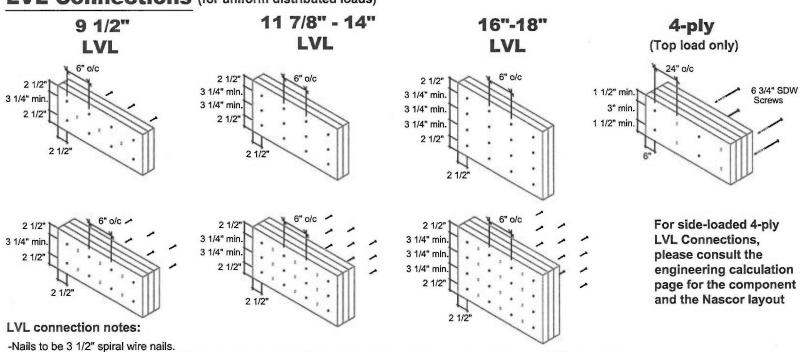
# Conventional Connections (for uniform distributed loads)



# Conventional connection notes:

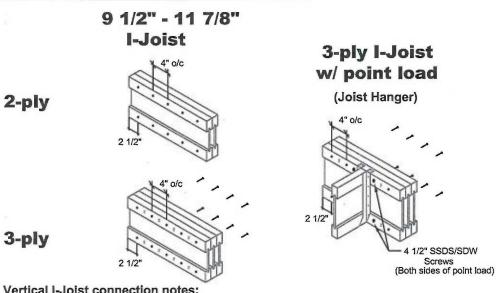
- -Nails to be 3" 10d spiral wire nails.
- -Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

# LVL Connections (for uniform distributed loads)



- -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.



**MULTI-PLY** CONNECTION **DETAILS** 

Scale: NTS

Date: November 30, 2016

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

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

GREENPARK-MINNISALE HOMES-MODEL HEMLOCK 4-1 & 4-2

REVISION 2009-10-09

Planes and all nates aview to install

# 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 <u>only</u> 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 <a href="http://www.nascor.ca">http://www.nascor.ca</a>.

# 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 preauthorization.



# JLTIPLE MEMBER CONNECTIONS

GREENPARK-MINNISALE HOMES MODEL HEMLOCK 4-1 & 4-2

# Conventional Connections (for uniform distributed loads)

2x10 2x12 2x6 2x8 2-ply 3-ply

### 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)

11 7/8" - 14" 16"-18" 9 1/2" 4-ply LVL LVL (Top load only) 3 1/4" min 2 1/2 For side-loaded 4-ply LVL Connections, 3 1/4" mln please consult the engineering calculation 3 1/4" mlr page for the component and the Nascor layout 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)

9 1/2" - 11 7/8" **I-Joist** 3-ply I-Joist w/ point load (Joist Hanger) 2-ply 3-ply 4 1/2" SSDS/SDW (Both sides of point load)

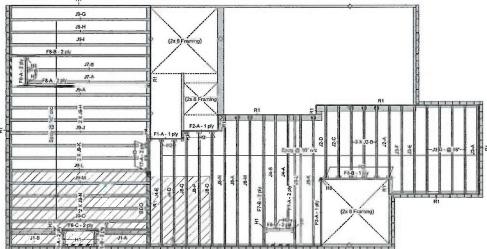
### Vertical I-Joist connection notes:

- -Nails to be 3" spiral wire nails.
- -Nalls to be located at centre of top and bottom flanges. Start all nalls 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.

MULTI -PLY CONNECTION DETAILS

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

Ground	Floor
H	



Legend



Load from Above Wall Opening Norbord Rimboard Plus 1.125 X 9.5 NJ 9.5 NJ60U 9.5 NJH 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9 5

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -14056-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

THIS CERTIFICATION IS TO CONFIRM THAT:

1. THE LOADS USED IN THE CALCULATION OF THE ATTACHED APPROVED COMPONENTS CONFORM TO THE FLOOR ASSEMBLY SHOWN ON THIS LAYOUT.

2. THE FLOOR JOISTS COMPLY WITH THE NASCOR SPAN TABLE FOR THE LOADS AND SPACING SHOWN ON THIS LAYOUT.

THE FLOOR SYSTEM MUST BE ASSEMBLED IN ACCORDANCE TO THE NASCOR SPECIFIER GUIDE. MULTI-PLY MEMBERS MUST BE ATTACHED TOGETHER AS PER THE INCLUDED MULTIPLE MEMBER CONNECTION DETAIL.

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.



REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F3	Forex 2.0E-3000Fb LVL	1.75	9.5			2	8-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5			1	6-0-0
F17	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			1	4-0-0
Joist (	Flush)		0.00				
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F8	NJ	1.5	9.5	3	2	6	16-0-0
F7	NJ	1.5	9.5	2	2	4	14-0-0
F6	NJ	15	9.5	2	2	4	4-0-0
F5	NJ	15	9.5	2	2	4	2-0-0
19	NJ60U	3.5	9.5			14	16-0-0
J7	NJ60Ú	3.5	9.5			2	14-0-0
J8	NJH	2.5	9.5			8	14-0-0
J4	NJH	2.5	9.5			4	12-0-0
J3	NJH	2.5	9.5			7	10-0-0
J2	NJH	2.5	9.5			6	8-0-0
J1	NJH	2.5	9.5			2	6-0-0
Rim Bo	ard						
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			13	12

Skew Slope

Live

Dead

Deflection Joist

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

LL Span L/

TL Span L

LL Cant 2L/ TL Cant 2L/

Decking

Thickness

Fastener Vibration

Deck

Deflection Girder

H6 2 MIT49.5 H8 1 L90 NOTES:

Label Pcs Description

15 LT259 3 LT359 1 HUCQ1.81/9-SDS

H1 6 LT2-159

Hanger

H2

нз

164

Framer to verify dimensions on the architectural drawings.

Double joist only require filler/backer ply when supporting another member using a face-mounted hanger.

answer memora usery a recu-movemen namper.

3. Install 2x4 blocking @ 24\* o/o under parallel non-load bearing walls.

4. Install single-ply flush window header along inside face of rimboard/rimjoist.

rimboard/impoist.

Refer to Nascor specifier guide for installation works.

Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding.

two levels foor or roof.

7. Load transfer blocks to be installed under all point loads.

8. It sha't be the framer's responsibility that foor joists and beams are

fastened as per the hanger manufacturer's standards.

Refer to Multiple Member Connection Detail to ply to ply nailing or

Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than rim depth @ 16" old). 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 represents ceramic filed floor with an additional dead load

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

ARCHITECTURAL DRAWINGS:

VA3 DESIGN VA3 DESIGN 255 Consumers Rd., Suite 120, Toronto, ON Date: Rev.6; July 23,2018 Project No: 18012 Model: Hemlock 4

ty	Piles	Pcs	Length	
		2	8-0-0	117100011
		1	6-0-0	Layout Name HEMLOCK 4-1 & 4-2
1	2	2	4-0-0	Design Method
		1	4-0-0	Description MINNISALE HOMES
ty	Plies	Pcs	Length	BRAMPTON, ONT.
3	2	6	16-0-0	Revised
2	2	4	14-0-0	August 13, 2018
2	2	4	4-0-0	Builder
2	2	4	2-0-0	GREENPARK
		14	16-0-0	
		2	14-0-0	Sales Rep
		8	14-0-0	RM
		4	12-0-0	Designer
		7	10-0-0	RCO
		6	8-0-0	Shipping
		2	6-0-0	Project
ty	Plies	Pcs	Length	Builder's Project
		13	12	Kott Lumber Company
				14 Anderson Blvd
				Stouffville, Ontario
Bea	am/Girder		ported	Canada
			ember	14A7X4
	steners		teners	905-642-4400
	10dx1 1/2		Odx1 1/2	Job Path
4	10dx1 1/2		Odx1 1/2	
	4 10d	2 1	0dx1 1/2	D.\Users\rochay.tio\WORK FROM HOMF\GREENPARK\/\UNNISALE
				HOMESHEMLOCK 4-HEMLOCK 4-1-
4	10dx1 1/2	4 1	3dx1 1/2	Ground Floor
				Design Method LSD Building Code NBCC 2010 / OBC
awir	nas.			2012
porti				Floor
	-			Loads
ad b	earing wall	S.		10

40

15

480

360

480

360

360

240

480

360

SPF Plywood

Nailed & Glued



Project:

Address:

**GREENPARK** 

Date:

8/13/2018

Page 1 of 2

Designer: RCO

Job Name: HEMLOCK 4-1

Project #:

Forex 2.0E-3000Fb LVL F17-A

1.750" X 9.500"

Floor (Residential)

