

Ground Floor LVL/LSL Width Depth Qty Plies Label Description Pcs Length F12 1.75 1 12-0-0 Forex 9.5 2.0E-3000Fb LVL Layout Name F6 6-0-0 Forex 1.75 2 2.0E-3000Fb LVL MILLWOOD 1 EL-3 Joist Design Method Width Depth Label Description Qty Plies Pcs Length LSD -F11 NJ 1.5 9.5 2 4 14-0-0 Description F10 NJ 1.5 9.5 1 2 2 4-0-0 GREENPARK HOMES J4 NJH 42 14-0-0 2.5 9.5 MINNISALE HOME CORP.,BRAMPTON,ON J3 NJH 9.5 4 12-0-0 J2 NJH 2.5 9.5 3 10-0-0 Created J7 NJH 2.5 9.5 1 6-0-0 June 26, 2018 F14 NJH 2.5 9.5 2 10-0-0 Builder F13 NJH 2.5 9.5 1 10-0-0 Rim Board Sales Rep Width Depth Qty Plies Pcs Length Label Description Designer Norbord Rimboard 1.125 9.5 R1 SB Plus 1.125 X 9.5 Blocking Shipping Label Description Width Depth Qty Plies Pcs Length Project BLK1 NJH 2.5 9.5 LinFt Varies 8-0-0 Builder's Project Hanger **Kott Lumber Company** Beam/Girder Supported 14 Anderson Blvd Member Stouffville, Ontario Label Pcs Description Skew Slope fasteners fasteners 6 LT259 4 10d Canada H2 2 10dx1 1/2 2 LT2-159 НЗ 4 10d 2 10dx1 1/2 L4A7X4 H6 4 LF259 905-642-4400 10 10d 1 #8x1 1/4WS H7 1 HUS1.81/10 30 16d 10 16d **Ground Floor** NOTES: LSD Design Method Building Code NBCC 2010 / OBC 2012

- 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-loadbearing walls.
- Install single-ply flush window header along inside face of rimboard/rimjoist Refer to Nascor specifier guide for installation details.
- Squash blocks recommended to be installed at end bearing on all first level
- ioists which support loading from above exceeding two levels floor or roof. Load transfer blocks to be installed under all point loads. It shall be the framer's responsibility that floor joists and beams

are fastened as per the hanger manufacturer's standards. Refer to Multiple Member Connection Detail to ply to ply nailing or bolting

