

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.



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.

NOTES:

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.

. Install 2x4 blocking @ 24" o/c under parallel non-load bearing walls.

. Install single-ply flush window header along inside face of . 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

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

ARCHITECTURAL DRAWINGS:

VA3 DESIGN 255 CONSUMERS ROAD, TORONTO, ON Address: GRANDBROOKE 2, BRAMPTON, ON

				_						17.4-0 01 07
Ground										
LVL/LS	Descripti	ion	Width	De	nth	Qty	Plies	Pcs	Length	NASCO
F5	Forex		1.75	_	9.5	Qty	Files	2	12-0-0	INADEGI
	2.0E-300	OFb LVL								Lavout Name
F7	Forex 2.0E-300	0Fb LVL	1.75		9.5	1	2	2	12-0-0	GRANDBROOKE 2-3
F4	Forex 2.0E-300	OFb LVL	1.75		9.5			3	10-0-0	Design Method LSD
F20	Forex 2.0E-300	0Fb LVĹ	1.75		9.5	1	3	3	8-0-0	Description
F3	Forex 2.0E-300	0Fb I VI	1.75		9.5			2	6-0-0	Created
F8	Forex 2.0E-300		1.75		9.5	1	2	2	6-0-0	June 07, 2018 Builder
F2	Forex 2.0E-300		1.75		9.5			1	4-0-0	Sales Rep
l Joist	12.0L-300	OI D LVL		I					-	Designer
Label	Descripti	ion	Width	De	nth	Qty	Plies	Pcs	Length	JO
F6	NJ	1011	1.5		9.5	5	2	10	14-0-0	Shipping
F19	NJ		1.5		9.5	2	2	4	4-0-0	
F18	NJ		1.5		9.5	2	2	4	2-0-0	Project
J8	NJ40U		3.5		9.5			24	14-0-0	Builder's Project
J11	NJ40U		3.5		9.5			4	12-0-0	Kott Lumber Company
J6	NJ40U		3.5		9.5			3	8-0-0	14 Anderson Blvd
J13	NJ60U		3.5		9.5			1	14-0-0	Stouffville, Ontario
J5	NJ60U		3.5		9.5			1	12-0-0	Canada
J12	NJH		2.5		9.5			34	12-0-0	L4A7X4
J4	NJH		2.5	_	9.5			4	10-0-0	905-642-4400
J7	NJH		2.5		9.5			3	8-0-0	
J2	NJH		2.5		9.5			4	6-0-0	Ground Floor
J1	NJH		2.5		9.5			3	4-0-0	Design Method
Rim Bo									,	Building Code NBCC 2010 / C
Label	Descript	ion	Width	De	pth	Qty	Plies	Pcs	Length	2
R1	Norbord F Plus 1.12		1.125		9.5			16	12	Floor Loads
Hange	r	_		-			-			Live
						Be	am/Girde	Su	pported	Dead
								M	ember	Deflection Joist
Label	Pcs D	escriptio	n S	kew	Slope	f	asteners	fas	steners	LL Span L/
H1	3 LI	F179					10 10d	1 #8	x1 1/4WS	TL Span L/
H2		UCQ1.81. DS1.75	/9-							LL Cant 2L/
H3	1 U	nknown				1				TL Cant 2L/

4 10dx1 1/2

4 10dx1 1/2

14 16d

Width Depth Qty Plies

9.5 LinFt

9.5 LinFt

9.5 LinFt

9.5 LinFt

9.5 LinFt

2 10dx1 1/2

4 10dx1 1/2

6 10d

2 10dx1 1/2

Pcs Length

2-0-0

14-0-0

1-0-0

21-0-0

Varies

Varies

Varies

Varies

CITY OF BRAMPTON BUILDING DIVISION REVIEWED MARK/DERKSEN

1.5

3.5

3.5

2.5

2.5

Unknown

Hanger

1 HUC410 (Min)

14 LT259

H9 6 LT2-159

Label Description

15 MIT49.5

H5

Blocking

BLK2 NJ

BLK2 NJ40U

BLK1 NJ60U

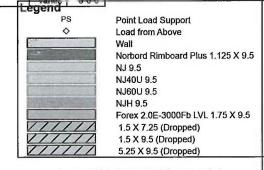
BLK1 NJH

BLK2 NJH

H7

Engineered floor joists shall be installed in accordance with the supplier's layout and specifications forming part of the permit drawings.

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



Deflection Girder

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

Decking

Thickness

Fastener

Vibration

Ceiling:

Deck

PAGE 3 OF 37

1. OBC 2012 O.Reg 332/12 as amended

2. Nascor CCMC - 13535-R

3. LVL CCMC -14056-R

CAN/CSA-086-09

CCMC -12787-R APA PR-L310(C)

Version 18.40.105 Powered by iStruct™

一个一种 医环境管 下色带 计多

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

LSD

2012

40

15

480

360

480

360

360

240

480

360

OSB

3/4"

Nailed & Glued

Gypsum 1/2"

NBCC 2010 / OBC

NOTES:

. 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.

 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.

 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. 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 and structural drawings. Project Engineer to review and approve the deviation prior

ARCHITECTURAL DRAWINGS:

255 CONSUMERS ROAD, TORONTO, ON Project No: 18012 Address: GRANDBROOKE 2.BRAMPTON, ON

Date: 5/15/18

F12 Forex 1.75 9.5 3 3 14-0-0 2.0E-3000Fb LVL Layout Name F7 12-0-0 Forex 1.75 9.5 2 4 2.0E-3000Fb LVL **GRANDBROOKE 2-3** F10 1.75 9.5 10-0-0 Design Method 2.0E-3000Fb LVL LSD 1.75 9.5 8-0-0 Forex 2.0E-3000Fb LVL 1.75 9.5 2 Forex 2.0E-3000Fb LVL F3 Forex 1.75 9.5 2 2.0E-3000Fb LVL F1 Forex 1.75 9.5 2.0E-3000Fb LVL F11 Forex 1.75 11.875 2.0E-3000Fb LVL Joist Label Description Width Depth Qty | Plies Pcs Le J10 NJ60U 3.5 9.5 13 J3 NJ60U 3.5 9.5 2.5 40 J9 NJH 9.5 2.5 J12 NJH 31 9.5 J4 NJH 2.5 9.5 14 J7 NJH 2.5 9.5 J1 NJH 2.5 9.5 1 Rim Board Pcs Le Label Description Width Depth Qty Plies R1 Norbord Rimboard 1.125 16 9.5 Plus 1.125 X 9.5 Blocking Label Description Width Depth Qty Plies Pcs L BLK1 NJ60U 3.5 9.5 LinFt Varies 2.5 9.5 LinFt BLK1 NJH Varies 5 Hanger Beam/Girder Suppo Mem Label Pcs Description Skew Slope fasteners faster H3 Unknown Hanger 2 10dx 4 10dx1 1/2 H4 39 LT259 4 10dx1 1/2 4 10dx H5 1 MIT49.5

Width Depth

Qty

Plies

Pcs Length

Second Floor

Label Description

LVL/LSL

H6

1 LF359

1 HUC410 (Min)

1 HGUS410

	Description						
6-0-0	Created						
600	June 07, 2018						
0-0-0	Builder						
2-0-0	Sales Rep						
16.0.0	Designer						
10-0-0	JO						
	Shipping						
	Project						
	Builder's Project						
	Kott Lumber Company						
	14 Anderson Blvd						
	Stouffville, Ontario						
	Canada						
4-0-0	L4A 7X4						
1	905-642-4400						
	Second Floor						
12	Design Method LSD						
	Building Code NBCC 2010 / OBC						
Length	2012						
	Floor						
	Loads						
	Live 40						
ported	Dead 15						
mber	Deflection Joist						
leners	LL Span L/ 480						
	TL Span L/ 360						
	LL Cant 2L/ 480						
dx1 1/2							
dx1 1/2	TL Cant 2L/ 360						
	Deflection Girder						
	LL Span L/ 360						
6 16d	TL Span L/ 240						
	LL Cant 2L/ 480						
	TL Cant 2L/ 360						
	Decking						
	Deck OSB						
	Thickness 5/8"						
	Fastener Nailed & Glued						
	Vibration						
	Ceiling: Gypsum 1/2"						
	6-0-0 2-0-0 16-0-0 16-0-0 16-0-0 8-0-0 14-0-0 10-0-0 8-0-0 4-0-0 Length 12 Length 15-0-0 51-0-0 ported ember teners						



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REFER TO MULTIPLE MEMBER TO MEMBER

CONNECTION DETAIL FOR PLY TO PLY

NAILING OR BOLTING REQUIREMENTS.

READ ALL NOTES ON THIS PAGE AND ON

NOTE PAGE IS AN INTEGRAL PART OF THIS

CONTAINS SPECIFICATIONS AND CRITERIA

USED IN THE DESIGN OF THIS COMPONENT.

ENGINEERING NOTE PAGE ENP-2. THIS

CALCULATION SUMMARY PAGE AS IT

PASS THRU FRAMING SQUASH

POINT LOADS OVER BEARINGS.

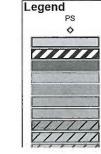
BLOCK IS REQUIRED AT ALL

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

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10 10d

14 16d

46 16d

2 #8x1

Point Load Support Load from Above Wall Opening Norbord Rimboard Plus 1.125 X 9.5 NJ60U 9.5 NJH 9.5 Forex 2.0E-3000Fb LVL 1.75 X 9.5 Forex 2.0E-3000Fb LVL 1.75 X 11.875 0 X 0 (Dropped)

5.75 X 9.5 (Dropped)

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)



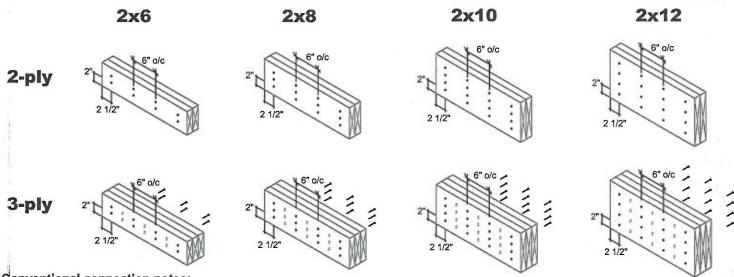
0.10

O-ST

/// PE 2015 / / / / /

MULTIPLE MEMBER CONNECTIONS

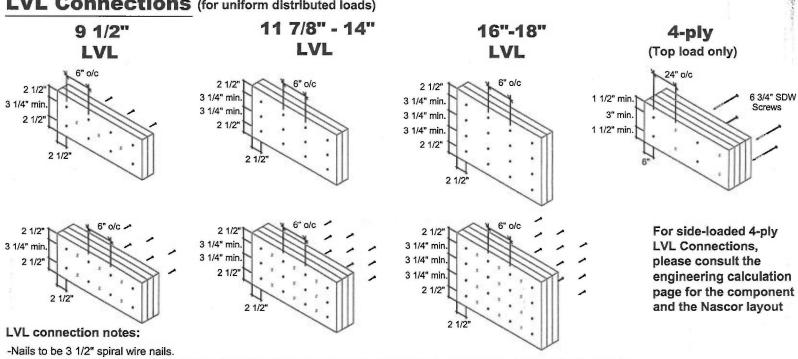
Conventional Connections (for uniform distributed loads)



Conventional connection notes:

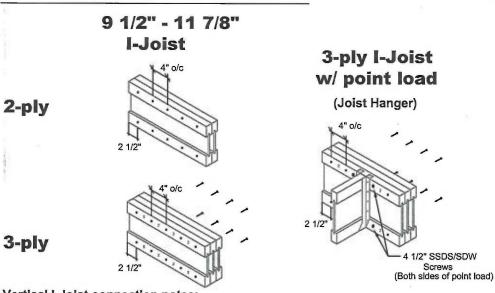
- -Nails to be 3" 10d spiral wire nails.
- -Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

LVL Connections (for uniform distributed loads)



- -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**

> Date: November 30, 2016 Scale: NTS

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

Engineering Note Page (ENP-2)

REVISION 2009-10-09

Please read all notes prior to installation of the component

DESIGN INFORMATION

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

The responsibility of the undersigned engineer is <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 http://www.nascor.ca.

CODE

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

COMPONENT

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

HANDLING AND INSTALLATION

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



MULTIPLE MEMBER CONNECTIONS

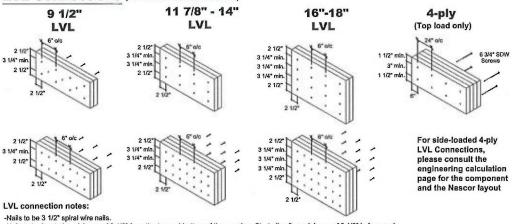
Conventional Connections (for uniform distributed loads)

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

Conventional connection notes:

- -Nails to be 3" 10d spiral wire nails.
- -Natils 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)

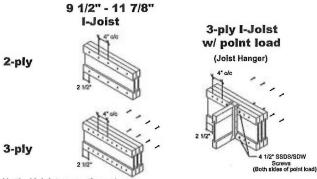


- -Malls to be located a minimum of 2 1/2* from the top and bottom of the member. Start all nails a minimum of 2 1/2* in from ends.

 -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.
- -Nalis to be 3 spiral vite liais.

 Alalis to be located at centre of top and bottom flanges, Start all nalis a minimum of 2 1/2" in from ends.