Not Checked

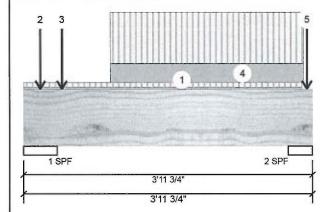
NBCC 2010 / OBC 2012

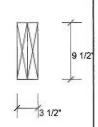
LSD

No Not Checked 2-Ply - PASSED

Brg

Level: Ground Floor





Wind

Member In	formation
-----------	-----------

Type:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal

Application: Design Method: **Building Code:** Load Sharing: Deck:

40 PSF 15 PSF

# Unfactored Reactions UNPATTERNED lb (Uplift)

1	3366	1381	0	0
2	1027	414	0	0

Dead

Snow

# **Bearings and Factored Reactions**

Live

Ī	Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
l	1-SPF	5.500"	62%	1726 / 5049	6775	L	1.25D+1.5L
ł	2 - SPF	4.000"	24%	517 / 1541	2059	L	1.25D+1.5L

**Analysis Results** 

General Load

Floor Live:

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	831 ft-lb	2'1 1/16"	22724 ft-lb	0.037 (4%)	1.25D+1.5L	L
Unbraced	831 ft-lb	2'1 1/16"	22724 ft-lb	0.037 (4%)	1.25D+1.5L	L
Shear	1816 lb	1'2 1/4"	9277 lb	0.196 (20%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/32006)	2' 13/16"	0.110 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/12992)	2' 7/8"	0.110 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.004 (L/9241)	2' 7/8"	0.166 (L/240)	0.030 (3%)	D+L	L

Vibration:

**Design Notes** 

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.

Part. Uniform

- 5 Top braced at bearings.

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



	7 Lateral slenderness ratio based on full section width.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-10-0	(Span)1-4-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-2-12		Тор	1074 lb	2663 lb	0 lb	0 lb	C2
3	Point	0-6-5		Far Face	173 lb	386 lb	0 lb	0 lb	J9

Far Face

Continued on page 2...

Calculated Structured Designs is responsible only of the structural adequacy of this component based on his design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

1-2-5 to 3-10-5

andling & Installation

LVL beams must not be cut or drilled

Refer to manufacturer's product information regarding installation requirements, multi-ply feathering feathering feathers, beam strength values, and code approvals

Damaged Beams must not be used

Design assumes top edge is laterally restrained

Provide lateral support at bearing points to avoid lateral displacement and rotation

290 PLF

109 PLF

Manufacturer Info Forex APA: PR-L318

0 PLF

0 PLF

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





GREENPARK

Project:

Address:

Date:

8/13/2018

RCO

Designer: Job Name: HEMLOCK 4-1

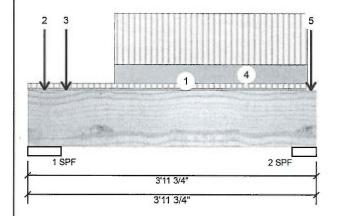
Project #:

Forex 2.0E-3000Fb LVL F17-A

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor



..Continued from page 1

ID Load Type 5 Point

Self Weight

3-10-14

Location Trib Width Side

Near Face

Dead 188 lb 8 PLF

Live 468 lb Snow

Wind Comments

0 lb 0 lb F1

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

- Handling & Installation
- andling & Installation
  LVL beams must not be cut or drilled
  Refer to manufacturer's product information
  regarding installation requirements, multi-pit
  fastening details, beam strength values, and code
  approvals
  Damaged Beams must not be used
  Design assumes top edge is laterally restreted
  Provide lateral support at bearing points to avoid
  lateral displacement and rotation

This design is valid until 7/10/2021

Manufacturer Info Forex

APA: PR-L318



GREENPARK

Project: Address:

Date:

8/13/2018

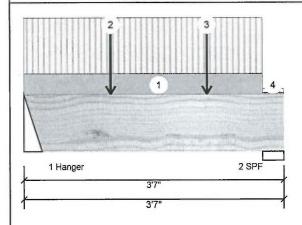
RCO Designer:

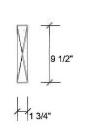
Job Name: HEMLOCK 4-1

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED Level: Ground Floor





Member Infor	mation			Unfacto	red Reac	tions U	NPATTERN	ED lb (	Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Sno	W	Wind
Plies:	1	Design Method:	LSD	1	701		283		0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	684		278		0	0
Deflection LL:	360	Load Sharing:	No	"						
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	s and Fac	tored	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - Hanger	3.000"	36%	353 / 1052	1405	L	1.25D+1.5L
Analysis Resu	ts			2-SPF	3,500"	36%	348 / 1027	1374	L	1.25D+1.5L

Analysis Kes	uits					
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1147 ft-lb	1'8 7/16"	11362 ft-lb	0.101 (10%)	1.25D+1.5L	L
Unbraced	1147 ft-lb	1'8 7/16"	9778 ft-lb	0.117 (12%)	1.25D+1.5L	L
Shear	1015 lb	2'6 3/4"	4638 lb	0.219 (22%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/11424)	1'9 1/16"	0.106 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.008 (L/4633)	1'9 1/16"	0.106 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.012 (L/3296)	1'9 1/16"	0.158 (L/240)	0.070 (7%)	D+L	L

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL



4 Bottom	braced at bearings.					POINT LOAD	S OVER BE	ARINGS.	
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-3-8		Тор	90 PLF	240 PLF	0 PLF	0 PLF	
2	Point	1-2-6		Near Face	123 lb	292 lb	0 lb	0 lb	J4
3	Point	2-6-6		Near Face	126 lb	299 lb	0 lb	0 lb	J4
4	Tie-In	3-3-8 to 3-7-0	(Span)0-10-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	ID 1 2	1 Part. Uniform 2 Point 3 Point	ID         Load Type         Location           1         Part. Uniform         0-0-0 to 3-3-8           2         Point         1-2-6           3         Point         2-6-6	ID         Load Type         Location         Trib Width           1         Part. Uniform         0-0-0 to 3-3-8           2         Point         1-2-6           3         Point         2-6-6	ID         Load Type         Location         Trib Width         Side           1         Part. Uniform         0-0-0 to 3-3-8         Top           2         Point         1-2-6         Near Face           3         Point         2-6-6         Near Face	ID         Load Type         Location         Trib Width         Side         Dead           1         Part. Uniform         0-0-0 to 3-3-8         Top         90 PLF           2         Point         1-2-6         Near Face         123 lb           3         Point         2-6-6         Near Face         126 lb	ID         Load Type         Location         Trib Width         Side         Dead         Live           1         Part. Uniform         0-0-0 to 3-3-8         Top         90 PLF         240 PLF           2         Point         1-2-6         Near Face         123 lb         292 lb           3         Point         2-6-6         Near Face         126 lb         299 lb	ID         Load Type         Location         Trib Width         Side         Dead         Live         Snow           1         Part. Uniform         0-0-0 to 3-3-8         Top         90 PLF         240 PLF         0 PLF           2         Point         1-2-6         Near Face         123 lb         292 lb         0 lb           3         Point         2-6-6         Near Face         126 lb         299 lb         0 lb	ID         Load Type         Location         Trib Width         Side         Dead         Live         Snow         Wind           1         Part. Uniform         0-0-0 to 3-3-8         Top         90 PLF         240 PLF         0 PLF         0 PLF           2         Point         1-2-6         Near Face         123 lb         292 lb         0 lb         0 lb           3         Point         2-6-6         Near Face         126 lb         299 lb         0 lb         0 lb

q	te	No
	te:	NC

**Design Notes** 

1 Fill all hanger nailing holes.

3 Top braced at bearings.

2 Girders are designed to be supported on the bottom edge only.

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to werify the dimensions and loads. Lumber

Handling & Installation

- I.U.I. beam must not be cut or drilled
   Refer to manufacturer's product information regerding installation requirements, multi-ply fastening details, beam strength values, and code approvals
   Demaged Beams must not be used
- Daniga assumes top edge is laterally restrained
  Provide lateral support at bearing points to avoid
  lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

4 PLF

Manufacturer Info Forex APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400



Self Weight

Page 1 of 1



Client:

**GREENPARK** 

Project: Address:

Date: 8/13/2018

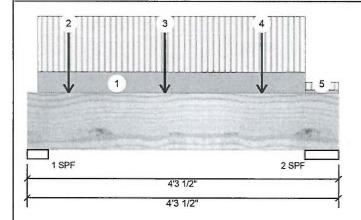
Designer: RCO

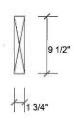
Job Name: HEMLOCK 4-1

Project #:

Forex 2.0E-3000Fb LVL F2-A

1.750" X 9.500" - PASSED Level: Ground Floor





Wiember Inform	nation
Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF

15 PSF

Floor (Residential) Application: Design Method: LSD NBCC 2010 / OBC 2012 Building Code:

Load Sharing: Deck: Not Checked Vibration: Not Checked

Unfactored Rea	actions UNPAT	TERNED IL	(Uplift)
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Brg	Live	Dead	Snow	Wind
1	970	391	0	0
2	881	350	0	0

# **Bearings and Factored Reactions**

I	Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
I	1-SPF	3.500"	52%	489 / 1456	1945	L	1.25D+1.5L
1	2-SPF	5.500"	30%	437 / 1322	1759	L	1.25D+1.5L

Analysis Results

Dead:

	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	1695 ft-lb	1'10 7/8"	11362 ft-lb	0.149 (15%)	1.25D+1.5L	L
	Unbraced	1695 ft-lb	1'10 7/8"	9238 ft-lb	0.184 (18%)	1.25D+1.5L	L
	Shear	1527 lb	1' 1/4"	4638 lb	0.329 (33%)	1.25D+1.5L	L
	Perm Defl in.	0.006 (L/7995)	1'11 1/4"	0.122 (L/360)	0.050 (5%)	D	Uniform
	LL Defl inch	0.014 (L/3200)	1'11 7/16"	0.122 (L/360)	0.110 (11%)	L	L
	TL Defl inch	0.019 (L/2285)	1'11 7/16"	0.183 (L/240)	0.110 (11%)	D+L	L
-							

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



# **Design Notes**

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Top braced at bearings.
- 3 Bottom braced at bearings

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-1-12 to 3-10-0		Тор .	90 PLF	240 PLF	0 PLF	0 PLF	
2	Point	0-6-14		Near Face	128 lb	307 lb	0 lb	0 lb	J8
3	Point	1-10-14		Near Face	134 lb	322 lb	0 lb	0 lb	J8
4	Point	3-2-14		Near Face	125 lb	322 lb	0 lb	0 lb	J8
5	Tie-In	3-10-0 to 4-3-8	(Span)1-8-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

- and ling & InStallation
  LVL beams must not be cut or drilled
  Refer to manufacturer's product information
  regarding installation requirements, multi-ply
  featening details, beam strength values, and code
  approvals
  Design assumes top edge is leterally restrained
  Provide lateral support at bearing points to avoid
  lateral displacement and rotation

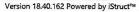
For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info APA: PR-L318









Page 1 of 1



Client: Project:

Address:

GREENPARK

Date:

8/13/2018

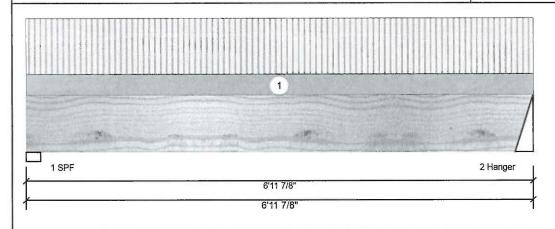
RCO Designer: Job Name: HEMLOCK 4-1

Project #:

Forex 2.0E-3000Fb LVL F3-A

1.750" X 9.500" - PASSED

Level: Ground Floor



Floor (Residential)

Not Checked

NBCC 2010 / OBC 2012

LSD

No Not Checked Brg

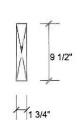
1

2

2 -Hanger

Bearing Length 1-SPF 2.375"

3.000"



Wind

0

0

Ld. Comb.

1.25D+1.5L

1.25D+1.5L

Member Infor	mation
Туре:	Girder
Plies:	1
Moisture Conditio	n: Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	
Floor Live:	40 PSF
Dead:	15 PSF
Analysis Resul	ts
Analysis A	ctual
Moment 20	06 ft-lb
Unbraced 20	06 ft-lb
Shear 94	lib

Analysis Res	ults						-
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case	-
Moment	206 ft-lb	3'5 5/8"	11362 ft-lb	0.018 (2%)	1.25D+1.5L	L	
Unbraced	206 ft-lb	3'5 5/8"	5592 ft-lb	0.037 (4%)	1.25D+1.5L	L	
Shear	94 lb	6' 1/8"	4638 lb	0.020 (2%)	1.25D+1.5L	L	
Perm Defl in.	0.002 (L/37066)	3'5 5/8"	0.222 (L/360)	0.010 (1%)	D	Uniform	
LL Defl inch	0.004 (L/22480)	3'5 5/8"	0.222 (L/360)	0.020 (2%)	L	L	
TL Defl inch	0.006 (L/13993)	3'5 5/8"	0.333 (L/240)	0.020 (2%)	D+L	L	

Application:

Design Method:

**Building Code:** 

Load Sharing:

Deck:

Vibration:

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

**Unfactored Reactions UNPATTERNED lb (Uplift)** 

57

58

**Bearings and Factored Reactions** 

Dead

Cap. React D/L lb

43 / 86

44 / 87

5%

3%

35

35

Snow

0

0

Total Ld. Case

129 L

131 1

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



# **Design Notes**

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.

4 DOLLOW	braced at bearings.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 6-11-14	(Span)0-9-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design critieria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

chemicals

Handling & Installation

LVL beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, multi-ply
fastening details, beam strength values, and code
appropriate.

tastening details, beam strength values, and code approvals
Damaged Beams must not be used
Design assumes top adge is laterally restrained
Provide lateral support at bearing points to avoid lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

Forex APA: PR-L318

Manufacturer Info

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





GREENPARK

Project:

Date:

8/13/2018

RCO Designer:

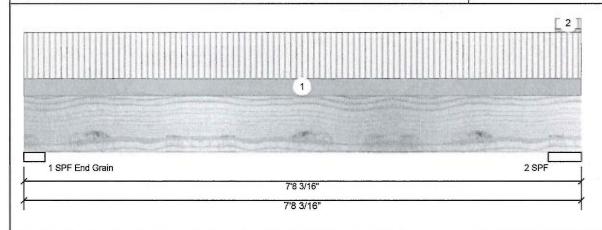
Job Name: HEMLOCK 4-1

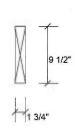
Project #:

Forex 2.0E-3000Fb LVL F3-B

1.750" X 9.500" - PASSED

Level: Ground Floor





Type:	Girder
Plies:	1
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal

Member Information

Application: Design Method: Building Code: Load Sharing:

Deck:

Vibration:

Floor (Residential) LSD

NBCC 2010 / OBC 2012 No Not Checked

Not Checked

Unfactored	Reactions	UNPATTERNED	lb (Uplift)
D	Live	Dood	Cnow

Brg	Live	Dead	Snow	Wind
1	567	229	0	0
2	604	243	0	0

### Floor Live: 40 PSF Dead: **15 PSF**

**Bearings and Factored Reactions** 

Bearing Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF 3.500" End Grain	25%	286 / 851	1137	L	1.25D+1.5L	
2-SPF 5.500"	20%	304 / 907	1210	L	1.25D+1.5L	

**Analysis Results** Analysis Actual Location Allowed Capacity Comb. Case 1884 ft-lb 3'9 1/8" 11362 ft-lb 0.166 (17%) 1.25D+1.5L L Moment 1884 ft-lb Unbraced 3'9 1/8" 5281 ft-lb 0.357 (36%) 1.25D+1.5L L 1064 lb 1' 1/4" 4638 lb 0.229 (23%) 1.25D+1.5L L Shear Perm Defl in. 0.016 (L/5227) 3'9 1/8" 0.235 (L/360) 0.070 (7%) D Uniform LL Defl inch 0.040 (L/2105) 3'9 1/8" 0.235 (L/360) 0.170 (17%) L TL Defl inch 0.056 (L/1501) 3'9 1/8" 0.353 (L/240) 0.160 (16%) D+L

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



### **Design Notes**

General Load

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Top braced at bearings
- 3 Bottom braced at bearings

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 7-8-3		Far Face	57 PLF	151 PLF	0 PLF	0 PLF	
2	Tie-In	7-3-13 to 7-8-3	(Span)1-7-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Notes Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design critieria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

amuling a Installation.

LVL beams must not be cut or drilled.

Refer to manufacturier's product information regarding installation requirements, multi-ply fastening details, beam strength velues, and code approvals.

Demaged Beams must not be used.

Design assumes top edge is laterally restrained.

Provide lateral support at bearing points to avoid lateral displacement and rotation.