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

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

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

LL Cant 2L/ TL Cant 2L/ **Deflection Girder**

Deflection Joist

LL Span L/

TL Span L/

Floor

Loads

Live

Dead

360 LL Span L/ TL Span L/ 240 LL Cant 2L/ 480 360 TL Cant 2L/

Decking OSB Deck 3/4" Thickness Fastener Nailed & Glued

Vibration



40

15

480

360

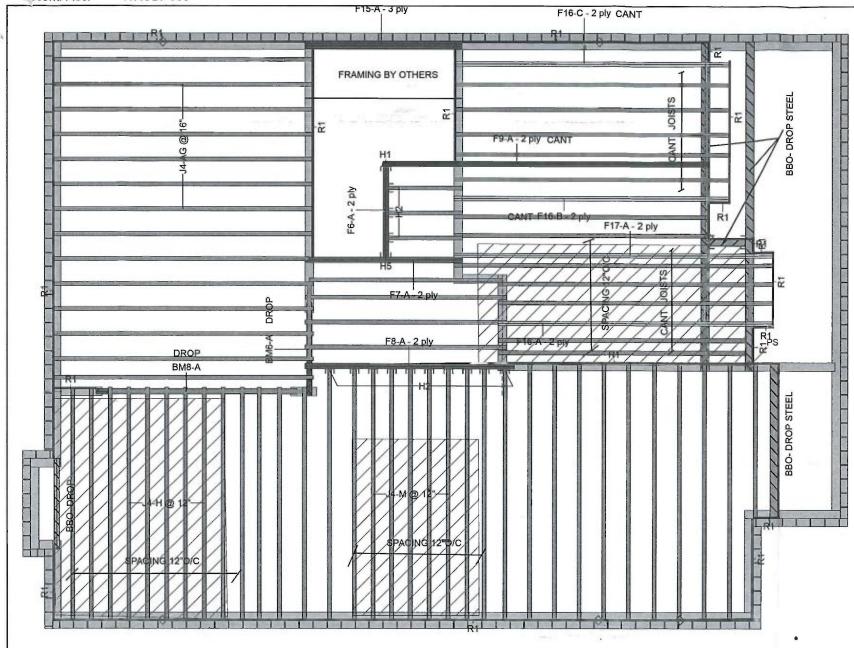
480

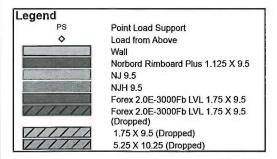
360

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

3. LVL CCMC -12904-R 4 CAN/CSA-O86-09

5. CCMC -12787-R APA PR-L310(C) Version 18.40.162 Powered by iStruct™





Architectural Drawing Info

JARDIN DESIGN GROUP

64 JARDIN DR, SUITE 3A

VAUGHAN, ON L4K 3P3

Date: AUGUST 09 2018

Project # 18-24 Model: Millwood 1 EL-3

- 1. OBC 2012 O.Reg 332/12 as amended
- 2. Nascor CCMC 13535-R
- 3. LVL CCMC -12904-R
- 4. CAN/CSA-086-09
- 5. CCMC -12787-R APA PR-L310(C)

JOISTS SPACING 16"O/C UNIESS NOTED OTHERWISE

Version 18.40.162 Powered by iStruct™

This certification is to confirm that:

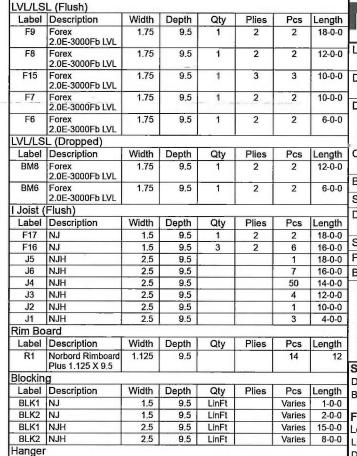
1. The loads used in the calculation of the attached approved components conform to the floor assembly shown on this

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.





Beam/Girder

fasteners

14 16d

4 10d

46 16d

Supporte Member

fasteners

6 10d

2 10dx1 1/2

16 16d

H5 NOTES:

Label

H1

H2

H4

Second Floor

Framer to verify dimensions on the architectural drawings.

Pcs Description

13 LT259

2

1 HUC410 (Min)

Linknown

Hanger

1 HGUS410

- 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-loadbearing walls.

Skew Slope

- Install single-ply flush window header along inside face of rimboard/rimjoist Refer to Nascor specifier guide for installation details.
- Squash blocks recommended to be installed at end bearing on all first level joists which support loading from above exceeding two levels floor or roof.
- Load transfer blocks to be installed under all point loads.
- It shall be the framer's responsibility that floor joists and beams are fastened as per the hanger manufacturer's standards.

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

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

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

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

	NASCOR
gth	MASCOR
0-0	
0-0	Layout Name MILLWOOD 1 EL-3 STD 3BEDRM
0-0	Design Method LSD
0-0	Description
0-0	GREENPARK HOMES MINNISALE HOME CORP.,BRAMPTON,ON
gth	Created
0-0	June 26, 2018
0-0	Builder
	Sales Rep
α	Designer
gth	SB
0-0	Shipping
0-0 0-0	Project
0-0	Builder's Project
0-0	
0-0	Kott Lumber Company
0-0	14 Anderson Blvd
0-0	Stouffville, Ontario
	Canada
gth	L4A 7X4
12	905-642-4400
	Second Floor
	Design Method LSD
gth	Building Code NBCC 2010 / OBC
0-0	2012
0-0 0-0	Floor
0-0	Loads
u-U	Live 40
ed	Dead 15
u	Deflection Joist

OSB Deck Thickness 5/8 Fastener Nailed & Glued Vibration Gypsum 1/2"

480

360

480

360

360

240

480

360

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

LL Span L/

TL Span L/

LL Cant 2L/

TL Cant 2L/

Decking

Deflection Girder



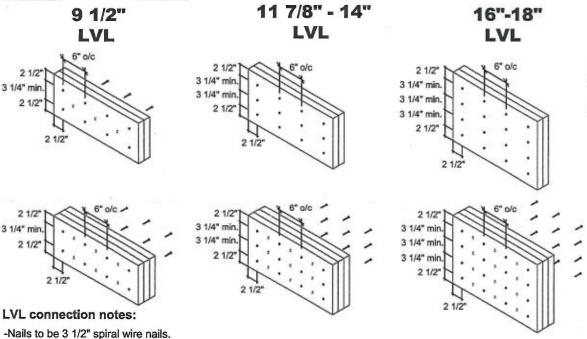
Conventional Connections (for uniform distributed loads)

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

Conventional connection notes:

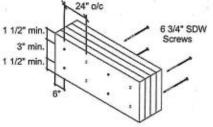
- -Nails to be 3" 10d spiral wire nails.
- -Nails to be located a minimum of 2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.
- -Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.