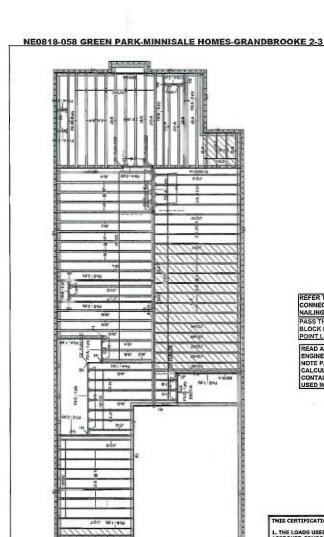
 -Number of rows and spacing as per details shown, unless noted otherwise.

 -"X" represents nail driven from the opposite side.



MULTI -PLY CONNECTION

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



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 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 beaning walls.
 Install single-ply flush window header along inside face of imboard/impiost.

Ground Floor LVL/LSL

Rim Board

BLK1 NJH

Label Description

- in 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.
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Hatch area represents ceramic tiled floor with an additional dead load of 5 PSF

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ARCHITECTURAL DRAWINGS:

VA3 DESIGN 255 CONSUMERS ROAD, TORONTO, ON Date: 5/15/18
Project No: 18012
Address: GRANDBROOKE 2,BRAMPTON, ON

	Description		Depth	Qly	Plies	Pcs	Length	
F5	Forex 2.0E-3000Fb LVL	1.75	9.5			2	12-0-0	
F7	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	12-0-0	Layout Name GRANDBROOKE 2-3
F4	Forex 2.0E-3000Fb LVL	1.75	9.5			3	10-0-0	Design Method LSD
F20	Forex 2.0E-3000Fb LVL	1.75	9.5	1	3	3	8-0-0	Description
F3	Forex 2.0E-3000Fb LVL	1.75	9.5			2	6-0-0	Created
F8	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	6-0-0	June 07, 2018 Builder
F2	2.0E-3000Fb LVL	1.75	9.5			1	4-0-0	Sales Rep
I Joist								Designer
Label	Description	Width	Depth	Qty	Plies	Pcs	Length	10
F6	NJ	1.5	9.5	5	2	10	14-0-0	Shipping
F19	NJ	1,5	9.5	2	2	4	4-0-0	Project
F18	NJ	1.5	9.5	2	2	- 4	2-0-0	
JB	NJ4QU	3.5	9.5			24	14-0-0	Builder's Project
J11	NJ40U	3.5	9.5			4	12-0-0	Kott Lumber Company
J6	NJ40U	3.5	9,5			3	8-0-0	14 Anderson Blvd
J13	NJ60U	3.5	9.5			- 1	14-0-0	Stouffville, Ontario
J5	NJ60U	3.5	9,5			1	12-0-0	Canada
J12	NJH	2.5	9.5			34	12-0-0	1.4A 7X4
J4	NJH	2.5	9.5			4	10-0-0	905-642-4400
J7	NJH	2.5	9.5			3	8-0-0	
					1			Ground Floor
J2	NJH	2.5	9.5			4	6-0-0	Design Method LSD

Width Depth Qty Plies Pcs Length

R1		rd Rimboard 125 X 9.5	1.125	1	9.5			16	12	Floor Loads
Hange	r					Be	am/Girde		ported	Live Dead Deflection Joist
Label	Pcs	Description	n S	kew	Slope	fa	steners	fas	teners	LL Span L/
H1.	3	LF179					10 10d	1 #8>	1 1/4WS	TL Span L/
H2	1	HUCQ1.81/ SDS1.75	9-							LL Cant 2L/
НЗ	1	Unknown Hanger								Deflection Girder
H4	14	LT259				4	10dx1 1/2	2 10	dx1 1/2	LL Span 1/
H5	15	MIT49.5				4	10dx1 1/2	4 10	dx1 1/2	TL Span L/
H7	1	HUC410 (N	lin)				14 16d	- 6	10d	LL Cant 2L/
H9	6	LT2-159				4	10dx1 1/2	2 10	dx1 1/2	TL Cant 2L/
Blockin	ng									Decking
Label	Descr	iption	Width	Dep	oth	Qty	Plies	Pcs	Length	Deck
BLK2	NJ		1.5		9.5	LinFt		Varies	2-0-0	Thickness
BLK2	NJ40L		3.5	1	9,5	LinFt		Varies	14-0-0	Fastener
BLK1	NJEOL	,	3.5	1	9.5	UnFt		Varies	1-0-0	Vibration
				_	0.5	1 - FT4		Mandage	04.00	1

9.5 LinFt 9.5 LinFt

	PS
l n	$\stackrel{\circ}{\longrightarrow}$
Ιì	HAILEY WILD
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100	300000000000000000000000000000000000000
2	14010

111111

Varies 21-0-0 Ceiling: Gypsum 1/2" Point Load Support 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 1.5 X 7.25 (Dropped) 1.5 X 9.5 (Dropped) 5.25 X 9.5 (Dropped)

Building Code NBCC 2010 / OBC

40

15

480

360

480

360

360

240

480

360

OSB

3/4"

Nailed & Glued

PAGE 3 OF 37

- 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)

KOTT

Version 18.40.105 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



Client: Project: Address:

8/10/2018 Designer: JO

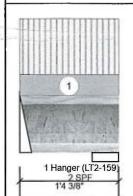
Job Name: GRANDBROOKE 2-3

Project #:

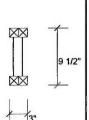
F18-A NJ 9.500"

2-Ply - PASSED

Level: Ground Floor



1'4 3/8"



Girder						omacco.	ca meac			/	Uplift)	
		Application	on: F	loor (Residenti	al)	Brg	Live		Dead	Sno	w	Wind
2		Design M	lethod: L	SD		1	32		12		0	0
on: Dry		Building (Code: N	IBCC 2010 / O	BC 2012	2	43		16		0	0
360		Load Sha	aring: N	lo		1						
240		Deck:	٨	lot Checked								
Normal		Vibration:	: N	lot Checked								
										-		
40 PSF						Bearings	and Fac	tored	Reactions			
15 PSF						Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
		-				1 - Hanger	2.000"	2%	15 / 48	63	L	1.25D+1.5L
lts							4.375"	3%	20 / 64	84	L	1.25D+1.5L
ctual	Location	Allowed	Capacity	Comb.	Case	IREEER T	O MULTIP	I E MEN	IRER TO MEM	RER]		
2 ft-lb	7"	7340 ft-lb	0.002 (0%)	1.25D+1.5L	L							
2 ft-lb	7"	7175 ft-lb	0.002 (0%)	1.25D+1.5L	L	NAILING	OR BOLT	ING REC	QUIREMENTS.			
2 lb	1 1/4"	3080 lb	0.017 (2%)	1.25D+1.5L	L						aOF	ESSIONA
.000 (L/999)	0	999.000 (L/0)	0.000 (0%)								100	181
.000 (L/999)	0	999.000 (L/0)	0.000 (0%)			POINT LO	DADS OVE	R BEAL	RINGS.		136	
.000 (L/999)	0	999.000 (L/0)	0.000 (0%)			1,000,000				N	S N.A.	EL-MASRI S
										HIS (CXC Free,	LE Mash
nailing holes.											OWN	205 9 0 A 9
signed to be su	pported on th	ne bottom edge	e only.								Aug	3, 2018
nust be fastene	d together as	per manufacti	urer's details			JUSED IN	THE DESI	GN OF T	HIS COMPONE	NT.		
t be supported	equally by all	plies.										
ced at bearings	i.											
braced at beari	ngs.											
1 . C 2 2 . C . C . C . C . C . C . C . C	360 240 Normal 40 PSF 15 PSF Its ctual 2 ft-lb 2 fb-lb 000 (L/999) 000 (L/999) 000 (L/999) aniling holes. signed to be surust be fastened be supported deed at bearings	360 240 Normal 40 PSF 15 PSF 15 PSF 15 PSF 16	360 240 Normal A0 PSF 15 PSF 15 PSF Location Allowed 7340 ft-lb 7" 7175 ft-lb 16 1 1/4" 3080 lb 16 1 1/4" 3080 lb 17 1/4" 3090 lb 18 1 1/4" 3090 lb 19 1 1/4" 3090 lb 19 1 1/4" 3090 lb 10 (L/999) 0 999.000 (L/0)	Load Sharing: Normal Deck: Normal Deck: Normal Vibration:	Load Sharing: No Deck: Not Checked	Load Sharing: No Deck: Not Checked	Load Sharing: No Deck: Not Checked Normal Vibration: Not Checked Vibration: Not Checked	Load Sharing: No Deck: Not Checked Normal Vibration: Not Checked Normal Vibration: Not Checked	Load Sharing: No Deck: Not Checked Normal Deck: Not Checked Normal Deck: Not Checked	Load Sharing: No Deck: Not Checked Normal Vibration: Not Checked	15 PSF	Load Sharing: No Deck: Not Checked Normal Deck: Not Checked Normal No

Notes

1

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.

Tie-In

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

chemicals

Handling & Installation

Handling & Installation

1. Judst flanges must not be cut or drifted

2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-py fastening details and handling-ferection details

3. Damaged Judsts must not be used

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

0-0-0 to 1-4-6 (Span)2-8-15 Top

15 PSF

40 PSF

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 for flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott

0 PSF

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



0 PSF





Client:

Project: Address: 8/10/2018

Designer: JO

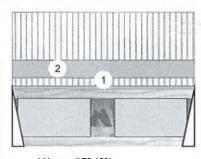
Job Name: GRANDBROOKE 2-3

Project #:

9.500"

2-Ply - PASSED

Level: Ground Floor



1 Hanger (LT2-159)

2 Hanger (LT2-159) 2'6 1/8"

2'6 1/8"

40 PSF

15 PSF



Wind

Wember Inform	nation		
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			

Unfactored Reactions UNPATTERNED Ib (Uplift)

2	262	99	0	0

Dead

99

Snow

Analysis Results

Floor Live:

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	273 ft-lb	1'3 1/16"	7340 ft-lb	0.037 (4%)	1.25D+1.5L	L
Unbraced	273 ft-lb	1'3 1/16"	5563 ft-lb	0.049 (5%)	1.25D+1.5L	L
Shear	474 lb	1 1/4"	3080 lb	0.154 (15%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/37709)	1'3 1/16"	0.077 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/14186)	1'3 1/16"	0.077 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.003 (L/10308)	1'3 1/16"	0.115 (L/240)	0.020 (2%)	D+L	L

Bearings and Factored Reactions

262

Brg

1

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	20%	123 / 393	516	L	1.25D+1.5L
2 - Hanger	2.000"	20%	123 / 393	516	L	1.25D+1.5L

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.



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 Location Trib Width Wind Comments Load Type Dead Snow 15 PSF 40 PSF 0 PSF 0 PSF Tie-In 0-0-0 to 2-6-2 (Span)1-6-7 Top 2 Part. Uniform 0-0-0 to 2-6-2 67 PLF 178 PLF 0 PLF 0 PLF Far Face

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 inlended application, and to verify the dimensions and loads.

Lumber

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

chemicals

Handling & Installation

- Handling & Installation

 1. Julist flanges must not be out or drifted

 2. Refer to latest copy of the Lifoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-pyl gastening details and handling/erection details

 3. Damaged Units 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 stiffeners for point load as shown Minimum point load bearing length>= 3.6 inches
 For fat roofs provide proper drainage to prevent ponding

Manufacturer Info

Nascor by Kott

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







Client:

Project: Address:

Designer: JO

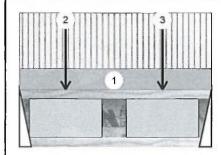
8/10/2018 Job Name: GRANDBROOKE 2-3

Project #:

9,500"

2-Ply - PASSED 50

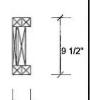
Level: Ground Floor



1 Hanger (LT2-159) 2 Hanger (LT2-159)

2'7 3/4"

2'7 3/4"



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

Unfactored Reactions UNPATTERNED Ib (Uplift)

Live	Dead	Snow	Wind
282	106	0	0
277	104	0	0
	282	282 106	282 106 0

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	306 ft-lb	1'5 11/16"	7340 ft-lb	0.042 (4%)	1.25D+1.5L	L
Unbraced	306 ft-lb	1'5 11/16"	5321 ft-lb	0.057 (6%)	1.25D+1.5L	L
Shear	550 lb	1 1/4"	3080 lb	0.178 (18%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/33872)	1'4 3/8"	0.081 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/12685)	1'4 3/8"	0.081 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.003 (L/9229)	1'4 3/8"	0.122 (L/240)	0.030 (3%)	D+L	L

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1-	2.000"	21%	132 / 423	556	L	1.25D+1.5L
Hanger						
2 -	2.000"	21%	130 / 416	545	L	1.25D+1.5L

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.