6. For flat roofs provide proper drainage to prevent

Forex APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Manufacturer Info Canada L4A 7X4 905-642-4400





Client: **GREENPARK** 

Address:

Project:

Date:

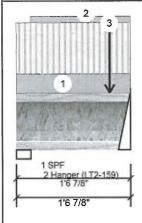
8/13/2018

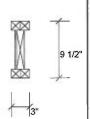
Designer: RCO Job Name: HEMLOCK 4-1

Project #:

2-Ply - PASSED 9.500" F5-A NJ

Level: Ground Floor





lember Inform	nation			Unfactored Reactions UNPATTERNED lb (Uplift)						
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	V	Wind
Plies:	2	Design Method:	LSD	1	65		31		0	0
Moisture Condition	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	134		66		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearing	s and Fac	tored I	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF	2.375"	5%	39 / 98	137	L	1.25D+1.5L
				2 -	2.000"	11%	82 / 201	283	L	1.25D+1.5L
Inalysis Result	nalysis Results			Hanger						

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	52 ft-lb	1' 1/16"	7340 ft-lb	0.007 (1%)	1.25D+1.5L	L
Unbraced	52 ft-lb	1' 1/16"	6912 ft-lb	0.008 (1%)	1.25D+1.5L	L
Shear	268 lb	1'5 5/8"	3080 lb	0.087 (9%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defi inch	0.000 (L/55254)	11 3/4"	0.044 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.000 (L/37041)	11 11/16"	0.067 (L/240)	0.010 (1%)	D+L	L

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



**Design Notes** 

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings.

ID	Load Type	Location	Trìb Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-2-6 to 1-6-14		Тор	8 PLF	0 PLF	0 PLF	0 PLF	
3	Point	1-3-7		Far Face	47 lb	97 lb	0 lb	0 lb	J1

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 Lioist not to be treated with fire retardant or corre

Handling & Installation

- Identified in Installation.

  Lolist flanges must not be cut or drilled.

  Refer to latest copy of the Light product information details for framing details, stiffener tables, web hole chart, bridging details, multi-lipy fastering details and handling/erection details.

  Demaged Lolists must not be used.

  Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
- Provide lateral support at bearing points to avoid lateral displacement and rotation
   Web stiffeness for point load as shown Minimum point load bearing length>= 3.5 Inches
   To first roofs provide proper drainage to prevent ponding

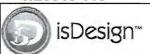
Manufacturer Info Nascor by Kott

Kott Lurnber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





F5-B



NJ

9.500"

Client:

**GREENPARK** 

2-Ply - PASSED

Project:

Address:

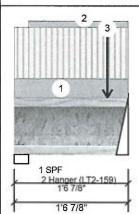
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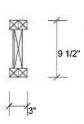
8/13/2018

RCO Job Name: HEMLOCK 4-1

Project #:

Level: Ground Floor





1.25D+1.5L

PROFESSIONAL CITY OF THE PROPERTY OF THE PROPE

Aug 18, 2018

Member Infor	mation			Unfactor	ed Reacti	ons UNPATTERN	ED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	65	31	0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	133	66	0	0
Deflection LL:	360	Load Sharing:	No	1 -				
Deflection TL:	240	Deck:	Not Checked					
Importance:	Normal	Vibration:	Not Checked					
General Load								
Floor Live:	40 PSF			Bearings	and Fact	ored Reactions		
Dead:	15 PSF			Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
				1 - SPF	2.375"	5% 39 / 98	136 L	1.25D+1.5L

L

2 -

Hanger

2,000"

Analysis Res	sults					
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	52 ft-lb	1' 1/16"	7340 ft-lb	0.007 (1%)	1.25D+1.5L	L
Unbraced	52 ft-lb	1' 1/16"	6912 ft-lb	0.008 (1%)	1.25D+1.5L	L
Shear	267 lb	1'5 5/8"	3080 lb	0.087 (9%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/55512)	11 11/16"	0.044 (L/360)	0.010 (1%)	L	L

11 11/16" 0.067 (L/240) 0.010 (1%) D+L

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

11%

82 / 199

281 L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



TL Defl inch 0.000

1 Fill all hanger nailing holes.

(L/37157)

- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.

6 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-6-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-2-7 to 1-6-14		Тор	8 PLF	0 PLF	0 PLF	0 PLF	
3	Point	1-3-7		Near Face	47 lb	96 lb	0 lb	0 lb	J1

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 Uplist not to be treated with fire retardant or corrosive

- and ling & Installation.

  Lioist flanger must not be cut or drilled.
  Refer to latest copy of the Lioist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details.

  Damaged Loists must not be used.
  Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeness for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info Nascor by Kott







**GREENPARK** 

Project: Address:

8/13/2018

RCO Designer:

Job Name: HEMLOCK 4-1

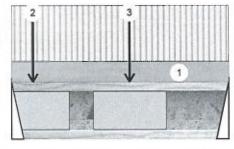
Project #:

Date:

NJ 9.500"

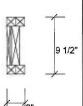
2-Ply - PASSED

Level: Ground Floor



1 Hanger (LT2-159)

2 Hanger (LT2-159)



Member Information

Girder Туре: Plies: 2 Moisture Condition: Dry Deflection LL: Deflection TL: 240 Importance: Normal General Load

40 PSF

Application: Floor (Residential) Design Method: **Building Code:** NBCC 2010 / OBC 2012 Load Sharing: Deck: Not Checked

Vibration: Not Checked

15 PSF Dead:

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	426	159	0	0
2	266	100	0	0

**Analysis Results** 

Floor Live:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	598 ft-lb	1'7 9/16"	7340 ft-lb	0.081 (8%)	1.25D+1.5L	L
Unbraced	598 ft-lb	1'7 9/16"	4678 ft-lb	0.128 (13%)	1.25D+1.5L	L
Shear	831 lb	1 1/4"	3080 lb	0.270 (27%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/19712)	1'7 9/16"	0.093 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/7401)	1'7 9/16"	0.093 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.006 (L/5381)	17 9/16"	0.140 (L/240)	0.040 (4%)	D+L	L

**Bearings and Factored Reactions** 

_							
Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - Hanger	2.000"	32%	199 / 639	838	L	1.25D+1.5L	
2 - Hanger	2.000"	20%	125 / 399	523	L	1.25D+1.5L	

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH POINT LOADS OVER BEARINGS.

BLOCK IS REQUIRED AT ALL



**Design Notes** 

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-3-9		Near Face	84 lb	225 lb	0 lb	0 lb	J7
3	Point	1-7-9		Near Face	136 lb	362 lb	0 lb	0 lb	J7

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 Upoist not to be treated with fire retardant or corrosiv

### chemicals

### Handling & Installation

andling & Installation
Librist flarges must not be cut or drilled
Refer to latest copy of the Lioist product information
details for framing details, stiffener tables, web hole
chart, bridging details, multi-ply testening details and
handling/erection details
Damaged Lioists must not be used

- Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
- Provide lateral support at bearing points to avoid lateral displacement and rotation
   Web stiffeners for polit load as shown Minimum point load bearing length>= 3.5 Inches
   For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario 905-642-4400







GREENPARK

Project: Address: Date:

8/13/2018

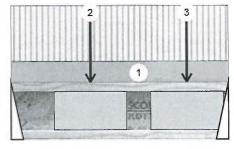
RCO Designer:

Job Name: HEMLOCK 4-1

Project #:

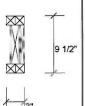
2-Ply - PASSED 9.500" NJ

Level: Ground Floor





2 Hanger (LT2-159)



Member Information

Type: Girder Plies: 2 Moisture Condition: Dry Deflection LL: Deflection TL: 240 Importance: Normal General Load

40 PSF

15 PSF

Application: Floor (Residential) Design Method: LSD

**Building Code:** NBCC 2010 / OBC 2012 No

Load Sharing: Deck:

Not Checked Not Checked Vibration:

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	283	106	0	0
2	353	132	0	0

**Analysis Results** 

Floor Live:

Dead:

Capacity Comb. Case Analysis Actual Location Allowed Moment 510 ft-lb 1'1 1/8" 7340 ft-lb 0.070 (7%) 1.25D+1.5L L Unbraced 510 ft-lb 1'1 1/8" 4678 ft-lb 0.109 (11%) 1.25D+1.5L L Shear 687 lb 2'10 3/4" 3080 lb 0.223 (22%) 1.25D+1.5L L Perm Defl in. 0.001 1'1 3/8" 0.093 (L/360) 0.020 (2%) D Uniform (L/23045) LL Defl inch 0.004 (L/8640) 1'1 3/8" 0.093 (L/360) 0.040 (4%) L L TL Defl inch 0.005 (L/6284) L 1'1 3/8" 0.140 (L/240) 0.040 (4%) D+L

Rearings and Factored Reactions

bearing.	s and rac	LOICUI	Cactions			
Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	21%	133 / 424	557	L	1.25D+1.5L
2 - Hanger	2.000"	27%	165 / 529	694	L	1.25D+1.5L

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top flange braced at bearings.
- 6 Bottom flange braced at bearings

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-0	(Span)1-8-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	1-1-2		Far Face	111 lb	296 lb	0 lb	0 lb	J4
3	Point	2-5-2		Far Face	88 lb	235 lb	0 lb	0 lb	J4