LVL Connections (for uniform distributed loads)



4-ply (Top load only)

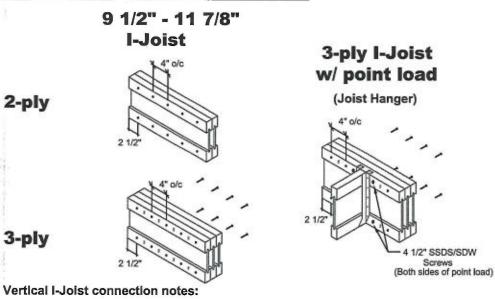
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For side-loaded 4-ply LVL Connections, please consult the engineering calculation page for the component and the Nascor layout

- -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)



- -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.

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

MULTI-PLY CONNECTION DETAILS

Date: November 30, 2016

Scale: NTS

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

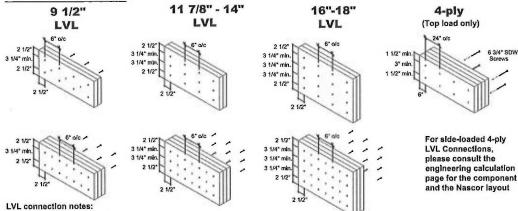
Conventional Connections (for uniform distributed loads)

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

Conventional connection notes:

- -Nails to be 3" 10d spiral wire nails.
 -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 detalls shown, unless noted otherwise.
 "X" represents nall driven from the opposite side.

LVL Connections (for uniform distributed loads)



- -Nails to be 3 1/2" spiral wire nails
- -Nails to be a 1/2" spiral wire nails.

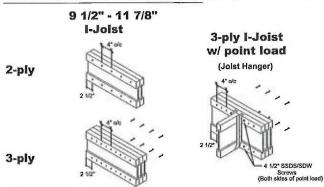
 Allist to be located a minimum of 2 1/2" from the top and bottom of the member. Start all nails a minimum of 2 1/2" in from ends.

 -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.

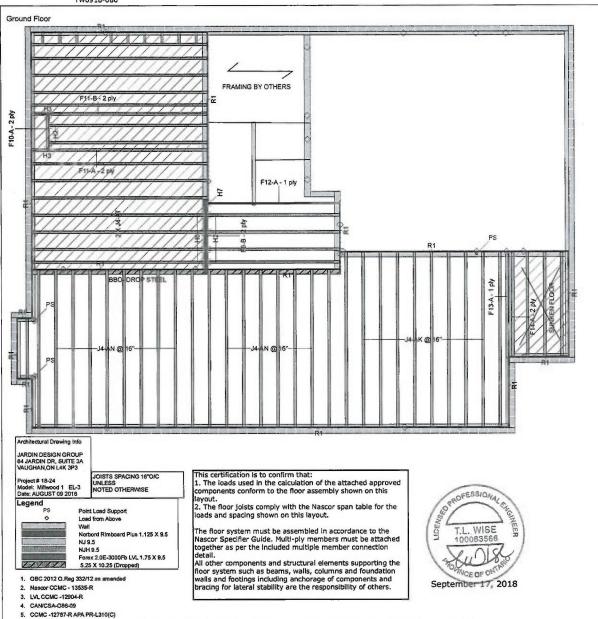
Vertical I-Joist Connections (for uniform distributed loads)



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 nall driven from the opposite side.