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

Point

O DOLLOTTI II	inge braced at bearings								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-7-12	(Span)1-6-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-7-11		Near Face	89 lb	237 lb	0 lb	0 lb	J11
1			(Span)1-6-7						

Near Face

3

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
 iJoist not to be treated with fire retardant or corrosive

chemicals

1-11-11

- Handling & Installation

 1. Noist flarges must not be cut or drilled

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

 3. Damaged loolists must not be used

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

90 lb

241 lb

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

Manufacturer Info

Nascor by Kott

0 lb

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



0 lb J11



Control of the Control

Page 1 of 2



Client:

Project: Address:

Designer: 10

Job Name: GRANDBROOKE 2-3

8/10/2018

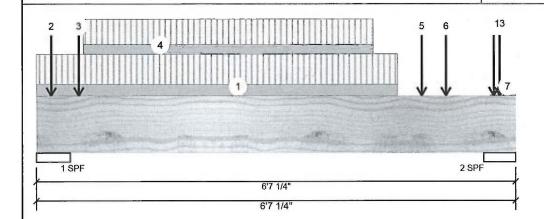
Project #:

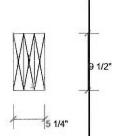
Forex 2.0E-3000Fb LVL F20-A

1.750" X 9.500"

3-Ply - PASSED

Level: Ground Floor





Member Information

Type: Girden Plies: 3 Moisture Condition: Dry Deflection LL: 360 240 Deflection TL: Importance: Normal General Load Floor Live: 40 PSF

15 PSF

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

Load Sharing: Yes Deck: Not Checked Not Checked Vibration:

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	vvina
1	6340	2651	0	0
2	4697	2104	0	0

Bearings and Factored Reactions

Cap. React D/L lb Bearing Length Total Ld. Case Ld. Comb. 1 - SPF 5.638" 3314 / 9510 12823 L 1.25D+1.5L 2 - SPF 5.250" 57% 2630 / 7045 9675 L 1.25D+1.5L

Analysis Results

Dead:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4314 ft-lb	3'2 3/8"	35449 ft-lb	0.122 (12%)	1.25D+1.5L	L
Unbraced	4314 ft-lb	3'2 3/8"	35449 ft-lb	0.122 (12%)	1.25D+1.5L	L
Shear	3272 lb	5'5 1/4"	13915 lb	0.235 (24%)	1.25D+1.5L	L
Perm Defl in.	0.009 (L/7684)	3'3 3/16"	0.194 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.023 (L/3089)	3'3 3/16"	0.194 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.032 (L/2203)	3'3 3/16"	0.291 (L/240)	0.110 (11%)	D+L	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.

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.

READ ALL NOTES ON THIS PAGE AND ON



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 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 Trib Width Live Load Type Location Side Dead Snow 101 PLF 268 PLF 0 PLF Part. Uniform 0-0-0 to 4-11-12 Far Face 1 0-2-8 1507 lb 3568 lb 0 lb 2 Top 3 Point 0-7-0 Top 568 lb 1338 lb 0 lb

85 PLF 226 PLF 0 PLF 0 PLF 0-7-12 to 4-7-12 4 Part Uniform Near Face 5-3-12 Near Face 95 lb 252 lb 0 lb 0 lb J12 5 Point

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
 LVL not to be treated with fire retardant or con-

chemicals

Handling & Installation

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

approvals
Damaged Beams must not be used
Design assumes top edge is laterally restreined
Provide lateral support at bearing points to avoid
lateral displacement and rotation

6. For flat roofs provide proper drainage to preven

Manufacturer Info

APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A7X4 905-642-4400



Wind

0 PLF

0 lb

0 lb

Comments

F11 F11

F8 F8



Page 2 of 2

12 173



Client

Project: Address:

Designer:

JO

Job Name: GRANDBROOKE 2-3

8/10/2018

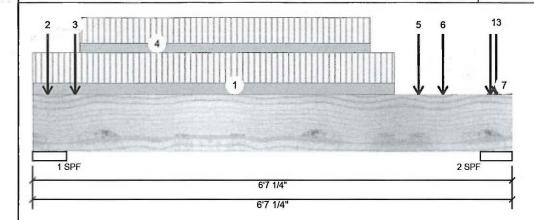
Project #:

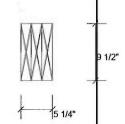
F20-A Forex 2.0E-3000Fb LVL

1.750" X 9.500"

3-Ply - PASSED

Level: Ground Floor





					_	
W		Live	Snow	Wind	i	Comments
		250 lb	0 lb	0 11)	J8
ın)(4	40 PSF	0 PSF	0 PSF	=	
		1 lb	0 lb	O II	0	J9
		0 lb	0 lb	O II)	Wall Self Weight
	2	2456 lb	0 lb	0 11	c	F7 F7
		31 lb	0 lb	0 11)	J9
		0 lb	0 lb	0 11)	Wall Self Weight
		900 lb	0 lb	0 11)	F8
		31 lb 0 lb		0 lb	0 lb 0 lb	0 lb 0 lb 0 lb

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 criticals 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
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

1. LVL beams must not be cut or drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strangth values, and code approvals

3. Damaged Beams must not be used

4. Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

APA: PR-L318

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





Member Information

Project: Address:

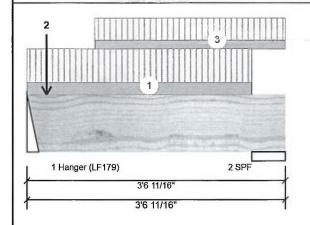
JO Designer:

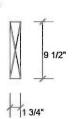
Job Name: GRANDBROOKE 2-3

8/10/2018

Project #:

Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED Level: Ground Floor





Type:	Girder		Applicat	ion: F	loor (Residenti	ial)	Brg	Live		Dead
Plies:	1		Design I	Method: L	SD		1	565		219
Moisture Condition	on: Dry		Building	Code: N	IBCC 2010 / O	BC 2012	2	568		222
Deflection LL:	360		Load Sh	naring: N	lo					
Deflection TL:	240		Deck:	N	lot Checked					
Importance:	Normal		Vibration	n: N	lot Checked					
General Load										
Floor Live:	40 PSF						Bearing	s and Fact	ored	Reactions
Dead:	15 PSF		1				Bearing	Length	Сар.	React D/L lb
							1-	2.000"	43%	273 / 848
							Hanger			
Analysis Resu	lts						2-SPF	5.500"	19%	277 / 852
Analysis A	ctual	Location	Allowed	Capacity	Comb.	Case	loccen a		FARE	IDED TO UE
Moment 7	83 ft-lb	1'7 15/16"	11362 ft-lb	0.069 (7%)	1.25D+1.5L	L				IBER TO ME R PLY TO PL
Unbraced 7	83 ft-lb	1'7 15/16"	9885 ft-lb	0.079 (8%)	1.25D+1.5L	L	11			QUIREMENT

10 3/4" 4638 lb

1'7 13/16" 0.102 (L/360) 0.020 (2%) D

1'7 13/16" 0.102 (L/360) 0.050 (5%) L

1'7 13/16" 0.153 (L/240) 0.050 (5%) D+L

Brg	Live	Dead	Snow	Wind
1	565	219	0	0
2	568	222	0	0

2.000" 43% 273 / 848 1121 L Hanger 2 - SPF 5.500" 19% 277 / 852 1129 L REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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.

PASS THRU FRAMING SQUASH

POINT LOADS OVER BEARINGS.

BLOCK IS REQUIRED AT ALL



Ld. Comb.

1.25D+1.5L

1.25D+1.5L

Total Ld. Case

Design Notes

Perm Defl in, 0.002

Shear

1 Fill all hanger nailing holes.

TL Defl inch 0.007 (L/4920)

965 lb

(L/17593) LL Defl inch 0.005 (L/6829)

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-1-3		Тор	79 PLF	210 PLF	0 PLF	0 PLF	
2	Point	0-3-5		Near Face	43 lb	116 lb	0 lb	0 lb	J6
3	Part. Uniform	0-11-5 to 3-6-11		Near Face	53 PLF	140 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				

0.208 (21%) 1.25D+1.5L L

Uniform

L

L

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 Lumber

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

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
- 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

Manufacturer Info APA; PR-L318

Kott Lumber Company 14 Anderson Blvd, Onlario 14A7X4 905-642-4400







Client:

Project: Address:

Designer: JO

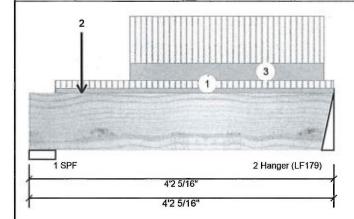
Job Name: GRANDBROOKE 2-3

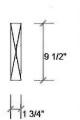
8/10/2018

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" PASSED Level Ground Floor





Member Infor	nation		
Type:	Girder	Application:	Floor (Residential)
Plies:	1	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		

	Brg	Live	Dead	Snow	Wind
	1	135	63	0	0
2	2	131	62	0	0

Cap. React D/L lb

78 / 202

77 / 197

Analysis Res	uits					
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	256 ft-lb	2'2 3/4"	11362 ft-lb	0.023 (2%)	1.25D+1.5L	L
Unbraced	256 ft-lb	2'2 3/4"	9094 ft-lb	0.028 (3%)	1.25D+1.5L	L
Shear	350 lb	1'1 1/8"	4638 lb	0.076 (8%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/46123)	2'2 9/16"	0.126 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/21407)	2'2 9/16"	0.126 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.003 (L/14621)	2'2 9/16"	0.189 (L/240)	0.020 (2%)	D+L	L

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

6%

11%

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

Bearings and Factored Reactions

Bearing Length

1 - SPF 4.375"

2.000"

2 -

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.



Ld. Comb.

1.25D+1.5L

1.25D+1.5L

Total Ld. Case

280 L

274 L

Design Notes

Dead:

1 Fill all hanger nailing holes.

15 PSF

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-4-6 to 4-2-5		Тор	6 PLF	10 PLF	0 PLF	0 PLF	
2	Point	0-8-12		Far Face	24 lb	65 lb	0 lb	0 lb	J1
3	Part. Uniform	1-4-12 to 4-0-12		Far Face	23 PLF	61 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				

Notes

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

Lumber

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

- Handling & Installation

 1. VIV. beams must not be cut or drilled

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

 3. Damaged Beams must not be used

 4. Design assumes top edge is faterally restrained

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario L4A 7X4





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Page 1 of 2



Project: Address:

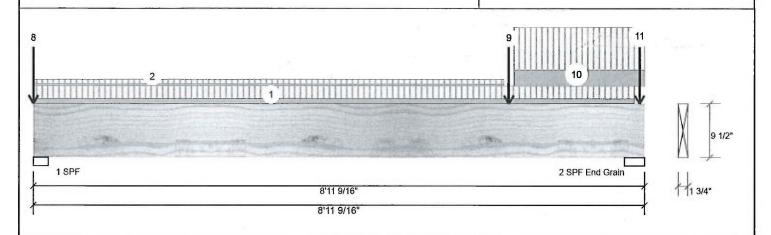
Designer: JO

Job Name: GRANDBROOKE 2-3

8/10/2018

Project #:

Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED Level: Ground Floor



Member Infor	mation		
Туре:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Conditio	n: 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		

Unfactored	Reactions	UNPATTERNED	lb	(Uplift)
------------	-----------	--------------------	----	----------

Brg	Live	Dead	Snow	Wind
1	335	168	0	0
2	1760	702	0	0

Cap. React D/L lb

210 / 502

877 / 2640

Analysis Results

	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
	Moment	2038 ft-lb	6'11 11/16"	11362 ft-lb	0.179 (18%)	1.25D+1.5L	L
	Unbraced	2038 ft-lb	6'11 11/16"	4345 ft-lb	0.469 (47%)	1.25D+1.5L	L
	Shear	1173 lb	7'11 5/16"	4638 lb	0.253 (25%)	1.25D+1.5L	L
	Perm Defl in.	0.022 (L/4715)	4'11 1/8"	0.286 (L/360)	0.080 (8%)	D	Uniform
	LL Defl inch	0.052 (L/1996)	4'11 3/4"	0.286 (L/360)	0.180 (18%)	L	L
	TL Defl inch	0.073 (L/1402)	4'11 9/16"	0.429 (L/240)	0.170 (17%)	D+L	L
_					_		

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

25%

77%

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

Bearings and Factored Reactions

Bearing Length

1 - SPF 2.625"

2 - SPF 3.500"

End

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.

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

3 Top braced at bearings.

4 Bottom 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.



Ld. Comb.

1.25D+1.5L

1.25D+1.5L

Total Ld. Case

712 L

3517 L

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 8-9-13	(Span) 0-11-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 6-10-13	(Span)0-4-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-0-0		Тор	0 lb	1 lb	0 lb	0 lb	J12
6	Point	0-0-0		Тор	25 lb	58 lb	0 lb	0 lb	J12
7	Point	0-0-0		Тор	12 lb	32 lb	0 lb	0 lb	J7
8	Point	0-0-0		Тор	21 lb	0 lb	0 lb	0 lb	Wall Self Weight
9	Point	6-11-11		Near Face	219 lb	565 lb	0 lb	0 lb	F2

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 landed application, and to verify the dimensions and loads.

Lumber

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

Handling & Installation

IAINCHING & INSTALIATION

I VVL beams must not be cut or drilled

Refer to manufacturer's product information regarding installation requirements, multi-py fastening details, beam 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 1.