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 Uoist not to be treated with fire retardant or corrosive

# Handling & Installation

- Internation of the cut or drilled Refer to latest copy of the Light product information details for framing details, stiffener tables, web hole chart. bridging details, multi-ply fastening details and handling/erection details Demaged Lights must not be used
- Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Previde lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott





Page 1 of 1



Client:

Project: Address:

**GREENPARK** 

8/13/2018

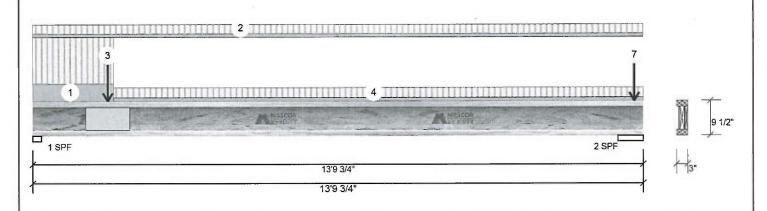
Designer: RCO Job Name: HEMLOCK 4-1

Project #:

Date:

2-Ply - PASSED NJ 9.500" F7-A

Level: Ground Floor



Vlember Info	rmation			Unfactore	d React	ions UNPATTERN	ED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	578	216	0	0
Moisture Conditi	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	423	219	0	0
Deflection LL:	360	Load Sharing:	No					
Deflection TL:	240	Deck:	Not Checked					
Importance:	Normal	Vibration:	Not Checked					
General Load								
Floor Live:	40 PSF			Bearings a	and Fact	ored Reactions		
Dead:	15 PSF			Bearing L	ength	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
		4		1-SPF 2	.375"	42% 270 / 867	1137 L	1.25D+1.5L
				2-SPF 6	.875"	29% 273 / 634	907 L	1.25D+1.5L

Analysis Results	Ana	lysis	Resu	ts
------------------	-----	-------	------	----

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1835 ft-lb	4'11 5/16"	7340 ft-lb	0.250 (25%)	1.25D+1.5L	L
Unbraced	1835 ft-lb	4'11 5/16"	1848 ft-lb	0.993 (99%)	1.25D+1.5L	L
Shear	1116 lb	1 5/8"	3080 lb	0.362 (36%)	1.25D+1.5L	L
Perm Defl in.	0.043 (L/3654)	6'3 1/2"	0.439 (L/360)	0.100 (10%)	D	Uniform
LL Defl inch	0.115 (L/1369)	6'3 1/2"	0.439 (L/360)	0.260 (26%)	L	L
TL Defl inch	0.159 (L/996)	6'3 1/2"	0.658 (L/240)	0.240 (24%)	D+L	L

**Design Notes** 

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 4'10" o.c.

5 Bottom flange braced at bearings.

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



O DOLLOIN	narige braces at bearing	ju.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	77-10-1
1	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Tie-In	0-0-0 to 13-9-12	(Span)0-7-10	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
3	Point	1-8-6		Far Face	132 lb	353 lb	0 lb	0 lb	F6	
4	Tie-In	1-9-14 to 13-9-12	(Span)0-8-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
5	Point	13-7-6		Тор	1 lb	3 lb	0 lb	0 lb	Ј8	
6	Point	13-7-6		Тор	76 lb	183 lb	0 lb	0 lb	J8	
7	Point	13-7-6		Тор	53 lb	0 lb	0 lb	0 lb	Wall Self Weight	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the lotended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 Upoist not to be treated with fire retardant or corresive

Handling & Installation

- Handling & Installation

  1. Joint flenges must not be cut or drilled

  2. Refer to latest copy of the IJoist product Information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fisterling details and handling/erection details

  3. Damaged Lolists must not be used

  4. Design assumes top flenge to be laterally restrained by attached sheathing or as specified in engineering notes.
- Provide lateral support at bearing points to avoid lateral displacement and rotation
   S Wab stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
   For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





**GREENPARK** 

Project:

Address:

Date:

8/13/2018

Designer: RCO

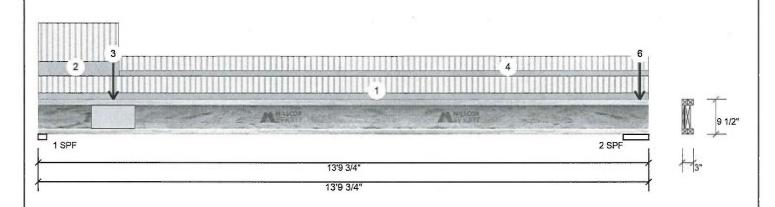
Job Name: HEMLOCK 4-1

Project #:

NJ 9.500" F7-B

2-Ply - PASSED

Level: Ground Floor



vlember Infor	mation			Unfactor	ed React	tions UNPATTERN	IED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	677	254	0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	783	414	0	O
Deflection LL:	360	Load Sharing:	No					
Deflection TL:	240	Deck:	Not Checked					
Importance:	Normal	Vibration:	Not Checked					
General Load		*						
Floor Live:	40 PSF			Bearings	and Fac	tored Reactions		
Dead:	15 PSF	1		Bearing I	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
				1-SPF	2.375"	50% 317 / 1016	1334 L	1.25D+1.5L
				2-SPF (	6.875"	55% 518 / 1175	1693 L	1.25D+1.5L

**Analysis Results** 

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2794 ft-lb	6' 1/16"	7340 ft-lb	0.381 (38%)	1.25D+1.5L	L
Unbraced	2794 ft-lb	6' 1/16"	2827 ft-lb	0.988 (99%)	1.25D+1.5L	L
Shear	1308 lb	1 5/8"	3080 lb	0.425 (42%)	1.25D+1.5L	L
Perm Defl in.	0.066 (L/2383)	6'6 1/16"	0.439 (L/360)	0.150 (15%)	D	Uniform
LL Defl inch	0.177 (L/893)	6'6 1/16"	0.439 (L/360)	0.400 (40%)	L	L
TL Defl inch	0.243 (L/650)	6'6 1/16"	0.658 (L/240)	0.370 (37%)	D+L	L
						···

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



# **Design Notes**

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 3'11" o.c.

5 Bottom flange braced at bearings

3 Bottom	nange braced at bearin	ys.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 13-9-12	(Span)1-5-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Tie-In	0-0-0 to 1-9-14	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
3	Point	1-8-6		Near Face	106 lb	283 lb	0 lb	0 lb	F6	
4	Tie-In	1-9-14 to 13-9-12	(Span)1-2-10	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
5	Point	13-7-6		Тор	151 lb	367 lb	0 lb	0 lb	J8	
6	Point	13-7-6		Тор	107 lb	0 lb	0 lb	0 lb	Wall Self Weight	

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 Uplish not to be treated with fire retardant or corrosive

Handling & Installation

- IAIMILING & INSTAILATION

  Lots flanges must not be cut or drilled

  Refer to latest copy of the Loist product information details for framing details, suffener tables, web hole chart, bridging details, multi-ley fastening details and handling/erection details

  Demaged Loists must not be used

  Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to evoid lateral displacement and rotation.
 Web stiffeners for point load as shown Minimum point load bearing length=> 3.5 inches
 Por flat roofs provide proper drainage to prevent ponding.

This design is valid until 7/10/2021

Manufacturer Info

Nascor by Kott







**GREENPARK** 

Project:

Address:

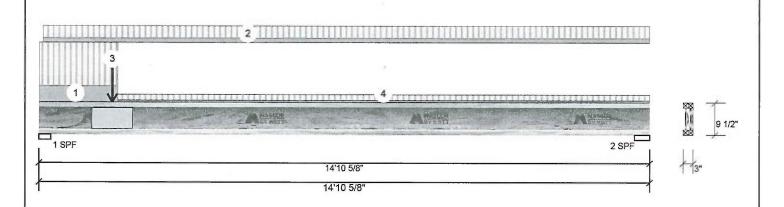
8/13/2018 Date:

Designer: RCO

Job Name: HEMLOCK 4-1

Project #:

F8-A NJ 9.500" 2-Ply - PASSED Level: Ground Floor



Member Info	rmation			Unfactor	red React	tions U	NPATTERN	ED lb (	Uplift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	V	Wind
Plies:	2	Design Method:	LSD	1	678		254	1	0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	251		94		0	0
Deflection LL:	360	Load Sharing:	No	_	-					
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load		N. E								
Floor Live:	40 PSF			Bearings	and Fac	tored R	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	3.500"	45%	317 / 1017	1334	L	1.25D+1.5L
Name lands Daniel				2-SPF	4.375"	16%	118 / 377	495	L	1.25D+1.5L