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Fround VL/LS	Floor	por								
		mater 1	10044	Deci	h [-	2tv Piles	Pcs	1 anath	NASCO	
F12	Descri	prion	Width 1.75	Dept	n 0	ty Piles	PCS 1	Length 12-0-0		
F12	Forex 2.0E-3	000Fb LVL	1.75	9.	.5		1	12-0-0		
F6	Forex	000Fb LVL	1.75	9.	.5	1 2	2	8-0-0	Layout Name MILLWOOD 1 EL-3	
Joist									Design Method	
	Descri	ption	Width	Dept		Qty Plies	Pcs	Length	LSD	
F11	MJ		1.5		5	2 2	4	14-0-0	Description	
F10	NJ		1.5		5	1 2	2	4-0-0 14-0-0	GREENPARK HOMES	
J4 J3	HLM		2.5		.5		42	12-0-0	MINNISALE HOME	
J2	NJH		2.5		9.5	-	3	10-0-0	CORP.,BRAMPTON,ON	
J7	HLM		2.5		5		1	6-0-0	Created	
F14	NJH		2.5 9.			1 2	2	10-0-0	June 26, 2018	
F13	NJH		2.5	9	.5		1	10-0-0	Builder	
Rim Bo	ard								Sales Rep	
	Descr		Width	Dep		Qty Plies	Pcs	Length	Designer	
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						Beam/Girde		oported ember	14 Anderson Blvd	
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H2	6	LT259		10017	Diopo	4 10d	1	dx1 1/2	Canada	
H3	2	LT2-159		-		4 10d	210	dx1 1/2	L4A 7X4	
HB	4	LF259				10 10d	1 #A:	d 1/4WS	905-642-4400	
H7	1	HU\$1.81/1	0			30 16d		0 16d	Ground Floor	
H7		HU\$1.81/1	0			30 16d			Design Method LS	
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France Fra	ner to we be joint to be usin all 2x4 bill single or to Nas ash block which a ditransfer all be the astened. Multiple nents. allel to juock (1/1) r compor system on walts o	parity dimensionly require g g a face-molocking @ 24-ply flush with corresponding face for the face face for the face face face face face face face fac	ons on the filler/back unted han in order to be guide for node to be not form a constitution of the first three to be not form the first three to be not form the first three to be not first three three to be not first three three to be not first three to be not first three three to be not first three to be not first three three to be not first three th	er ply inger. er parader alo install e Install	when si illel non- ing Inside atton de exceedir r all poi floor joi trer's st to ply to the ply to	drawings. upporting another includes a continuous de face of rimb to tails, and beating on grow levels fat loads, stis and beams andards. p ply nailling or arting on the continuous de face andards.	all first lever or roof	G 16d	Design Method Li	
France Process of the Control of the	mer to ve ble joist ber usin all 2x4 bi all single ar to Nas ash bloo a which s d transfer all be th astened Multiple material allel to ju- ook (1/1) r compoor system on walti- ents and	erily dimensionly require g g a sace-mootocking @ 24-ply flush with corresponding to the comment of the comment	one on the filler/back unted hen "of curied hen guide for noded to be guide forma e installer anger ma ormection rimboard in rim depructural et ims, walls sincluding lateral ste	er ply ger. er para der alo instal e insta bove ed unde ty that nufacts Detail with th) @ ernenis colum g anche ability s	when sillel non- ing linsk atton de illed at e xceedir r all pois floor joi urer's si to ply to s suppo- nes and orage of the the	drawings. upporting another includes a continuous de face of rimb to tails, and beating on grow levels fat loads, stis and beams andards. p ply nailling or arting on the continuous de face andards.	alls. pard/rimjol all first lever or roof	G 16d	Design Method Li	
France Control of the	mer to ve ble joist ber usin all 2x4 bi all single ar to Nas ash bloo a which s d transfer all be th astened Multiple material allel to ju- ook (1/1) r compoor system on walti- ents and	erily dimensionly require g g a sace-mootocking @ 24-ply flush with corresponding to the comment of the comment	one on the filler/back unted hen "of curied hen guide for noded to be guide forma e installer anger ma ormection rimboard in rim depructural et ims, walls sincluding lateral ste	er ply ger. er para der alo instal e insta bove ed unde ty that nufacts Detail with th) @ ernenis colum g anche ability s	when sillel non- ing linsk atton de illed at e xceedir r all pois floor joi urer's si to ply to s suppo- nes and orage of the the	drawings. drawings. drawings and le face of rimb stalis. and beating on g two levels fit t loads. sts and beams ply nailing or whing drawings ply nailing or whing	alls. pard/rimjol all first lever or roof	G 16d	Design Method L	

KOTT



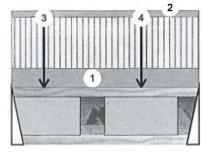
Date: 9/10/2018 Designer: SB

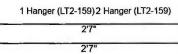
Job Name: MILLWOOD 1 EL-3

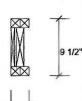
9,500" NJ

2-Ply - PASSED

Level: Ground Floor







Page 1 of 1

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

Brg	Live	Dead	Snow	Wind
1	311	150	0	0
2	262	127	0	0

Analysis Results Analysis Actual Location Allowed Capacity Comb. 364 ft-lb 1'9 7/16" 7340 ft-lb 0.050 (5%) 1.25D+1.5L L Moment 1'9 7/16" 5436 ft-lb 0.067 (7%) 1.25D+1.5L L 364 ft-lb Unbraced 1 1/4" 3080 lb 0.210 (21%) 1.25D+1.5L L Shear 647 lb Perm Defl in. 0.001 1'8 7/16" 0.079 (L/360) 0.010 (1%) D Uniform (L/25061) LL Defl inch 0.002 1'8 3/8" 0.079 (L/360) 0.030 (3%) L L (L/12149) TL Defl inch 0.003 (L/8182)