6. For flat roofs provide proper drainage to prevent

Manufacturer Info APA; PR-L318

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





Page 2 of 2



Client:

Project: Address: 8/10/2018

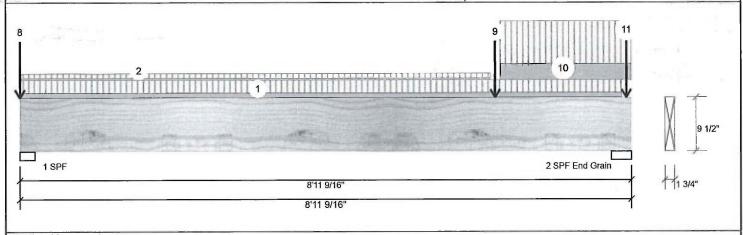
JO Designer:

Job Name: GRANDBROOKE 2-3

Project #:

F4-A Torex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED Level: Ground Floor



.. Continued from page 1

ID.	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
10	Tie-In	7-0-9 to 8-11-9	(Span)3-2-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
11	Point	8-10-11		Far Face	429 lb	1093 lb	0 lb	0 lb	F4
	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 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
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

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

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex

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





Client:

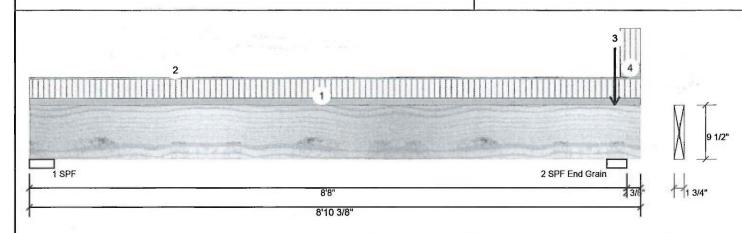
Project: Address: 8/10/2018

Designer: JO

Job Name: GRANDBROOKE 2-3

Project #:

Forex 2.0E-3000Fb LVL 9.50 3.500" - PASSED Level: Ground Floor



Type:	Girder	Application:	Floor (Residential)
Plies:	1	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		

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	41	36	0	0
2	177	101	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.375"	2%	46 / 61	106	L_	1.25D+1.5L
2 - SPF End Grain	3.500"	9%	126 / 266	392	LL	1.25D+1.5L

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.



Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment		8'8"	11362 ft-lb	0.000 (0%)	1.25D+1.5L	
Unbraced	-1 ft-lb	8'8"	11362 ft-lb	0.000 (0%)	1.25D+1.5L	LL
Pos Moment	204 ft-lb	4'4 7/8"	11362 ft-lb	0.018 (2%)	1.25D+1.5L	L_
Unbraced	204 ft-lb	4'4 7/8"	4539 ft-lb	0.045 (4%)	1.25D+1.5L	L_
Shear	80 lb	7'8 3/4"	4638 lb	0.017 (2%)	1.25D+1.5L	LL
Perm Defl in.	0.004 (L/25516)	4'4 7/8"	0.274 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.004 (L/22840)	4'4 15/16"	0.274 (L/360)	0.020 (2%)	L	L_
TL Defl inch	0.008 (L/12052)	4'4 7/8"	0.411 (L/240)	0.020 (2%)	D+L	L_
LL Cant	-0.000 (2L/16310)	Rt Cant	0.200 (2L/480)	0.001 (0%)	L	L_
TL Cant	-0.001 (2L/8647)	Rt Cant	0.300 (2L/360)	0.002 (0%)	D+L	L_

Design Notes

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

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 component suitability of the inlended application, and to verify the dimensions and loads.

Lumber

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

chemicals

- andiling & Installation.

 LVL beams must not be cut or drilled.
 Refer to manufacturer's product information regarding installation requirements, mutili-ply fastening details, 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.

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex

APA: PR-L318

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



Trib Width

(Span)0-5-8

Location

8-5-14

8-6-12 to 8-10-6 (Span)0-10-8 Top

0-0-0 to 8-10-6

0-0-0 to 8-10-6

8'10 3/8'

Side

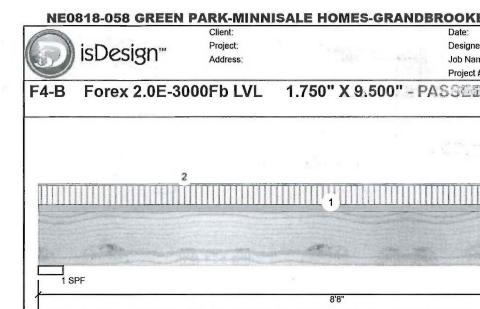
Top

Top

Far Face

Page 2 of 2

9 1/2"



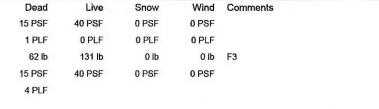
Designer: 10 Job Name: GRANDBROOKE 2-3

8/10/2018

Project #:

Croupd Floor

2 SPF End Grain



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

ID

1

2

3

Load Type

Part. Uniform Point

Self Weight

Tie-In

Tie-In

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
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

LVI 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 approvals.

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318

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

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Page 1 of 1



Client:

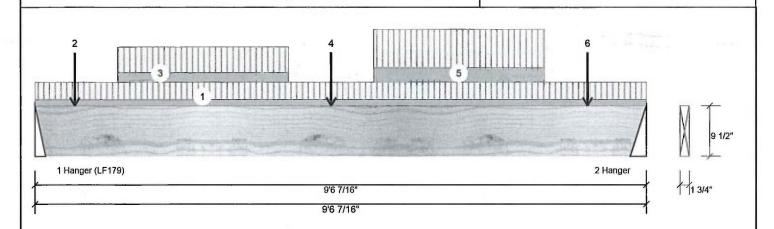
Project: Address:

8/10/2018 Designer:

Job Name: GRANDBROOKE 2-3

Project #:

1.750" X 9.500" - PASSED Level: Ground Floor Forex 2.0E-3000Fb LVL



Member Inforn	nation			Unfacto	red React	ions UNP
Type:	Girder	Application:	Floor (Residential)	Brg	Live	D
Plies:	1	Design Method:	LSD	1	981	
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012	2	1093	
Deflection LL:	360	Load Sharing:	No	1		
Deflection TL:	240	Deck:	Not Checked	1		
Importance:	Normal	Vibration:	Not Checked			
General Load						
Floor Live:	40 PSF			Bearing	and Fac	tored Rea
Dead:	15 PSF			Bearing	Length	Cap. Rea
				1 - Hanger	2.000"	75%

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4946 ft-lb	4'7 7/16"	11362 ft-lb	0.435 (44%)	1.25D+1.5L	L
Unbraced	4946 ft-lb	4'7 7/16"	4950 ft-lb	0.999 (100%)	1.25D+1.5L	L
Shear	2021 lb	8'6 11/16"	4638 lb	0.436 (44%)	1.25D+1.5L	L
Perm Defl in.	0.066 (L/1688)	4'8 15/16"	0.308 (L/360)	0.210 (21%)	D	Uniform
				0 5 10 15 1011		

LL Defl inch 0.167 (L/662) 4'9" 0.308 (L/360) 0.540 (54%) L L TL Defl inch 0.233 (L/476) 4'9" 0.462 (L/240) 0.500 (50%) D+L L

Design Notes

Analysis Results

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top must be laterally braced at a maximum of 7'6 3/8" o.c.
- 4 Bottom braced at bearings.

Unfactored Reactions	UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	981	386	0	0
2	1093	429	0	0
1				

actions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	75%	483 / 1471	1954	L	1.25D+1.5L
range						
2 -	3.000"	56%	536 / 1640	2176	L	1.25D+1.5L

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.



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 9-6-7 ((Span)3-10-9	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-7-7		Near Face	46 lb	123 lb	0 lb	0 lb	J7
3	Part. Uniform	1-3-7 to 3-11-7		Near Face	44 PLF	117 PLF	0 PLF	0 PLF	
4	Point	4-7-7		Near Face	86 lb	229 lb	0 lb	0 lb	J4
5	Part. Uniform	5-3-7 to 7-11-7		Near Face	66 PLF	175 PLF	0 PLF	0 PLF	
6	Point	8-7-7		Near Face	76 lb	203 lb	0 lb	0 lb	J4
	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 set the dimensions and loads.

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 information regarding installation requirements, multi-ply fastening details, beam strength values, and code
- tasterung details, deam strengen values, and approvals

 Damaged Beams must not be used

 Design assumes top edge is laterally restrained

 Provide lateral support at bearing points to a

 lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent

Manufacturer Info Forex APA: PR-L318

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





Member Information

Girder

Client

Project: Address: Date: 8/10/2018

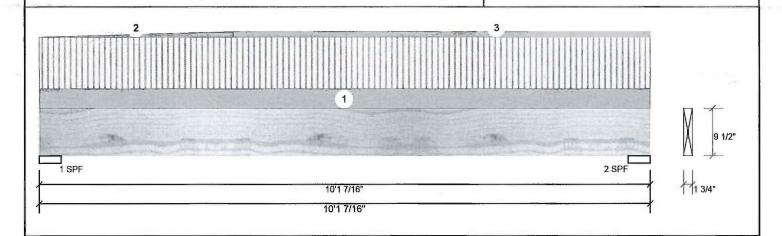
Designer: JO

Job Name: GRANDBROOKE 2-3

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED Level: Ground Floor



Plies:	1	Design Method:	LSD	1	96		63	0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	96		65	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	Сар.	React D/L lb	Total Ld. Case	Ld. Comb.
				1 - SPF	4.375"	5%	78 / 145	223 L	1.25D+1.5L
				2-SPF	4.375"	5%	82 / 145	226 L	1.25D+1.5L
Analysis Resu	lts			-					

Brg

Floor (Residential)

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	505 ft-lb	5' 13/16"	11362 ft-lb	0.044 (4%)	1.25D+1.5L	L
Unbraced	505 ft-lb	5' 13/16"	3917 ft-lb	0.129 (13%)	1.25D+1.5L	L
Shear	177 lb	9' 5/16"	4638 lb	0.038 (4%)	1.25D+1.5L	L
Perm Defl in	1, 0.010	5' 13/16"	0.317 (L/360)	0.030 (3%)	D	Uniforn

(L/10910) LL Defl inch 0.016 (L/7344) 5' 3/4" 0.317 (L/360) 0.050 (5%) L L TL Defl inch 0.026 (L/4389) 5' 13/16" 0.476 (L/240) 0.050 (5%) D+L L

Application:

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

Snow

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.



Wind

2 Top bi	raced at bearings. n braced at bearings.	ed off the bottom e	age omy.		
ID	Load Type	Location	Trib Width	Side	Dead

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-1-7	(Span)0-11-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tapered Start	0-0-0		Тор	0 PLF	0 PLF	0 PLF	0 PLF	
	End	3-2-11			2 PLF	0 PLF	0 PLF	0 PLF	
3	Part. Uniform	3-2-11 to 10-1-7		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				

Design Notes

Calcutated 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
 LVL not to be treated with fire retardant or corrosive

chemicals

- LIVI 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

fastening uses.

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex

APA: PR-L318

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



15 190

Page 1 of 1



Client:

Project: Address: Date: 8/10/2018

Designer: JO

Job Name: GRANDBROOKE 2-3

Project #:

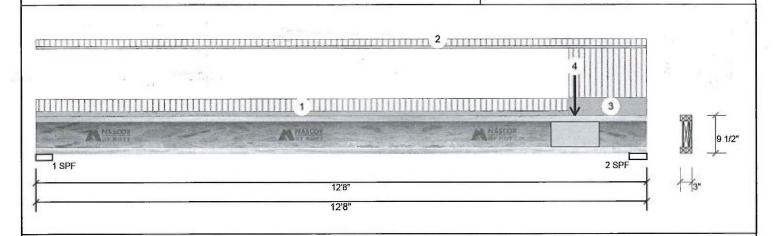
NJ

Member Information

9.500"

2-Ply - PASSED

Level: Ground Floor



Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	W	Wind
Plies:	2	Design Method:	LSD	1	166		62		0	0
Moisture Condition:	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	437		165		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	and Fac	tored R	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	4.125"	11%	78 / 249	326	L	1.25D+1.5L
				2-SPF	4.375"	28%	206 / 656	862	L	1.25D+1.5L

Analysis Kes	Analysis Kesults											
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case						
Moment	1158 ft-lb	7'7 13/16"	7340 ft-lb	0.158 (16%)	1.25D+1.5L	L						
Unbraced	1158 ft-lb	7'7 13/16"	1165 ft-lb	0.994 (99%)	1.25D+1.5L	L						
Shear	824 lb	12'4 3/8"	3080 lb	0.268 (27%)	1.25D+1.5L	L						
Perm Defl in.	0.024 (L/6152)	6'8 3/16"	0.403 (L/360)	0.060 (6%)	D	Uniform						
LL Defl inch	0.063 (L/2312)	6'8 1/8"	0.403 (L/360)	0.160 (16%)	L	L						
TL Defl inch	0.086 (L/1681)	6'8 1/8"	0.604 (L/240)	0.140 (14%)	D+L	L						

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

Unfactored Reactions UNPATTERNED lb (Uplift)

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.



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 5'10" o.c.
- 5 Bottom flange braced at bearings.