### **Analysis Results**

**Design Notes** 

Ī	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	2185 ft-lb	5'5 1/2"	7340 ft-lb	0.298 (30%)	1.25D+1.5L	L
	Unbraced	2185 ft-lb	5'5 1/2"	2202 ft-lb	0.993 (99%)	1.25D+1.5L	L
	Shear	1300 lb	2 3/4"	3080 lb	0.422 (42%)	1.25D+1.5L	L
	Perm Defl in.	0.060 (L/2850)	6'11 3/8"	0.478 (L/360)	0.130 (13%)	D	Uniform
	LL Defl inch	0.161 (L/1067)	6'11 5/16"	0.478 (L/360)	0.340 (34%)	L	L
	TL Defl inch	0.222 (L/776)	6'11 5/16"	0.718 (L/240)	0.310 (31%)	D+L	L
-							

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



3 Top loads must be supported equally by all plies. 4 Top flange must be laterally braced at a maximum of 4'6" o.c.

1 Girders are designed to be supported on the bottom edge only.

2 Multiple plies must be fastened together as per manufacturer's details.

5 Bottom flange braced at bearings

ы			9							
ſ	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
l	1	Tie-In	0-0-0 to 1-11-0	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	2	Tie-In	0-1-2 to 14-10-10	(Span) 0-10-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
l	3	Point	1-9-8		Far Face	159 lb	426 lb	0 lb	dl 0	F6
l	4	Tie-In	1-11-0 to 14-10-10	(Span)0-5-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Intended application, and to verify the dimensions and loads.

# Lumber

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Handling & Installation

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I Jolat flanges must not be cut or drilled

Refer to latest copy of the Lloist product information
defails for framing details, suffiener tables, web hole
chart, bridging details, multi-ply fastening details and
handlingferection details

Damaged Lloists must not be used

Design assumes top flange to be laterally restrained
by attached sheathing or as specified in engineering
notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer info Nascor by Kott





**GREENPARK** 

Project:

Address:

8/13/2018 Date:

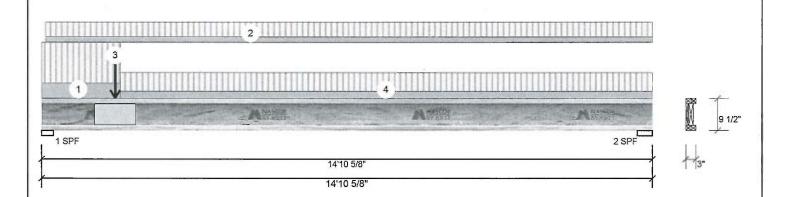
Designer: RCO

Job Name: HEMLOCK 4-1

Project #:

Level: Ground Floor

2-Ply - PASSED NJ 9.500" F8-B



Member Infor	mation			Unfacto	red Reac	tions U	NPATTERN	ED lb (	Uplift)	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	v	Wind
Plies:	2	Design Method:	LSD	1	694		260		0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	431		162	(	0	0
Deflection LL:	360	Load Sharing:	No	0.5						
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored F	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	3.500"	46%	325 / 1040	1366	L	1.25D+1.5L
Sandaria Danul				2 - SPF	4.375"	28%	202 / 647	849	L	1.25D+1.5L

Analysis Results

**Design Notes** 

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3182 ft-lb	6'9 9/16"	7340 ft-lb	0.434 (43%)	1.25D+1.5L	L
Unbraced	3182 ft-lb	6'9 9/16"	3222 ft-lb	0.988 (99%)	1.25D+1.5L	L
Shear	1330 lb	2 3/4"	3080 lb	0.432 (43%)	1.25D+1.5L	L
Perm Defl in.	0.088 (L/1948)	7'2 5/8"	0.478 (L/360)	0.180 (18%)	D	Uniform
LL Defl inch	0.236 (L/731)	7'2 5/8"	0.478 (L/360)	0.490 (49%)	L	L
TL Defl inch	0.324 (L/531)	7'2 5/8"	0.718 (L/240)	0.450 (45%)	D+L	L

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS. OPROFESSIONAL ENGINEERS T8, 2018

3 Top loads must be supported equally by all plies. 4 Top flange must be laterally braced at a maximum of 3'8" o.c.

1 Girders are designed to be supported on the bottom edge only.

2 Multiple plies must be fastened together as per manufacturer's details.

J BOROTT	lariye braceu at bearii.	ıya.						_		
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	_
1	Tie-In	0-0-0 to 1-11-0	(Span)3-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Tie-In	0-1-2 to 14-10-10	(Span)1-2-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
3	Point	1-9-8		Near Face	100 lb	266 lb	0 lb	0 lb	F6	
4	Tie-In	1-11-0 to 14-10-10	(Span)1-5-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF		

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 Upoist not to be treated with fire retardant or corrosive

Handling & Installation

- andling & Installation

  Licist flenges must not be cut or drilled

  Refer to latest copy of the Jubist product information
  defails for framing details, stiffener tables, web hote
  chart, bridging details, multi-ply fastening details and
  handling/erection details

  Damaged Loists must not be used

  Design assumes top flenge to be laterally restrained
  by attached sheathing or as specified in engineering
  notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Wab stitleners for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info

Nascor by Kott





Page 1 of 2



Client:

**GREENPARK** 

Project: Address:

8/13/2018 Date:

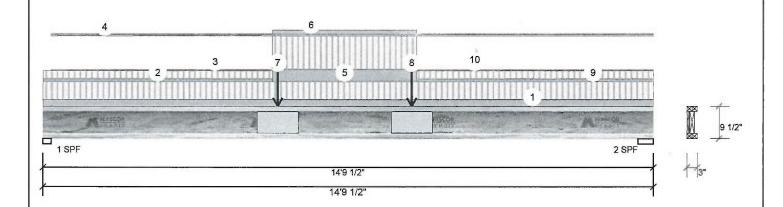
RCO Designer:

Job Name: HEMLOCK 4-1

Project #:

NJ 2-Ply - PASSED F8-C 9.500"

Level: Ground Floor



Member Inforn	nation			Unfacto	red Reac	tions U	NPATTERN	ED lb (	Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Sno	N	Wind
Plies:	2	Design Method:	LSD	1	375		183		0	0
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012	2	380		186		0	0
Deflection LL:	360	Load Sharing:	No	_						
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearing:	s and Fac	tored I	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF	2.375"	29%	229 / 562	791	L	1.25D+1.5L
				2-SPF	4.500"	26%	233 / 570	803	L	1.25D+1.5L

**Analysis Results** 

Case
1.5L L
1.5L L
1.5L L
Uniform
L
L

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



**Design Notes** 

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top flange must be laterally braced at a maximum of 3'4" o.c.

5 Bottom flange braced at bearings.

O DOLLOIN	nango biacca at bearinge	••								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 14-9-8	(Span)0-11-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Tie-In	0-0-0 to 5-6-14	(Span)0-4-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
3	Part. Uniform	0-2-7 to 5-6-14		Тор	1 PLF	0 PLF	0 PLF	0 PLF		
4	Part. Uniform	0-2-7 to 14-9-8		Тор	2 PLF	0 PLF	0 PLF	0 PLF		
5	Tie-In	5-6-14 to 9-0-14	(Span)1-8-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
6	Part. Uniform	5-6-14 to 9-0-14		Тор	4 PLF	0 PLF	0 PLF	0 PLF		
7	Point	5-8-6		Near Face	66 lb	134 lb	0 lb	0 lb	F5	

Continued on page 2...

### Notes

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

### Lumber

Dry service conditions, unless noted otherwise
 Uoist not to be treated with fire retardant or con

Handling & Installation

- Handling & Installation

  1. Lioist flanges must not be cut or drilled

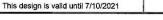
  2. Refer to latest copy of the Lioist product information details for framing details, stiffener tables, web note chart. bridging details, multi-ply testening details and handling/eraction details

  3. Damaged Loists must not be used

  4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffenses for point load as shown Minimum point load bearing lengthre-3.5 inches
 For liat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott



Page 2 of 2

isDesign™

Client:

**GREENPARK** 

Project: Address: Date: 8/13/2018

Designer: RCO

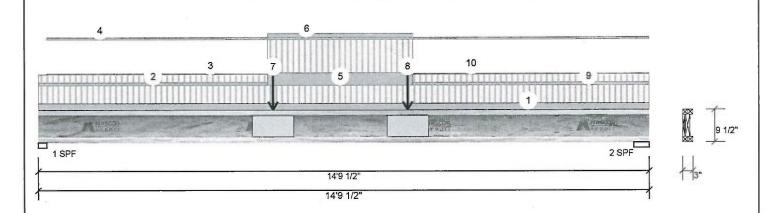
Job Name: HEMLOCK 4-1

Project #:

9.500" F8-C NJ

2-Ply - PASSED

Level: Ground Floor



Continued	from page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Point	8-11-6		Near Face	66 lb	133 lb	0 lb	0 lb	F5
9	Tie-In	9-0-14 to 14-9-8	(Span)0-4-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
10	Part. Uniform	9-0-14 to 14-9-8		Тор	1 PLF	0 PLF	0 PLF	0 PLF	

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

Notes

Notres

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads. Lumber

Dry service conditions, unless noted otherwise
 Upoist not to be treated with fire retardant or corresive

Handling & Installation

Handling & Installation

1. Uplist flanges must not be cut or drilled

2. Refer to latest copy of the Libist product information details for framing details, stiffener tables, web hole chart. bridging details, multi-ply fastening details and handling/eraction details

3. Damaged lobists must not be used

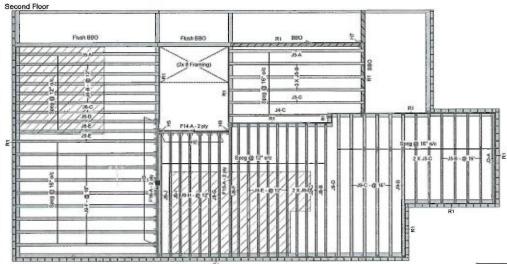
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.