1'8 3/8" 0.119 (L/240) 0.030 (3%) D+L

Bearings and Factored Reactions Bearing Length Cap. React D/L lb Total Ld. Case Ld. Comb. 187 / 466 653 L 1.25D+1.5L 2.000" 25% Hanger 159 / 393 552 L 1.25D+1.5L 2.000" 21% Hanger

Design Notes

1 Fill all hanger nailing holes.

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

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

4 Top loads must be supported equally by all plies.

5 Top flange braced at bearings.

6 Bottom flange braced at bearings.



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind Comments
1	Tie-In	0-0-0 to 2-7-0	(Span)1-3-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF
2	Part. Uniform	0-0-0 to 2-7-0		Тор	3 PLF	0 PLF	0 PLF	0 PLF
3	Point	0-5-7		Near Face	111 lb	232 lb	0 lb	Pase-Thau Framing Squash Block is
4	Point	1-9-7		Near Face	133 lb	274 lb	0 lb	required at all point loads over bearings

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

Lumber

Dry service conditions, unless noted otherwise
 Uoist not to be treated with fire relardant or corro

Handling & Installation

I. Joist fanges must not be cut or drilled
 Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handingiferedon details
 Design assumes top fange to be laterally restrained by attached sheathing or as specified in engineering notes.

Nascor by Kott

Manufacturer Info

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

Kott Lumber Company 14 Anderson Blvd, Ontario



This design





Client: Project:

Address:

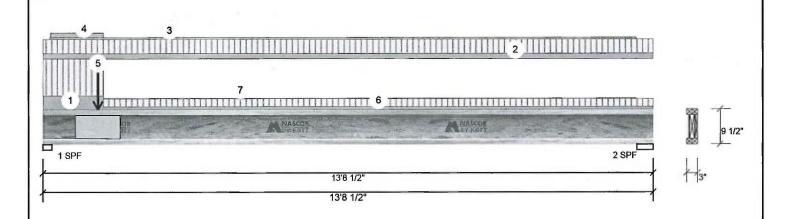
Date: 9/10/2018

Designer: SB

Job Name: MILLWOOD 1 EL-3

Project #:

9.500" 2-Ply - PASSED Level: Ground Floor



Member Infor	mation			Unfactored Reactions UNPATTERNED Ib (Uplift)						
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	v	Wind
Plies:	2	Design Method:	LSD	1	570		278		0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	260		127		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked	1						
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearing	s and Fac	tored	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	2.375"	45%	347 / 855	1202	L	1.25D+1.5L
				2-SPF	4.375"	18%	158 / 390	548	L	1.25D+1.5L
1 ' 0 .1										

Analysis Results

Actual	Location	Allowed	Capacity	Comb.	Case
1978 ft-lb	5'11 1/16"	7340 ft-lb	0.269 (27%)	1.25D+1.5L	L
1978 ft-lb	5'11 1/16"	1987 ft-lb	0.995 (100%)	1.25D+1.5L	L
1181 lb	1 5/8"	3080 lb	0.383 (38%)	1.25D+1.5L	L
0.058 (L/2728)	6'6 1/4"	0.442 (L/360)	0.130 (13%)	D	Uniform
0.119 (L/1344)	6'6 3/16"	0.442 (L/360)	0.270 (27%)	L	L
0.177 (L/900)	6'6 3/16"	0.664 (L/240)	0.270 (27%)	D+L	L
	1978 ft-lb 1978 ft-lb 1181 lb 0.058 (L/2728) 0.119 (L/1344)	1978 ft-lb 5'11 1/16" 1978 ft-lb 5'11 1/16" 1181 lb 1 5/8" 0.058 (L/2728) 6'6 1/4" 0.119 (L/1344) 6'6 3/16"	1978 ft-lb 5'11 1/16" 7340 ft-lb 1978 ft-lb 5'11 1/16" 1987 ft-lb 1181 lb 1 5/8" 3080 lb 0.058 (L/2728) 6'6 1/4" 0.442 (L/360) 0.119 (L/1344) 6'6 3/16" 0.442 (L/360)	1978 ft-lb 5'11 1/16" 7340 ft-lb 0.269 (27%) 1978 ft-lb 5'11 1/16" 1987 ft-lb 0.995 (100%) 1181 lb 1 5/8" 3080 lb 0.383 (38%) 0.058 (L/2728) 6'6 1/4" 0.442 (L/360) 0.130 (13%) 0.119 (L/1344) 6'6 3/16" 0.442 (L/360) 0.270 (27%)	1978 ft-lb 5'11 1/16" 7340 ft-lb 0.269 (27%) 1.25D+1.5L 1978 ft-lb 5'11 1/16" 1987 ft-lb 0.995 (100%) 1.25D+1.5L 1181 lb 1 5/8" 3080 lb 0.383 (38%) 1.25D+1.5L 0.058 (L/2728) 6'6 1/4" 0.442 (L/360) 0.130 (13%) D 0.119 (L/1344) 6'6 3/16" 0.442 (L/360) 0.270 (27%) 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 4'8" o.c.