Point

ID Load Type Location Trib Width Side Dead Live Snow Wind Comments Tie-In 0-0-0 to 11-0-10 (Span)0-8-6 15 PSF 40 PSF 0 PSF 0 PSF 1 40 PSF 0 PSF 0 PSF 0-0-0 to 12-8-0 15 PSF 2 Tie-In (Span)0-4-10 Top 11-0-10 to 12-8-0 (Span)2-9-2 Top 15 PSF 40 PSF 0 PSF 0 PSF Tie-In 3 99 lb 262 lb 0 lb 0 lb F19

Far Face

Notes

4

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 corrosive

chemicals

Handling & Installation

11-2-2

- Handling & Installation

 1. Joist flanges must not be cut or drilled

 2. Refer to latest copy of the IJoist product information details for framing details, eitherner tables, web hole chart, bridging details, multi-ply fastening details and handlinglerection details

 3. Damaged IJoists 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 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







isDesign"

Client: Project: Address:

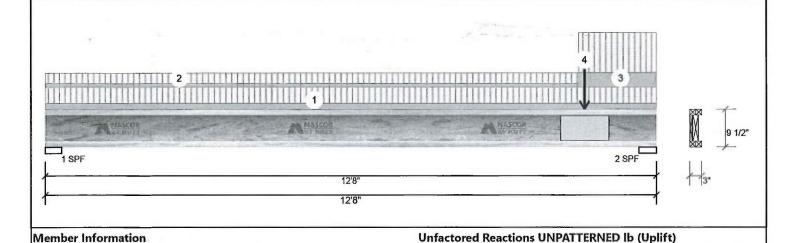
Designer: JO

8/10/2018 Job Name: GRANDBROOKE 2-3

Project #:

9.500" 2-Ply - PASSED NJ

Lavel Ground Floor



Type.	Girder	Application.	ribbi (Residential)	Brg	Live		Dead	Sho	W	vvina
Plies:	2	Design Method:	LSD	1	260		98		0	0
Moisture Conditi	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	532		200		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	and Fact	ored F	Reactions		Det see	
Dead:	15 PSF			Bearing	Length	Сар.	React D/L lb	Total	Ld, Case	Ld. Comb.
				1 - SPF	4.125"	17%	122 / 391	513	L	1.25D+1.5L
				2-SPF	4.375"	34%	250 / 797	1047	L	1.25D+1.5L

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1681 ft-lb	7'1 1/4"	7340 ft-lb	0.229 (23%)	1.25D+1.5L	L
Unbraced	1681 ft-lb	7'1 1/4"	1695 ft-lb	0.992 (99%)	1.25D+1.5L	L
Shear	1001 lb	12'4 3/8"	3080 lb	0.325 (33%)	1.25D+1.5L	L
Perm Defl in.	0.034 (L/4232)	6'6 13/16"	0.403 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.091 (L/1590)	6'6 3/4"	0.403 (L/360)	0.230 (23%)	L	L
TL Defl inch	0.125 (L/1156)	6'6 3/4"	0.604 (L/240)	0.210 (21%)	D+L	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.

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

- 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 5' o.c.
- 5 Bottom flange braced at bearings.

Ī	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	1	Tie-In	0-0-0 to 12-8-0	(Span)1-1-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	2	Tie-In	0-0-0 to 11-0-10	(Span)0-8-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	3	Tie-In	11-0-10 to 12-8-0	(Span)2-9-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	4	Point	11-2-2		Near Face	99 lb	262 lb	0 lb	0 lb	F19

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 shreid and loadings and the strip the component suitability of the shreid and the strip the decision for anning details, suitability and loadings for familing details, and manifely decided the shreid of the strip the strip the strip the strip that the strip the strip the strip the strip that the strip the strip that the stri

Lumber

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

chemicals

- Handling & Installation

 1. IJoist flarges 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-py fastering details and handling/erection details

 3. Damaged IJoists 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 stiffeners for point load as shown Minimum point load bearing length>= 3.5 inches
 For fat 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







F PHIST

Client:

Project: Address:

Designer: JO

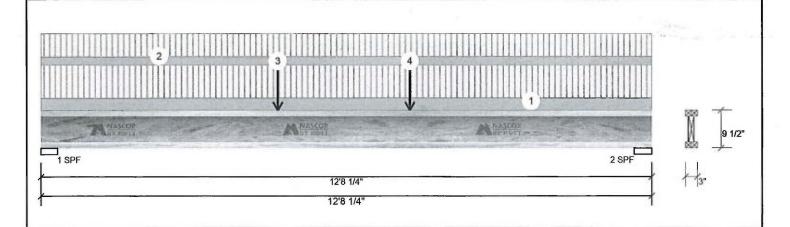
Job Name: GRANDBROOKE 2-3

8/10/2018

Project #:

9.500" 2-Ply - PASSED NJ

Level: Ground Floor



								/ - /	
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	363		136	0	0
Moisture Condition	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	363		136	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	and Fact	tored R	leactions		
Dead:	15 PSF			Bearing I	ength	Сар.	React D/L lb	Total Ld. Case	Ld. Comb.
				1-SPF 4	1.125"	23%	170 / 544	714 L	1.25D+1.5L
-				2-SPF 4	4.375"	23%	170 / 545	716 L	1.25D+1.5L
Analysis Desult	_			2 0. 1					

Analysis Results

Member Information

ase
niform

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

Unfactored Reactions UNPATTERNED lb (Uplift)

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.



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 4'6" o.c.
- 5 Bottom flange braced at bearings.

	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	1	Tie-In	0-0-0 to 12-8-4	(Span)1-6-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
	2	Tie-In	0-0-0 to 12-8-4	(Span)1-0-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
ı	3	Point	4-11-2		Far Face	12 lb	32 lb	0 lb	0 lb	F18
	4	Point	7-8-1		Far Face	12 lb	32 lb	0 lb	0 lb	F18

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 inlended application, and to verify the dimensions and loads.

Lumber

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

chemicals

Handling & Installation

Handlling & Installation

1. Joist flanges must not be cut or drilled

2. Refer to latest copy of the Joist product information details for framing details, stiffener tables, vob hole chart. bridging details, multi-py fastening details and handling feraction 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 sittleness for point load as shown Minimum point load bearing length>= 3.5 inches
 For fall roofs provide proper drainage to prevent ponding.

Nascor by Kott

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







Project: Address:

Designer: JO Job Name: GRANDBROOKE 2-3

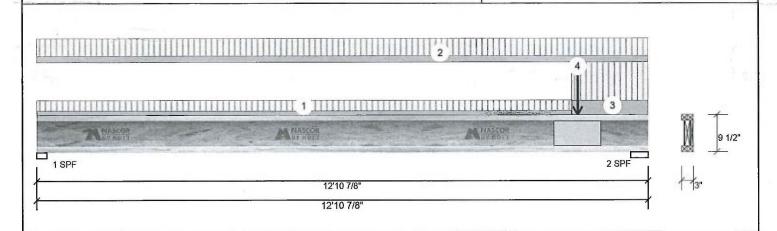
Project #:

F6-D NJ

9:500" 2-Ply - PASSED

Level: Ground Floor

8/10/2018



Туре:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	295	111	0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	587	220	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	nd Factore	d Reactions		
Dead:	15 PSF			Bearing Le	ength C	ap. React D/L lb	Total Ld. Case	Ld. Comb.
				1-SPF 2.	625" 2	1% 138 / 443	581 L	1.25D+1.5L
				2-SPF 4	375" 3	8% 275 / 881	1156 L	1.25D+1.5L

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1969 ft-lb	7'1"	7340 ft-lb	0.268 (27%)	1.25D+1.5L	L
Unbraced	1969 ft-lb	7'1"	1987 ft-lb	0.991 (99%)	1.25D+1.5L	L
Shear	1107 lb	12'7 1/4"	3080 lb	0.359 (36%)	1.25D+1.5L	L
Perm Defl in.	0.042 (L/3535)	6'7 3/16"	0.415 (L/360)	0.100 (10%)	D	Uniform
LL Defl inch	0.113 (L/1326)	6'7 3/16"	0.415 (L/360)	0.270 (27%)	L	L
TL Defl inch	0.155 (L/964)	6'7 3/16"	0.622 (L/240)	0.250 (25%)	D+L	L

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

Unfactored Reactions UNPATTERNED lb (Uplift)

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.



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 4'8" o.c.

2 Rollow	nange braced at beam	iys.			200				
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-3-8	(Span)0-9-10	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 12-10-14	(Span)1-3-6	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	11-3-8 to 12-10-14	(Span) 2-10-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	11-5-0		Far Face	104 lb	277 lb	0 lb	0 lb	F19

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 inlended application, and to verify the dimensions and loads.

Lumber

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

chemicals

Handiing & Installation

- Handling & Installation

 1. Lioist flanges must not be cut or driffled

 2. Refer to latest copy of the Lioist product Information details for framing details, stiffener lables, web hold-chart, bridging details, multi-ply restening details and handling/erection details

 3. Damaged Lioists 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 14A7X4 905-642-4400







Client:

Project: Address: 8/10/2018

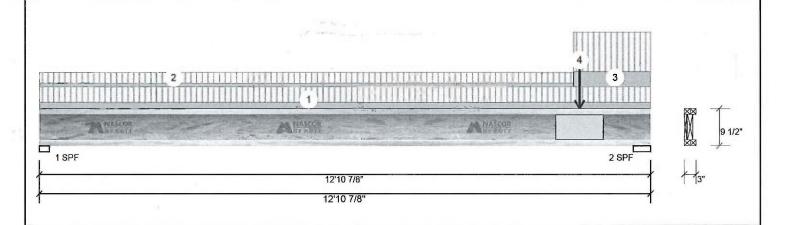
Designer: JO

Job Name: GRANDBROOKE 2-3

Project #:

NJ 9.500" 2-Ply - PASSED To The Transport of the Passed Transpor

Level: Ground Floor



Туре:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	274	103	0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	571	214	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 Factor	ed Reactions		
Dead:	15 PSF			Bearing L	ength (Cap. React D/L lb	Total Ld. Case	Ld. Comb.
				1-SPF 2	.625"	20% 129 / 412	540 L	1.25D+1.5L
		·		2-SPF 4	.375"	37% 268 / 857	1125 L	1.25D+1.5L

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1851 ft-lb	7'1 15/16"	7340 ft-lb	0.252 (25%)	1.25D+1.5L	L
Unbraced	1851 ft-lb	7'1 15/16"	1875 ft-lb	0.987 (99%)	1.25D+1.5L	L
Shear	1077 lb	12'7 1/4"	3080 lb	0.350 (35%)	1.25D+1.5L	L
Perm Defl in.	0.040 (L/3757)	6'7 7/16"	0.415 (L/360)	0.100 (10%)	D	Uniform
LL Defl inch	0.106 (L/1409)	6'7 7/16"	0.415 (L/360)	0.260 (26%)	L	L
TL Defl inch	0.146 (L/1025)	6'7 7/16"	0.622 (L/240)	0.230 (23%)	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.

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

Unfactored Reactions UNPATTERNED lb (Uplift)

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.



3 DUMUIT Hange	blaced at bearing	1.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-10-14	(Span)1-1-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 11-3-8	(Span)0-9-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	11-3-8 to 12-10-14	(Span) 2-10-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	11-5-0		Near Face	106 lb	282 lb	0 lb	0 lb	F19

Cacutated 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
 Upist not to be treated with fire retardant or corrosive

chemicals

- landling & Installation

 Libots flanges must not be cut or drilled

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

 Damaged Libots 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 fat 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







Client

Project: Address: 8/10/2018

Designer: JO

Job Name: GRANDBROOKE 2-3

Project #:

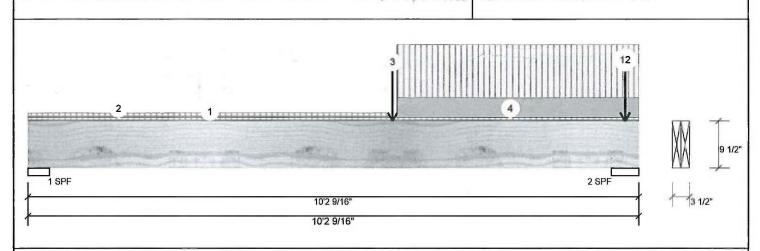
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Cround Floor

There's



Brg

Plies:	2	Design Method:	LSD	1	673	298	0	
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1529	691	69	
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 Facto	red Reactions		
Dead:	15 PSF			Bearing L		Cap. React D/L lb	Total Ld. Ca	ase

Floor (Residential)

Analysis Results

Member Information

Type:

Girder

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6869 ft-lb	6'1 1/4"	22724 ft-lb	0.302 (30%)	1.25D+1.5L	L
Unbraced	6869 ft-fb	6'1 1/4"	20936 ft-lb	0.328 (33%)	1.25D+1.5L	L
Shear	2387 lb	9' 5/16"	9277 lb	0.257 (26%)	1.25D+1.5L	L
Perm Defl in.	0.043 (L/2640)	5'6 5/16"	0.317 (L/360)	0.140 (14%)	D	Uniform
LL Defl inch	0.104 (L/1098)	5'6 3/4"	0.317 (L/360)	0.330 (33%)	L+0.5S	L
TL Defl inch	0.147 (L/776)	5'6 5/8"	0.476 (L/240)	0.310 (31%)	D+L+0.5S	L

Application:

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.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

373 / 1010 1382 L 1 - SPF 4.375"

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

Live

2-SPF 5.500"

27% 864 / 2327

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

3191 L

Snow

1.25D+1.5L 1.25D+1.5L +0.58

Ld. Comb.

Wind

0 0

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.