Provide lateral support at bearing points to avoid lateral displacement and rotation
 Web stiffeness for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4 905-642-4400





Legend



Load from Above Norbord Rimboard Plus 1.125 X 9.5 NJ40U 9 5 N 160H 9.5 NJH 95 Forex 2.0E-3000Fb LVL 1.75 X 9.5

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVI. CCMC -14056-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

THIS CERTIFICATION IS TO CONFIRM THAT:

1, THE LOADS USED IN THE CALCULATION OF THE ATTACHED APPROVED COMPONENTS CONFORM TO THE FLOOR ASSEMBLY SHOWN ON THIS LAYOUT.

2. THE FLOOR JOISTS COMPLY WITH THE NASCOR SPAN TABLE FOR THE LOADS AND SPACING SHOWN ON THIS LAYOUT.

THE FLOOR SYSTEM MUST BE ASSEMBLED IN ACCORDANCE TO THE NASCOR SPECIFIER GUIDE. MULTI-PLY MEMBERS MUST BE ATTACHED TOGETHER AS PER THE INCLUDED MULTIPLE MEMBER CONNECTION DETAIL.

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.



REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.

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

Second Floor LVL/LSL (Flush) Width Depth Qty Plies Pcs Length Label Description 1.75 2 2 Forex 2.0E-3000Fb LVL F15 2 14-0-0 Forex 2.0E-3000Fb LVL F14 8-0-Forex 2.0E-3000Fb LVL Joist (Flush) Width Depth Qty Plies 3.5 9.5 Pcs Lengtl 9 16-0-Label Description 3.5 3.5 J6 NJ40U J5 NJ40U 14-0-15 16-0-0 17 14-0-0 J9 NJ60U 3.5 9.5 JB NJH
J4 NJH
J3 NJH 2.5 9.5 2.5 9.5 12-0-9.5 Rim Board Label Description Width Depth Qty Plies Pcs Length Norbord Rimboard Plus 1.125 X 9.5 1.125 13

Hanger

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H2	7	LT259			4 10dx1 1/2	2 10dx1 1/2
НЗ	11	LT359			4 10d	2 10dx1 1/2
H5	2	HGUS410			46 16d	16 16d
H7	1	Unknown				

### NOTES:

rimboard/nmioist.

- . Framer to verify dimensions on the architectural drawings. Double joist only require fillenbacker ply when supporting another member using a face-mounted hanger.
- 3. Install 2x4 blocking @ 24" ofc under parallel non-load bearing walls. 1. Install single-pty flush window header along inside face of
- rimboard/rimjorist.

  5. Refer to Nascor specifier guide for installation works.

  6. Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding.
- as instress loss 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 responsiblifly that floor joists and beams are fastened as per the hanger manufacturer's standards.

Refer to Multiple Member Connection Detail to ply to ply nailing or

Rim parallel to joists: 1-1/8" rimboard with 2"x 4" block (1/16" longer than Full parallel to jossis: 1-3/8 immobility 2 X 4 'sock (1110' longer to imm depth @ 16' do). 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 represents ceramic filed floor with an additional dead load

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

### ARCHITECTURAL DRAWINGS:

VA3 DESIGN 255 Consumers Rd., Suite 120, Toronto, ON Date: Rev.2; May 18,2018 Project No: 18012 Model: Hemlock 4

**PAGE 20 OF 24** 

0	
0	Layout Name HEMLOCK 4-1 & 4-2
0	Design Method LSD
h O	Revised August 13, 2018
0	Description MINNISALE HOMES BRAMPTON, ONT.
0	Builder GREENPARK
h 2	Sales Rep RM
_	Designer RCO
	Shipping Project
	Builder's Project
<u> </u>	Kott Lumber Company
	14 Anderson Blvd
	Stouffville, Ontario
	Canada
ı	L4A 7X4
ı	905-642-4400
•	Job Path
	D:\Users\rochavilo\WORK FROM HOME\GREENPARKVAINNISALE HOMES\HEMLOCK 4\HEMLOCK 4-1 \FLOOR\REV\HEMLOCK 4-1.isl
ı	Second Floor
ı	Design Method LSD
	Building Code NBCC 2010 / OBC 2012
ı	Floor
	Loads Live 40
ı	Dead 15
1	Deflection Joist
	LL Span L/ 480
1	TL Span L/ 360
L	IL Opan D 300

LL Cant 2L/

TL Cant 2L/

LL Span L/

TL Span 1/

LL Cant 2L/

TL Cant 2L/

Decking

Thickness

Fastener Vibration Celling:

Deck

Deflection Girder

480

360

360

240

480

360

SPF Plywood

Nailed & Glued

Gypsum 1/2\*



Client: Project:

Address:

GREENPARK

Date:

8/13/2018

RCO Designer:

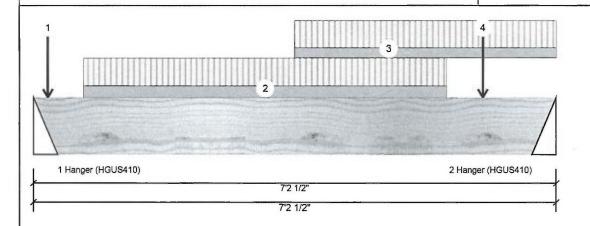
Job Name: HEMLOCK 4-1 Project #:

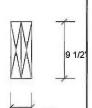
Forex 2.0E-3000Fb LVL F14-A

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor





Member	Information

Туре:	Girder
Plies:	2
Moisture Condition:	Dry
Deflection LL:	360
Deflection TL:	240
Importance:	Normal
General Load	

40 PSF

15 PSF

Application: Design Method: **Building Code:** Load Sharing:

Floor (Residential) NBCC 2010 / OBC 2012

Deck: Not Checked Not Checked Vibration:

# Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1103	473	0	0
2	1457	610	0	0

# **Analysis Results**

Floor Live:

Dead:

	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	4254 ft-lb	4' 1/8"	22724 ft-lb	0.187 (19%)	1.25D+1.5L	L
l	Unbraced	4254 ft-lb	4' 1/8"	21846 ft-lb	0.195 (19%)	1.25D+1.5L	L
	Shear	2622 lb	6'1 3/4"	9277 lb	0.283 (28%)	1.25D+1.5L	L
	Perm Defl in.	0.017 (L/4697)	3'9"	0.222 (L/360)	0.080 (8%)	D	Uniform
	LL Defl inch	0.040 (L/1997)	3'9 3/16"	0.222 (L/360)	0.180 (18%)	L	L
	TL Defl inch	0.057 (L/1401)	3'9 1/8"	0.333 (L/240)	0.170 (17%)	D+L	L
Г.							