5 Bottom	flange braced at bearings	3.						
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind Comments
1	Tie-In	0-0-0 to 1-4-6	(Span)2-10-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF
2	Tie-In	0-0-0 to 13-8-8	(Span)1-1-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF
3	Part. Uniform	0-1-15 to 13-4-0		Тор	3 PLF	0 PLF	0 PLF	0 PLF
4	Part. Uniform	0-2-1 to 1-4-6		Тор	7 PLF	0 PLF	0 PLF	Pass-Thru Framing Squash Block is
5	Point	1-2-14		Far Face	150 lb	311 lb	0 lb	required at all point loads over bearings
6	Tie-In	1-4-6 to 13-8-8	(Span)0-6-15	Тор	15 PSF	40 PSF	0 PSF	Refer to Multiple Member Connection
7	Part. Uniform	1-4-6 to 13-4-0		Тор	1 PLF	0 PLF	0 PLF	Setail for ply to ply nailing or bolting requirements

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

- chemicals
- Handling & Installation
- Handling & Installation

 1. Joist flanges must not be cut or drilled

 2. Refer to latest copy of the Lloist product information details for framing details, sifferer tables, web hole boart, bridging details, multi-ply fastening details and handling/erection details

 3. Damaged loists must not be used

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

This design is va

Provide lateral support at bearing points to avoid lateral displacement and rotation.
 Web stiffeness for point load as shown Minhmum point load bearing length>= 3.5 inches
 7. For flat roofs provide product descriptions to provide product descriptions.
 READ ALL NOTES

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

Manufacturer Info

Nascor by Kott



September 17, 2018

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



Version 18.40.162 Powered by iStruct™



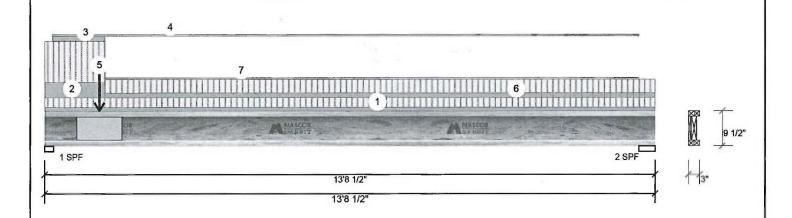
Client: Project: Address: Date: 9/10/2018 Designer: SB

Job Name: MILLWOOD 1 EL-3

Project #:

2-Ply - PASSED 9.500"