	, garotal ololias										
	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
	1	Tie-In	0-0-0 to 10-2-9	(Span)0-6-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
	2	Tie-In	0-0-0 to 6-0-6	(Span)0-9-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
	3	Point	6-1-4		Near Face	386 lb	981 lb	0 lb	0 lb	F4	
	4	Part, Uniform	6-2-2 to 10-2-9		Тор	90 PLF	240 PLF	0 PLF	0 PLF		
	5	Point	9-11-13		Тор	9 lb	0 lb	22 lb	0 lb		
~		0									

Continued on page 2...

Notes

Calculated Shuctured 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
 LVL not to be treated with fire retardant or corrosive

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
- 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

Manufacturer Info

APA: PR-L318

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



Page 2 of 2



Client:

Project: Address: 8/10/2018

Designer: J O

Job Name: GRANDBROOKE 2-3

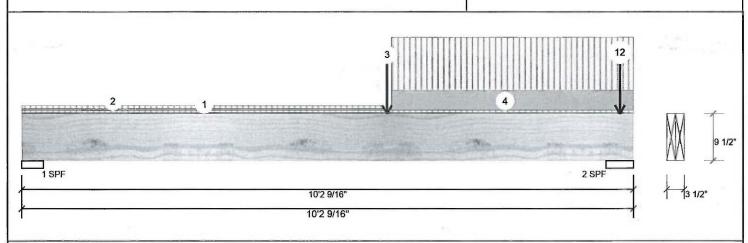
Project #:

F7-C Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor



Continued fr	rom page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	9-11-13		Тор	6 lb	14 lb	0 lb	0 lb	J4
7	Point	9-11-13		Тор	5 lb	0 lb	0 lb	0 lb	Wall Self Weight
8	Point	9-11-13		Тор	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
9	Point	9-11-13		Тор	20 lb	0 lb	47 lb	0 lb	
10	Point	9-11-13		Тор	14 lb	30 lb	0 lb	0 lb	J4
11	Point	9-11-13		Тор	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
12	Point	9-11-13		Тор	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight				8 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

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

Lumber

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

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 according to the product of t
- approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prever ponding

Manufacturer Info

Forex APA: PR-L318

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





Project: Address: 8/10/2018

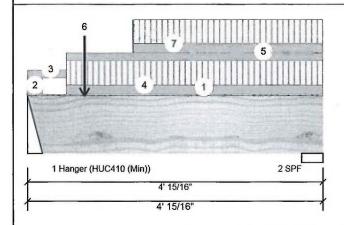
Designer: JO

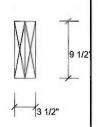
Job Name: GRANDBROOKE 2-3

Project #:

Forex 2.0E-3000Fb LVL == 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor





Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	w	Wind	
Plies:	2	Design Method:	LSD	1	900		515		0	0	
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1086		592		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-	2.500"	31%	644 / 1350	1994	L	1.25D+1.5L	
				Hanger							
Analysis Resu	ts			2-SPF	3.500"	31%	740 / 1629	2369	L	1.25D+1.5L	

Allaly Sis ites						
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1935 ft-lb	2' 1/8"	22724 ft-lb	0.085 (9%)	1.25D+1.5L	L
Unbraced	1935 ft-lb	2' 1/8"	22724 ft-lb	0.085 (9%)	1.25D+1.5L	L
Shear	2005 lb	11 1/4"	9277 lb	0.216 (22%)	1.25D+1.5L	L
Perm Defl in.	0.004 (L/10899)	2'	0.123 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.007 (L/5958)	2' 1/16"	0.123 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.012 (L/3852)	2'	0.185 (L/240)	0.060 (6%)	D+L	L

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

Unfactored Reactions UNPATTERNED Ib (Uplift)

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.



Design Notes

1 Fill all hanger nailing holes.

Member Information

- 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	Tie-In	0-0-0 to 4-0-15	(Span)0-8-14	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-2-8		Тор	46 PLF	123 PLF	0 PLF	0 PLF	J9
3	Part. Uniform	0-0-0 to 0-6-7		Тор	82 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Part. Uniform	0-6-7 to 4-0-15		Тор	96 PLF	257 PLF	0 PLF	0 PLF	J9
5	Part. Uniform	0-6-7 to 4-0-15		Тор	82 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight

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 landed application, and to verify the dimensions and loads.

Lumber

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire retardant or corrosive
- Handling & Installation LVL beams must not be cut or drilled
 Refer to manufacturer's product infor regarding installation requirements, m fastening details, beam strength values, and

approvals

Damaged Beams must not be used

Design assumes top edge is laterally restrained

Environment of the support at bearing points to avoid lateral displacement and rotation

Manufacturer Info

APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Onlario L4A7X4 905-642-4400

Page 2 of 2



Client: Project:

Address:

8/10/2018 Designer: JO

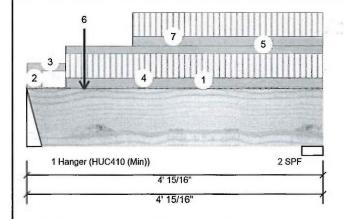
Job Name: GRANDBROOKE 2-3

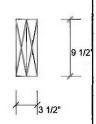
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" Bly PASSED

Level: Ground Floor





...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	0-9-8		Near Face	122 lb	326 lb	0 lb	0 lb	J8
7	Part. Uniform	1-5-8 to 4-0-15		Near Face	95 PLF	254 PLF	0 PLF	0 PLF	
	Self Weight				8 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.

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 sustability of the Intended application, and to verify the dimensions and loads.

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

chemicals

- Handling & Installation

 1. LVL beams must not be cut or drilled

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

 3. Damaged Beams must not be used

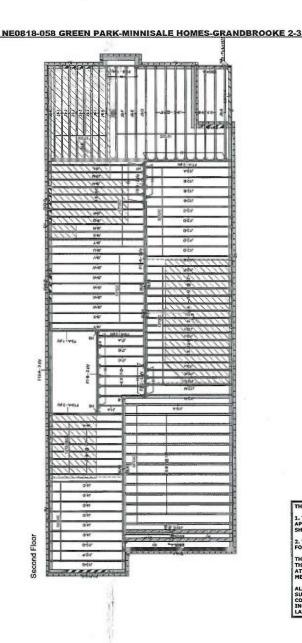
 4. Design assumes top edge is laterally restrained

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

- For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex

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



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/timioist.

5. Refer to Nescor 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 Load transfer blocks to be installed under all point loads.

i. It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's stendards.

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" c/e). All other components and structural elements supporting the floor system such as beams, wells, columns, and foundation walls and footings including anchorage of components and bracing for lateral stability are 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

ARCHITECTURAL DRAWINGS:

VA3 DESIGN 255 CONSUMERS ROAD, TORONTO, ON Date: 5/15/18 Project No: 18012 Address: GRANDBROOKE 2.BRAMPTON, ON

R1		rd Rimboard .125 X 9.5	1.125		9.5				16	12
Blockin	ıg						-			
Label	Descri	iption	Width	De	pth	Qt	у	Plios	Pcs	Longth
BLK1	NJ60U		35		9.5	Lini	Ft		Vanes	15-0-0
BLK1	NJH		2.5		9.5	Lini	Ft		Varies	51-0-0
Hanger	Pcs	Description	n E	Skow	Slop			am/Girder	Me	pported ember steners
НЗ	1	Unknown Hanger								
H4	39	LT259					41	10dx1 1/2	2 10	0dx1 1/2
H5	1	MIT49.5					41	0dx1 1/2	4 10	0dx1 1/2
H6	1	LF359						10 10d	2 #8;	x1 1/4WS
H7	1	HUC410 (M	din)			\perp	_	14 16d		5 10d
HB	1	HGUS410				\neg	- 4	46 16d	1	6 16d

Width Depth Qty

9.5

9.5

9.5

9.5

Width Depth Qty Plies Pcs Length

1.75 11.875

3.5 9.5

2.5 9.5

2.5 9.5

25 9.5 2.5 9.5

1.75 9.5

1.75 9.5

1.75

Plies Pcs Length

31 12-0-0

Second Floor LVL/LSL

Label Description F12 Forex 2.0E-3000Fb LVL

2.0E-3000Fb LVL

Forex 2.0E-3000Fb LVL

2.0E-3000Fb LVL

Forex 2.0E-3000Fb LVL

Forex 2.0E-3000Fb LVL

2.0E-3000Fb LVL

2.0E-3000Fb LVL

Forex

Label Description

J10 NJ60U

J3 NJ60U

HLM 6F J12 NJH

J4 NJH

J7 NJH J1 NJH

Rim Board

F11

Joist

PAGE 26 OF 37

Lavout Name 12-0-0 GRANDBROOKE 2-3 10-0-0 Design Method LSD 8-0-0 Description 6-0-0 Created June 07, 2018 6-0-0 Builder Sales Rep 16-0-0 Designer 10

Shipping 13 16-0-0 Project 1 8-0-0 Builder's Project 40 14-0-0 Kott Lumber Company 14 Anderson Blvd

14 10-0-0 7 8-0-0 Stouffville, Ontario Canada 1 4-0-0 L4A 7X4 905-642-4400

Label Description Width Depth Qty Plies Pcs Length Second Floor Design Method LSD Building Code NBCC 2010 / OBC 2012

Floor Loads Live Dead Deflection Joist LL Span L/ TL Span L/ LL Cant 2L/ TL Cant 2L/ Deflection Girder

15

480

360

480

360

240

480

360

LL Span L/ TL Span L/ 11 Cant 21/ TL Cant 2L/ Decking Deck

OSB Thickness Fastener Nailed & Glued Vibration Gypsum 1/2"

Ceiling Point Load Support Load from Above

Wall Opening Norbord Rimboard Plus 1.125 X 9.5 NJ60U 9.5

NJH 95 Forex 2.0F-3000Fb LVL 1.75 X 9.5 Forex 2.0E-3000Fb LVL 1.75 X 11.875

0 X 0 (Dropped) 5.75 X 9.5 (Dropped)

1. OBC 2012 O.Reg 332/12 as amended

Wall

- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -14056-R
- 4. CAN/CSA-086-09

Legend

0

111111

5. CCMC -12787-R APA PR-L310(C)

THIS CERTIFICATION IS TO CONFIRM THAT:

THE LOADS USED IN THE CALCULATION OF THE ATTACHED APPROVED COMPONENTS CONFORM TO THE FLOOR ASSEMBLY

REFER TO MULTIPLE MEMBER TO MEMBER

CONNECTION DETAIL FOR PLY TO PLY

NAILING OR BOLTING REQUIREMENTS.

READ ALL NOTES ON THIS PAGE AND ON

NOTE PAGE IS AN INTEGRAL PART OF THIS

CONTAINS SPECIFICATIONS AND CRITERIA

USED IN THE DESIGN OF THIS COMPONENT.

N.A. EL-MASRI

ENGINEERING NOTE PAGE ENP-2. THIS

CALCULATION SUMMARY PAGE AS IT

PASS THRU FRAMING SQUASH

POINT LOADS OVER BEARINGS.

BLOCK IS REQUIRED AT ALL

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 FOOTINGS INCLUDING ANCHORAGE OF COMPONENTS AND BRACING FOR LATERAL STABILITY ARE THE RESPONSIBILITY OF OTHERS.

Version 18.40.105 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



Project: Address: 8/10/2018

Designer: JO

Job Name: GRANDBROOKE 2-3

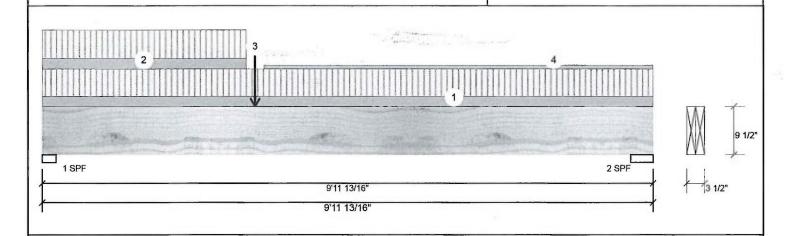
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply PASSED

Level: Second Floor



Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	w	Wind
Plies:	2	Design Method:	LSD	1	605		295		0	0
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012	2	353		198		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	and Facto	ored R	Reactions			
Dead:	15 PSF			Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF	2.750"	22%	369 / 907	1276	L	1.25D+1.5L
				2-SPF	4.375"	8%	247 / 530	777	L	1.25D+1.5L

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3656 ft-lb	3'5 3/4"	22724 ft-lb	0.161 (16%)	1.25D+1.5L	L
Unbraced	3656 ft-lb	3'5 3/4"	20936 ft-lb	0.175 (17%)	1.25D+1.5L	L
Shear	1185 lb	11 1/2"	9277 lb	0.128 (13%)	1.25D+1.5L	L
Perm Defl in.	0.026 (L/4434)	4'6 1/8"	0.317 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.052 (L/2202)	4'5 3/16"	0.317 (L/360)	0.160 (16%)	L	L
TL Defl inch	0.078 (L/1471)	4'5 1/2"	0.476 (L/240)	0.160 (16%)	D+L	L

REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS. PASS THRU FRAMING SQUASH

Unfactored Reactions UNPATTERNED lb (Uplift)

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.