**Bearings and Factored Reactions** 

Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 -	4.000"	22%	591 / 1655	2246	L	1.25D+1.5L	
Hanger							
2 -	4.000"	28%	763 / 2185	2949	L	1.25D+1.5L	
Hanger							

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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





DPROFESSIONAL CA

EL-MASRI

# **Design Notes**

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-2-6		Near Face	63 lb	169 lb	0 lb	0 lb	J8
2	Part, Uniform	0-8-6 to 5-8-6		Near Face	105 PLF	251 PLF	0 PLF	0 PLF	
3	Part. Uniform	3-7-4 to 7-2-8		Тор	90 PLF	240 PLF	0 PLF	0 PLF	
4	Point	6-2-6		Near Face	116 lb	271 lb	0 lb	0 lb	J8
	Self Weight				8 PLF				

### Notes

# Lumber

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

### chemicals

Handling & Installation

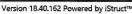
- LVL beams must not be cut or drilled Refer to manufacturer's product regarding installation requirements
- Design assumes top edge is laterally res Provide lateral support at bearing poli lateral displacement and rotation

For flat roofs provide proper drainage to prevent confine

Forex

Manufacturer Info APA: PR-L318





Page 1 of 1



Client: Project:

Address:

GREENPARK

8/13/2018 Date:

Designer: RCO

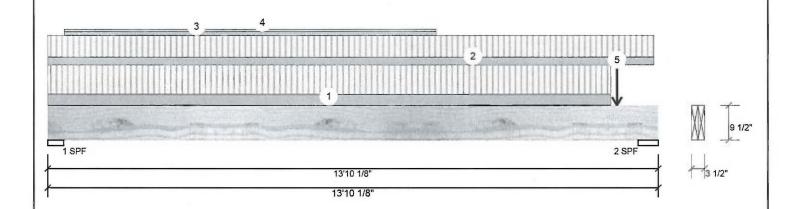
Job Name: HEMLOCK 4-1

Project #:

F15-A Forex 2.0E-3000Fb LVL 1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



ember Information				Unfactored Reactions UNPATTERNED Ib (Uplift)					
Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	v	Wind
2	Design Method:	LSD	1	334		209		0	0
n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1651		747		0	0
360	Load Sharing:	No	_						
240	Deck:	Not Checked							
Normal	Vibration:	Not Checked							
40 PSF			Bearings	and Fact	tored F	Reactions			
15 PSF			Bearing I	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
			1-SPF 4	4.375"	8%	261 / 501	761	L	1.25D+1.5L
			2-SPF 5	5.500"	29%	934 / 2476	3410	L	1.25D+1.5L
	Girder 2 in: Dry 360 240 Normal	Girder Application: 2 Design Method: 360 Building Code: Load Sharing: Deck: Normal Vibration: 40 PSF 15 PSF	Girder 2 Design Method: LSD Building Code: NBCC 2010 / OBC 2012 Load Sharing: No Deck: Not Checked Normal Vibration: Not Checked	Application: Floor (Residential)   Brg	Application: Floor (Residential)   Brg   Live	Application: Floor (Residential)   Brg   Live	Application: Floor (Residential)   Brg   Live   Dead	Application: Floor (Residential)   Brg   Live   Dead   Snov	Application: Floor (Residential)   Brg   Live   Dead   Snow

### Analysis Results

,	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
1	Moment	2858 ft-lb	8' 15/16"	22724 ft-lb	0.126 (13%)	1.25D+1.5L	L
1	<b>Jnbraced</b>	2858 ft-lb	8' 15/16"	19311 ft-lb	0.148 (15%)	1.25D+1.5L	L
	Shear	3357 lb	12'7 7/8"	9277 lb	0.362 (36%)	1.25D+1.5L	L
1	Perm Defl in.	0.050 (L/3160)	7'1 1/4"	0.438 (L/360)	0.110 (11%)	D	Uniform
J	L Defl inch	0.087 (L/1811)	7'2 7/8"	0.438 (L/360)	0.200 (20%)	L	L
	TL Defl inch	0.137 (L/1151)	7'2 5/16"	0.657 (L/240)	0.210 (21%)	D+L	L

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



**Design Notes** 

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width

L	O Lateral Siender	ness ratio based on to	il Section with.							
	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	1	Tie-In	0-0-0 to 12-9-4	(Span)1-1-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	2	Tie-In	0-0-0 to 13-9-0	(Span)0-10-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	3	Part. Uniform	0-4-9 to 8-9-13		Тор	3 PLF	0 PLF	0 PLF	0 PLF	
	4	Part. Uniform	0-4-9 to 8-9-13		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
	5	Point	12-11-0		Far Face	610 lb	1457 lb	0 lb	0 lb	F14
		Self Weight				8 PLF				

N	nte	90

### Lumber

Handling & Installation

- LVL beams must not be cut or drilled
   Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code

For flat roofs provide proper drainage to prevent ponding

Forex APA: PR-L318

Manufacturer Info

Kott Lumber Company 14 Anderson Blvd, Ontario L4A 7X4 905-642-4400



Client: Project:

Address:

GREENPARK

Date:

8/13/2018 RCO Designer:

Job Name: HEMLOCK 4-1

Project #:

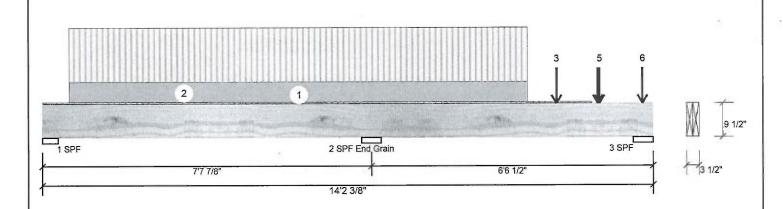
Forex 2.0E-3000Fb LVL F16-A

1.750" X 9.500"

2-Ply - PASSED

1

Level: Second Floor



Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition	: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Analysis Results							
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case	
Neg Moment	-3841 ft-lb	7'7 7/8"	22724 ft-lb	0.169 (17%)	1.25D+1.5L	LL	
Unbraced	-3841 ft-lb	7'7 7/8"	22724 ft-lb	0.169 (17%)	1.25D+1.5L	LL	
Pos Moment	3116 ft-lb	11'11 7/16"	22724 ft-lb	0.137 (14%)	1.25D+1.5L	_L	
Unbraced	3116 ft-lb	11'11 7/16"	22724 ft-lb	0.137 (14%)	1.25D+1.5L	_L	
Shear	3612 lb	13' 1/8"	9277 lb	0.389 (39%)	1.25D+1.5L	_L	
Perm Defl in.	0.010 (L/9038)	3'7"	0.245 (L/360)	0.040 (4%)	D	Uniform	
LL Defl inch	0.034 (L/2632)	3'9 11/16"	0.245 (L/360)	0.140 (14%)	L	L_	

**Design Notes** 

- 1 Girders are designed to be supported on the bottom edge only.
- 2 Multiple plies must be fastened together as per manufacturer's details.
- 3 Top loads must be supported equally by all plies.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.

TL Defl inch 0.043 (L/2040)

2	2	2663	1074
3	1644	700	

Live

746

Bearings an	d Factored	Reactions

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

302

Snow

0

0

0

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1-SPF	4.375"	17%	369 / 1266	1635	L_	1.25D+1.5L
2 - SPF End Grain	5.500"	38%	1360 / 4048	5408	LL	1.25D+1.5L
3 CDE	5 500"	300/	965 / 2600	3563	1	1 25D+1 51

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

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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



Wind

0

0

0

6 Lateral slende	erness ratio based on	full section width.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-9-4	(Span)0-4-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-7-7 to 11-3-7		Far Face	107 PLF	286 PLF	0 PLF	0 PLF	
3	Point	11-11-7		Far Face	125 lb	334 lb	0 lb	0 lb	J9
4	Point	12-11-0		Near Face	473 lb	1103 lb	0 lb	0 lb	F14
5	Point	12-11-7		Far Face	116 lb	286 lb	0 lb	0 lb	J6

Continued on page 2...

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the Inlanded application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

andling & Installation
LVL beams must not be cut or drillied
Refer to manufacturer's product information
regarding installation requirements, multi-pil
fastening details, beam strength values, and code
approvels
Damaged Beams must not be used
Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

3'9 1/8" 0.368 (L/240) 0.120 (12%) D+L

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario 905-642-4400





Address:

GREENPARK

Project:

Date:

8/13/2018

Page 2 of 2

Designer: RCO

Job Name: HEMLOCK 4-1

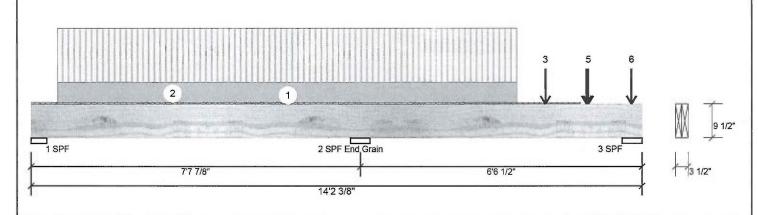
Project #:

Forex 2.0E-3000Fb LVL F16-A

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



.Continued from page 1

ID Load Type 6 Point

Self Weight

13-11-7

Location Trib Width

Side Far Face Dead 79 lb Snow 0 lb

Live

191 lb

Wind Comments 0 lb J6

8 PLF

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

and ling & Installation
LVL beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, mutil-ply
fastening details, beem strength values, and code
approvals
Demaged Beams must not be used
Design assumes top edge is laterally restrained
Provide lateral support at bearing points to avoid
lateral displacement and rotation

For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Forex APA: PR-L318

Manufacturer Info