Level: Ground Floor



Member Inforn	nation			Unfactored Reactions UNPATTERNED Ib (Uplift)						
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Sno	W	Wind
Plies:	2	Design Method:	LSD	1	505		248		0	0
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012	2	244		120		0	0
Deflection LL:	360	Load Sharing:	No	-						
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked	1						
General Load		1100 000000								
Floor Live:	40 PSF			Bearing	s and Fac	tored l	Reactions			
Dead:	15 PSF			Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
		. 19		1 - SPF	2.375"	40%	310 / 757	1067	L	1.25D+1.5L
				2-SPF	4.375"	17%	150 / 365	516	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1837 ft-lb	6' 1/4"	7340 ft-lb	0.250 (25%)	1.25D+1.5L	L
Unbraced	1837 ft-lb	6' 1/4"	1848 ft-lb	0.994 (99%)	1.25D+1.5L	L
Shear	1048 lb	1 5/8"	3080 lb	0.340 (34%)	1.25D+1.5L	L
Perm Defl in.	0.055 (L/2916)	6'6 9/16"	0.442 (L/360)	0.120 (12%)	D	Uniform
LL Defl inch	0.110 (L/1453)	6'6 1/2"	0.442 (L/360)	0.250 (25%)	L	L
TL Defl inch	0.164 (L/970)	6'6 1/2"	0.664 (L/240)	0.250 (25%)	D+L	L
	Analysis Moment Unbraced Shear Perm Defl in. LL Defl inch	Moment 1837 ft-lb Unbraced 1837 ft-lb	Analysis Actual Location Moment 1837 ft-lb 6' 1/4" Unbraced 1837 ft-lb 6' 1/4" Shear 1048 lb 1 5/8" Perm Defl in. 0.055 (L/2916) 6'6 9/16" LL Defl inch 0.110 (L/1453) 6'6 1/2"	Analysis Actual Location Allowed Moment 1837 ft-lb 6' 1/4" 7340 ft-lb Unbraced 1837 ft-lb 6' 1/4" 1848 ft-lb Shear 1048 lb 1 5/8" 3080 lb Perm Defl in. 0.055 (L/2916) 6'6 9/16" 0.442 (L/360) LL Defl inch 0.110 (L/1453) 6'6 1/2" 0.442 (L/360)	Analysis Actual Location Allowed Capacity Moment 1837 ft-lb 6' 1/4" 7340 ft-lb 0.250 (25%) Unbraced 1837 ft-lb 6' 1/4" 1848 ft-lb 0.994 (99%) Shear 1048 lb 1 5/8" 3080 lb 0.340 (34%) Perm Defl in. 0.055 (L/2916) 6'6 9/16" 0.442 (L/360) 0.120 (12%) LL Defl inch 0.110 (L/1453) 6'6 1/2" 0.442 (L/360) 0.250 (25%)	Analysis Actual Location Allowed Capacity Comb. Moment 1837 ft-lb 6' 1/4" 7340 ft-lb 0.250 (25%) 1.25D+1.5L Unbraced 1837 ft-lb 6' 1/4" 1848 ft-lb 0.994 (99%) 1.25D+1.5L Shear 1048 lb 1 5/8" 3080 lb 0.340 (34%) 1.25D+1.5L Perm Defl in. 0.055 (L/2916) 6'6 9/16" 0.442 (L/360) 0.120 (12%) D LL Defl inch 0.110 (L/1453) 6'6 1/2" 0.442 (L/360) 0.250 (25%) 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.



o bolloni	nange praced at bearings							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind Comments
1	Tie-In	0-0-0 to 13-8-8	(Span)0-7-15	Тор	15 PSF	40 PSF	0 PSF	0 PSF
2	Tie-In	0-0-0 to 1-4-6	(Span)2-10-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF
3	Part. Uniform	0-2-2 to 1-4-6		Тор	7 PLF	0 PLF	0 PLF	0 PLF
4	Part. Uniform	0-2-2 to 13-4-2		Тор	2 PLF	0 PLF	0 PLF	0 PLF
5	Point	1-2-14		Near Face	127 lb	262 lb	0 lb	Pass-Thru Framing Squash Block is required at all point loads over bearings
6	Tie-In	1-4-6 to 13-8-8	(Span)0-11-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF
7	Part. Uniform	1-4-6 to 13-4-2		Тор	2 PLF	0 PLF	0 PLF	हर्ज़्द्र to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

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
 Unless not to be treated with fire retardant or corrosive
- Handling & Installation
- 1. IJoist finages must not be cut or drifted
 2. Refer to letest copy of the IJoist product information
 details for framing details, swiftener tables, web hole
 chart, bridging details, multi-ply fastening details and
 handlingiverection details
 3. Damaged Libists must not be used
- Damaged Boists must not be used
 Design assumes top flange to be laterally restrained by attached shealthing 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 tiet roofs provide
 Provide READ ALL NOTES

This design is val

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

Manufacturer Info

Nascor by Kott

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





Client:

Project: Address:

9/10/2018 Date:

Designer: SB

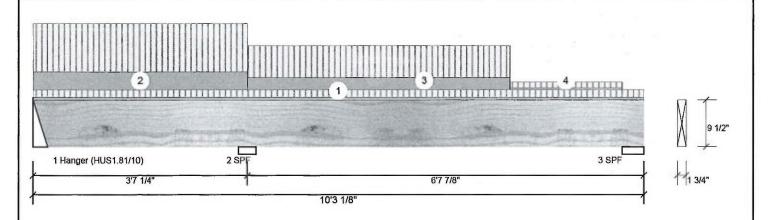
Job Name: MILLWOOD 1 EL-3

Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500" - PASSED

Level: Ground Floor



Hanger

2 - SPF 3.500°

3 - SPF 4.375"