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.
- e ratio based on full coation width

6 Lateral S	lenderness ratio based of	on full section width.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 9-11-13	(Span)1-0-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 3-4-0	(Span)1-1-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	3-5-12		Near Face	291 lb	672 lb	0 lb	0 lb	F7
4	Part. Uniform	3-7-9 to 9-11-13		Тор	3 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

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 inlended application, and to verify the dimensions and loads.

Lumber

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

Handling & Installation

- Handling & Installation

 1. U.V. beams must not be cut or drilled

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

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318

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







Client:

Project: Address:

Designer: JO

Job Name: GRANDBROOKE 2-3

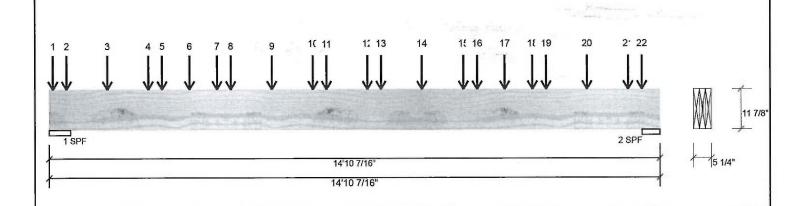
8/10/2018

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 11.875"

3-Ply - PASSED Level: Second Floor



	Building Code: Load Sharing:	LSD NBCC 2010 / OBC 2012 Yes	1 2	3510 3568	1498 1507	0 0	0
	Load Sharing:		2	3568	1507	0	0
l l		Yes					
	Dook:						
	Deck.	Not Checked					
mal	Vibration:	Not Checked					
PSF			Bearings	and Facto	ored Reactions		
PSF			Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
			1 - SPF	6.313"	35% 1873 / 5265	7138 L	1.25D+1.5L
			2-SPF	5.188"	43% 1884 / 5352	7235 L	1.25D+1.5L
				Bearing 1 - SPF	Bearing Length	Bearing Length Cap. React D/L lb 1 - SPF 6.313" 35% 1873 / 5265	Bearing Length Cap. React D/L lb Total Ld. Case 1 - SPF 6.313" 35% 1873 / 5265 7138 L

Milaly 313 Itc	Juits					
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	24212 ft-lb	7'9 1/16"	53447 ft-lb	0.453 (45%)	1.25D+1.5L	L
Unbraced	24212 ft-lb	7'9 1/16"	50392 ft-lb	0.480 (48%)	1.25D+1.5L	L
Shear	6521 lb	1'5 7/16"	17394 lb	0.375 (37%)	1.25D+1.5L	L
Perm Defl in	, 0.131 (L/1286)	7'5 3/4"	0.468 (L/360)	0.280 (28%)	D	Uniform
LL Defl inch	0.311 (L/541)	7'5 15/16"	0.468 (L/360)	0.670 (67%)	L	L

7'5 7/8" 0.702 (L/240) 0.630 (63%) D+L

Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
- 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.

TL Defl inch 0.442 (L/381)

Member Information

- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

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

Unfactored Reactions UNPATTERNED Ib (Uplift)

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.



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Point	0-1-1		Тор	63 lb	167 lb	0 lb	0 lb	J9	
2	Point	0-5-1		Тор	49 lb	112 lb	0 lb	0 lb	J12	
3	Point	1-5-1		Тор	228 lb	572 lb	0 lb	0 lb	J12 J9	
4	Point	2-5-1		Тор	100 lb	230 lb	0 lb	0 lb	J12	
5	Point	2-9-1		Тор	128 lb	342 lb	0 lb	0 lb	J9	
continued or	n 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 inlended application, and to verify the dimensions and loads.

Lumber

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

Handling & Installation

- LVL beams must not be cut or drilled
 Refer to manufacturers product information regarding installation requirements. mutti-ply fastening details, 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

For flat roofs provide proper drainage to prevent poorling

Manufacturer Info Forex

APA: PR-L318

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



Page 2 of 2

A



Project:

Address:

Date:

Designer: JO

Job Name: GRANDBROOKE 2-3

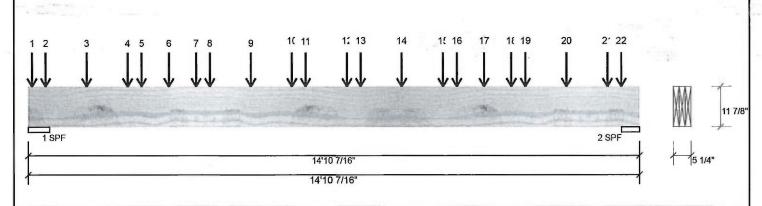
Project #:

F11-A Forex 2.0E-3000Fb LVL

1.750" X 11.875"

3-Ply - PASSED Level: Second Floor

8/10/2018



Continued fro	om page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-5-1		Тор	100 lb	230 lb	0 lb	0 lb	J12
7	Point	4-1-1		Тор	128 lb	342 lb	0 lb	0 lb	J9
8	Point	4-5-1		Тор	99 lb	230 lb	0 lb	0 lb	J12
9	Point	5-5-1		Тор	228 lb	572 lb	0 lb	0 lb	J9 J12
10	Point	6-5-1		Тор	117 lb	268 lb	0 lb	0 lb	J12
11	Point	6-9-1		Тор	128 lb	342 lb	0 lb	0 lb	J9
12	Point	7-9-1		Тор	118 lb	307 lb	0 lb	0 lb	J12
13	Point	8-1-1		Тор	112 lb	299 lb	0 lb	0 lb	J9
14	Point	9-1-1		Тор	211 lb	563 lb	0 lb	0 lb	J9 J12
15	Point	10-1-1		Тор	97 lb	256 lb	0 lb	0 lb	J9
16	Point	10-5-1		Тор	115 lb	307 lb	0 lb	0 lb	J12
17	Point	11-1-1		Тор	98 lb	256 lb	0 lb	0 lb	J9
18	Point	11-9-1		Тор	115 lb	307 lb	0 lb	0 lb	J12
19	Point	12-1-1		Тор	105 lb	256 lb	0 lb	0 lb	J9
20	Point	13-1-1		Тор	228 lb	563 lb	0 lb	0 lb	J12 J9
21	Point	14-1-1		Тор	112 lb	253 lb	0 lb	0 lb	J9
22	Point	14-5-1		Тор	114 lb	304 lb	0 lb	0 lb	J12
	Self Weight				14 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.

Calcutated 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 substibility of the Intended application, and to verify the dimensions and loads.

Lumber

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

chemicals

- Handling & Installation

 1. LVL beams must not be cut or drilled

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

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex

APA: PR-L318

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



Client:

Project: Address: Date:

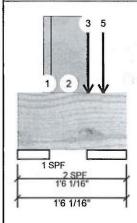
Designer: JO

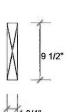
Job Name: GRANDBROOKE 2-3

8/10/2018

Project #:

Forex 2.0E-3000Fb LWL 201750" X 9.500" - PASSED Level: Second Floor





Member Inforn	nation			Unfactored Reactions UNPATTERNED lb (Uplift)						
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	W	Wind
Plies:	1	Design Method:	LSD	1	0		30		0	0
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012	2	394		468	43	1	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 F	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	5.375"	1%	41/0	41	Uniform	1.4D
nalysis Results				2-SPF	6.500"	20%	585 / 844	1428	L	1.25D+1.5S +0.5L

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6 ft-lb	8 7/16"	7385 ft-lb	0.001 (0%)	1.4D	Uniform
Unbraced	6 ft-lb	8 7/16"	7385 ft-lb	0.001 (0%)	1.4D	Uniform
Shear	38 lb	2 13/16"	3015 lb	0.013 (1%)	1.4D	Uniform
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

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.



Design Notes

- 1 Performed Secondary Bearing Check (CSA 086-14 6.5,7.3). Assumed point load size: beam width X 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Top braced at bearings.

4 DOLLOHI DI	aceu at bearings.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-4-6 to 0-5-10		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-5-10 to 0-11-8		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Point	0-11-13		Far Face	440 lb	394 lb	428 lb	0 lb	J3
4	Point	1-2-4		Тор	1 lb	0 lb	3 lb	0 lb	
5	Point	1-2-4		Тор	3 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Self Weight				4 PLF				

Calculated Shuctured 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
 LVL not to be treated with fire retardant or corrosive

chemicals

- Handling & Installation

 1. IV/L beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multiply fastening details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex

APA: PR-L318

Kott Lumber Company 14 Anderson Blyd, Onlario Canada L4A 7X4 905-642-4400





Project: Address:

8/10/2018

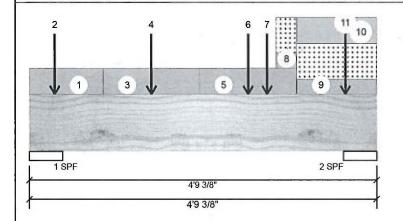
Designer: JO

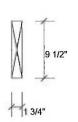
Job Name: GRANDBROOKE 2-3

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED Level: Second Floor





Unfactored Reactions UNPATTERNED Ib (Uplift) Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition	on: 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	40	

				•
Brg	Live	Dead	Snow	Wind
1	452	377	87	0
2	429	448	244	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React U/L ID	Iotai	La. Case	La. Comp.
1 - SPF	5.500"	20%	471 / 721	1192	L	1.25D+1.5L +0.5S
2 - SPF	5.500"	22%	560 / 766	1326	L	1.25D+1.5L +0.5S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1321 ft-lb	3' 3/16"	11362 ft-lb	0.116 (12%)	1.25D+1.5L +0.5S	L
Unbraced	1321 ft-lb	3' 3/16"	8845 ft-lb	0.149 (15%)	1.25D+1.5L +0.5S	L
Shear	972 lb	3'7 1/8"	4638 lb	0.210 (21%)	1.25D+1.5L +0.5S	L
Perm Defl in.	0.008 (L/6321)	2'6 7/16"	0.133 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.010 (L/4823)	2'6 1/8"	0.133 (L/360)	0.070 (7%)	L+0.5S	L
TL Defl inch	0.018 (L/2736)	2'6 5/16"	0.200 (L/240)	0.090 (9%)	D+L+0.5S	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.

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

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

	3 Bottom braced	at bearings.									
Г	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
l	1	Part. Uniform	0-0-0 to 1-0-4		Тор	24 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	
l	2	Point	0-4-4		Far Face	65 lb	111 lb	0 lb	0 lb	J9	
	3	Part. Uniform	1-0-4 to 2-4-4		Тор	24 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	
	4	Point	1-8-4		Far Face	199 lb	334 lb	0 lb	0 lb	J9	
	5	Part. Uniform	2-4-4 to 3-8-4		Тор	24 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	
	6	Point	3-0-4		Far Face	290 lb	334 lb	184 lb	0 lb	J9	
	7	Point	3-3-5		Тор	35 lb	0 lb	71 lb	0 lb	Header Column	

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. If 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

chemicals

Handling & Installation

landling & Installation

LVL beams must not be cut or drilled.
Refer to manufacturer's product information regarding installation requirements, mutti-pit fastening details, 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

For flat roofs provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info Forex APA: PR-1.318

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





FRENCHTON.

Page 2 of 2



Client: Project: Address:

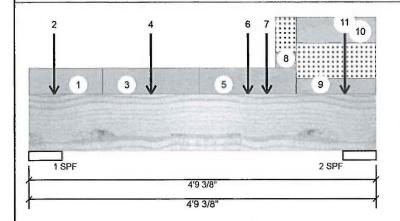
8/10/2018 Designer:

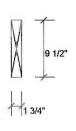
10 Job Name: GRANDBROOKE 2-3

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED Level: Second Floor





Continued fr	om page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
8	Tapered Start	3-4-13		Тор	14 PLF	0 PLF	33 PLF	0 PLF	
	End	3-8-4			14 PLF	0 PLF	33 PLF	0 PLF	
9	Tapered Start	3-8-4		Тор	14 PLF	0 PLF	33 PLF	0 PLF	
	End	4-9-6			14 PLF	0 PLF	33 PLF	0 PLF	
10	Part. Uniform	3-8-4 to 4-9-6		Тор	24 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
11	Point	4-4-4		Far Face	84 lb	102 lb	30 lb	0 lb	J9
	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.

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
 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
- tastering details, 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.

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

APA: PR-L318

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





Project: Address: 8/10/2018

Designer: JO

Job Name: GRANDBROOKE 2-3

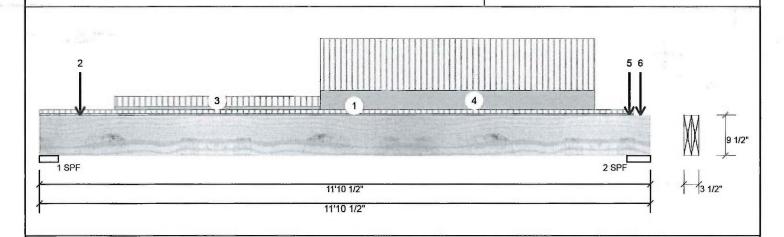
Project #:

Forex 2:0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



Plies:	2	Design Method:	LSD	1	686	304	0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	2456	1023	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 Factored	Reactions		
Dead:	15 PSF			Bearing L	ength Cap	. React D/L lb	Total Ld. Case	Ld. Comb.
				1 - SPF 4	.375" 15%	380 / 1029	1409 L	1.25D+1.5L
	_			2-SPF 5	.500" 42%	1279 / 3684	4964 L	1.25D+1.5L

Brg

Floor (Residential)

Analysis Results

Member Information

Type:

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5826 ft-lb	6'9 1/16"	22724 ft-lb	0.256 (26%)	1.25D+1.5L	L
Unbraced	5826 ft-lb	6'9 1/16"	20256 ft-lb	0.288 (29%)	1.25D+1.5L	L
Shear	2093 lb	10'8 1/4"	9277 lb	0.226 (23%)	1.25D+1.5L	L
Perm Defl in.	0.056 (L/2399)	6'1 15/16"	0.373 (L/360)	0.150 (15%)	D	Uniform
LL Defl inch	0.133 (L/1008)	6'2 1/4"	0.373 (L/360)	0.360 (36%)	L	L
TL Defl inch	0.189 (L/710)	6'2 3/16"	0.559 (L/240)	0.340 (34%)	D+L	L

Application:

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.
- end on full eaction width

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

Unfactored Reactions UNPATTERNED Ib (Uplift)

Dead

Snow

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

Live

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.



Wind

6 Lateral	sienderness ratio based c	in full section width.								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1	Tie-In	0-0-0 to 11-6-7	(Span) 0-10-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2	Point	0-9-8		Near Face	19 lb	51 lb	0 lb	0 lb	J9	
3	Part. Uniform	1-5-8 to 5-5-8		Near Face	18 PLF	47 PLF	0 PLF	0 PLF		
4	Part. Uniform	5-5-8 to 10-9-8		Near Face	93 PLF	247 PLF	0 PLF	0 PLF		
5	Point	11-5-8		Near Face	62 lb	165 lb	0 lb	0 lb	J9	
6	Point	11-8-3		Far Face	509 lb	1211 lb	0 lb	0 lb	F8	
	Self Weight				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.

Lumber

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

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 approvals.
- 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

Manufacturer Info Forex

APA: PR-L318

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





Client:

Project: Address: 8/10/2018

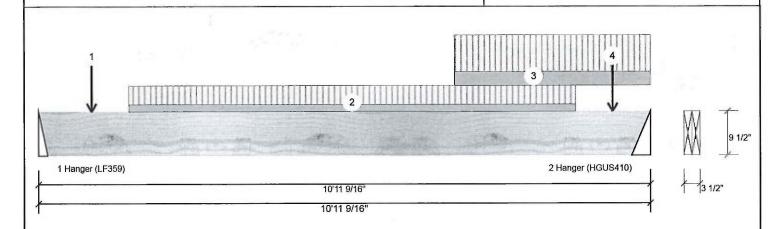
Designer: JO

Job Name: GRANDBROOKE 2-3

Project #:

Forex 2.0E-3000Fb LVL 1.7549 10-5500 2-Ply - PASSED

Level: Second Floor



Member Info	rmation			Unfacto	red React	ions U	NPATTERNE	D lb (Uplift)
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Sno	w
Plies:	2	Design Method:	LSD	1	672		291		0
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1374		555		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 l	Reactions		
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case
				1 - Hanger	2.000"	26%	364 / 1007	1371	L
Inalycic Pocu	ilte			2-	4 000"	27%	694 / 2062	2756	1

L

L

Analysis Kes	Suits					
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4806 ft-lb	6'4 5/16"	22724 ft-lb	0.211 (21%)	1.25D+1.5L	L
Unbraced	4806 ft-lb	6'4 5/16"	20509 ft-lb	0.234 (23%)	1.25D+1.5L	L
Shear	2244 lb	9'10 13/16"	9277 lb	0.242 (24%)	1.25D+1.5L	L
Perm Defl in.	0.044 (L/2912)	5'7 3/8"	0.353 (L/360)	0.120 (12%)	D	Uniform

5'7 3/8" 0.353 (L/360) 0.120 (12%) D 5'7 3/4" 0.353 (L/360) 0.300 (30%) L 5'7 5/8" 0.530 (L/240) 0.280 (28%) D+L

Hanger 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.



Wind 0 0

Ld. Comb. 1.25D+1.5L 1.25D+1.5L

Design Notes

1 Fill all hanger nailing holes.

LL Defl inch 0.105 (L/1214)

TL Defl inch 0.148 (L/857)

- 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 clanderness ratio based on full section width

/ Lateral	siendeniess ratio based	on full section width.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-11-8		Near Face	30 lb	80 lb	0 lb	0 lb	J1
2	Part. Uniform	1-7-8 to 9-7-8		Near Face	46 PLF	124 PLF	0 PLF	0 PLF	
3	Part. Uniform	7-5-9 to 10-11-9		Тор	90 PLF	240 PLF	0 PLF	0 PLF	
4	Point	10-3-8		Near Face	50 lb	134 lb	0 lb	0 lb	J7
	Self Weight				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 consure the component suitability of the Intended application, and to verify the dimensions and loads.

Lumber

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

chemicals

- ARCHING of 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

fastening details, 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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318

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





Client:

Project: Address:

Designer: JO

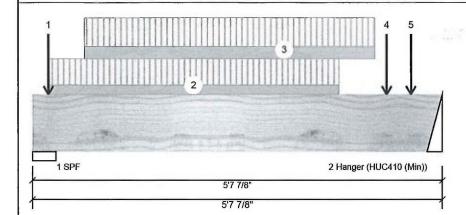
Job Name: GRANDBROOKE 2-3

8/10/2018

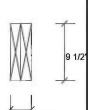
Project #

F8-B Forex 2.0E-3000Fb LVL

1.750" X 9.500" 2-Ply - PASS - Level Serond Floor



Vibration:



Member Information					
Type:	Girder				
Plies:	2				
Moisture Condition:	Dry				
Deflection LL:	360				
Deflection TL:	240				
Importance:	Normal				
General Load					
Floor Live:	40 PSF				
Dead:	15 PSF				

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

Not Checked

Brg 2

Wind Live Dead Snow 1338 568 0 0 0 1211 509 0

Bearings and Factored Reactions Bearing Length 1 - SPF 3.893" 2 -

Hanger

Cap. React D/L lb Total Ld. Case 32% 710 / 2006 2716 L 38% 637 / 1817 2454 L

Ld. Comb. 1.25D+1.5L 1.25D+1.5L

Analysis Results

Analysis Actual Location Allowed Capacity Comb. Case Moment 3255 ft-lb 2'10 1/2" 22724 ft-lb 0.143 (14%) 1.25D+1.5L L 3255 ft-lb 2'10 1/2" 22724 ft-lb 0.143 (14%) 1.25D+1.5L L Unbraced 2965 lb 0.320 (32%) 1.25D+1.5L L Shear Perm Defl in. 0.009 (L/6980) 2'10 5/8" 0.175 (L/360) 0.050 (5%) D Uniform LL Defl inch 0.021 (L/2937) 2'10 5/8" 0.175 (L/360) 0.120 (12%) L L TL Defl inch 0.030 (L/2067) 2'10 5/8" 0.262 (L/240) 0.120 (12%) D+L L

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

Unfactored Reactions UNPATTERNED Ib (Uplift)

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

2.500"

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

- 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 braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width.

ID	Load Type	Location T	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-2-11		Far Face	86 lb	194 lb	0 lb	0 lb	J9
2	Part. Uniform	0-2-11 to 4-2-11		Near Face	85 PLF	227 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-8-11 to 4-8-11		Far Face	109 PLF	252 PLF	0 PLF	0 PLF	
4	Point	4-10-11		Near Face	95 lb	254 lb	0 lb	0 lb	J12
5	Point	5-2-11		Far Face	77 lb	185 lb	0 lb	0 lb	J9
	Self Weight				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 inlended Lumber

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

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

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

For flat roofs provide proper drainage to prevent proofing

Manufacturer Info

APA: PR-L318

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







10 Town

Project: Address:

10 Designer:

Job Name: GRANDBROOKE 2-3

8/10/2018

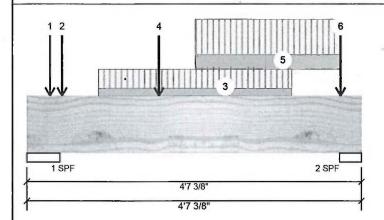
Project #:

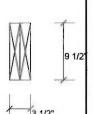
F8-C Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor





Member Info	rmation	7 1 1	
Туре:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition	on: 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	1	

Unfactored Reactions UNPATTERNED Ib (Uplift)

DIY	Live	Dead	SHOW	WILIG
1	759	311	0	0
2	704	296	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	13%	389 / 1139	1527	L	1.25D+1.5L
2 - SPF	3.694"	18%	370 / 1056	1426	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1323 ft-lb	2'4 11/16"	22724 ft-lb	0.058 (6%)	1.25D+1.5L	L
Unbraced	1323 ft-lb	2'4 11/16"	22724 ft-lb	0.058 (6%)	1.25D+1.5L	L
Shear	1812 lb	1'2 1/4"	9277 lb	0.195 (20%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/19163)	2'4 11/16"	0.132 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.006 (L/8009)	2'4 5/8"	0.132 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.008 (L/5649)	2'4 5/8"	0.199 (L/240)	0.040 (4%)	D+L	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.

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

- 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 braced at bearings.
- 4 Bottom braced at bearings.
- 5 Lateral slenderness ratio based on full section width.

o partial.	Olotiabiliade I and Daboa	on ran accusi, mann							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-3-14		Far Face	3 lb	dl 8	0 lb	0 lb	J7
2	Point	0-5-14		Near Face	113 lb	301 lb	0 lb	0 lb	J12
3	Part, Uniform	0-11-14 to 3-7-14		Far Face	46 PLF	123 PLF	0 PLF	0 PLF	
4	Point	1-9-14		Near Face	104 lb	264 lb	0 lb	0 lb	J12
5	Part. Uniform	2-3-14 to 4-3-14		Near Face	94 PLF	226 PLF	0 PLF	0 PLF	
6	Point	4-3-14		Far Face	41 lb	110 lb	0 lb	0 lb	J7
	Self Weight				8 PLF				
1									

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 Lumber

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

Handling & Installation

- Handling & Installation

 1. LVL beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastering details, beam strength values, and code approvals

 3. Damaged Beams must not be used

 4. Design assumes top edge is laterally restrained

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario L4A 7X4





isDesign"

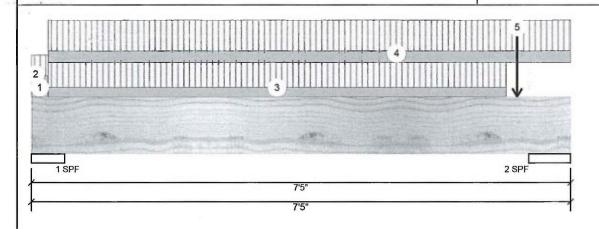
Project: Address:

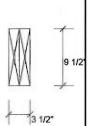
Designer: 10

Job Name: GRANDBROOKE 2-3

Project #:

F9-A Forex 2:0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED Level: Second Floor





Mind

Member Information

Girder Type: Plies: 2 Moisture Condition: Dry Deflection LL: 360 Deflection TL: 240 Importance: Normal General Load Floor Live: 40 PSF

15 PSF

Application: Floor (Residential) Design Method: LSD **Building Code:**

Not Checked

Load Sharing: Deck: Not Checked

Vibration:

Bro NBCC 2010 / OBC 2012

Unfactored Reactions UNPATTERNED Ib (Uplift)

org	Live	Dead	SHOW	VVIIIU
1	176	95	0	0
2	1452	612	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	3%	119 / 264	383	L	1.25D+1.5L
2 - SPF	6.955"	20%	764 / 2178	2942	L	1.25D+1.5L

Comments

Analysis Results

Dead:

	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
ŀ	Moment	785 ft-lb	4'9 5/16"	22724 ft-lb	0.035 (3%)	1.25D+1.5L	L
	Unbraced	785 ft-lb	4'9 5/16"	21888 ft-lb	0.036 (4%)	1.25D+1.5L	L
	Shear	2864 lb	6'1 5/16"	9277 lb	0.309 (31%)	1.25D+1.5L	L
	Perm Defl in.	0.003 (L/22626)	3'10 15/16"	0.217 (L/360)	0.020 (2%)	D	Uniform
	LL Defl inch	0.007 (L/11233)	3'11 3/4"	0.217 (L/360)	0.030 (3%)	L	L
	TL Defl inch	0.010 (L/7507)	3'11 1/2"	0.325 (L/240)	0.030 (3%)	D+L	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

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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. Trib Width ID Load Type Location Side Dead Live Snow Wind **40 PSF** 0 PSF 0 PSF Tie-In 0-0-0 to 0-2-12 (Span)0-3-13 Top 15 PSF 0-0-0 to 0-2-12 (Span)0-8-3 15 PSF 40 PSF 0 PSF 0.PSF 2 Tie-In Top

15 PSF 40 PSF 0 PSF 0 PSF 3 Tie-In 0-2-12 to 6-6-7 (Span)0-9-13 Top 0-2-12 to 7-5-0 15 PSF 40 PSF 0 PSF 0 PSF 4 Tie-In (Span)1-0-3 Top 5 **Point** 6-8-3 Far Face 555 lb 1374 lb 0 lb 0 lb F7 Self Weight

8 PI F

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
 LVL not to be treated with fire retardant or corrosive

Handling & Installation

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6. For flat roofs provide proper drainage to prevent

Manufacturer Info APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario Canada 14A7X4 905-642-4400