Member Inforn	nation			Unfacto	red React	ions UN	IPATTERN	ED lb (Uplift	t)
Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snow	
Plies:	1	Design Method:	LSD	1	171		68	0	
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012	2	670		276	0	
Deflection LL:	360	Load Sharing:	No	3	159		71	0	
Deflection TL:	240	Deck:	Not Checked						
Importance:	Normal	Vibration:	Not Checked						
General Load									
Floor Live:	40 PSF			Bearing	s and Fac	tored Re	eactions		
Dead:	15 PSF			Bearing	Length	Cap. R	React D/L lb	Total Ld. Ca	ase
				1 -	3.000"	11%	78 / 363 4	41 (-30) L_	

Analysis Res	sults					
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-717 ft-lb	3'7 1/4"	11362 ft-lb	0.063 (6%)	1.25D+1.5L	LL
Unbraced	-717 ft-lb	3'7 1/4"	10999 ft-lb	0.065 (7%)	1.25D+1.5L	LL
Pos Moment	582 ft-lb	7' 7/8"	11362 ft-lb	0.051 (5%)	1.25D+1.5L	_L
Unbraced	582 ft-lb	7' 7/8"	7023 ft-lb	0.083 (8%)	1.25D+1.5L	_L
Shear	548 lb	4'4 3/4"	4638 lb	0.118 (12%)	1.25D+1.5L	LL
Perm Defl in.	0.004 (L/18084)	6'10 5/8"	0.212 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.011 (L/6896)	6'9 15/16"	0.212 (L/360)	0.050 (5%)	L	_L

TL Defl inch 0.015 (L/4993) 6'10 3/16" 0.318 (L/240) 0.050 (5%) D+L

BOPROFESSIONAL CHOOL 100083566

1388 LL

331

Ld. Comb. 1.25D+1.5L

1.25D+1.5L

1.25D+1.5L

September 17, 2018

Design Notes

- 1 Fill all hanger nailing holes.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Tie-down connection required at bearing 1 for uplift 30 lb (Combination 0.9D+1.5L, Load Case L).
- 4 Top braced at bearings.
- 5 Bottom braced at bearings

O DOLLOIN	bracea at bearings.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind Comments
1	Tie-In	0-0-0 to 10-3-2	(Span)0-11-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF
2	Part. Uniform	0-0-0 to 3-7-4		Тор	45 PLF	120 PLF	0 PLF	हिक्दक-Thru Framing Squash Block is
3	Part. Uniform	3-7-4 to 8-0-4		Тор	30 PLF	80 PLF	0 PLF	required at all point loads over bearings
4	Tie-In	8-0-4 to 9-10-12	(Span)0-8-4	Тор	15 PSF	40 PSF	0 PSF	Reter to Multiple Member Connection
	Self Weight				4 PLF			Detail for ply to ply nailing or bolting requirements

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 amplication, particle business that districts the intended amplication, particle business.

Lumber

- Dry service conditions, unless noted otherwise
 LVL not to be treated with fire returdant or corrosive
- chemicals
- Handling & Installation
- And Image and a manufacture of the cut or drilled Refer to manufacturer's product information regarding installation requirements, multi-pty fastening details, beam strength values, and code

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info Forex APA: PR-L318

37%

7%

354 / 1034

85 / 246

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

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



Client: Project:

Address:

Date: 9/10/2018

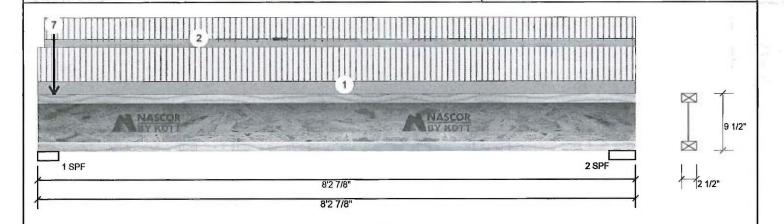
Designer: SB

Job Name: MILLWOOD 1 EL-3

Project #.

NJH 9.500" - PASSED F13-A

Level: Ground Floor



Member Info	mber Information				Unfactored Reactions UNPATTERNED Ib (Uplift)					
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Sno	w	Wind
Plies:	1	Design Method:	LSD	1	137		87		0	0
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	76		29		0	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked	1						
Importance:	Normal	Vibration:	Not Checked	1						
General Load										
Floor Live:	40 PSF			Bearings a	and Fact	ored F	Reactions			
Dead:	15 PSF			Bearing L	ength	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF 3	3.500"	20%	109 / 206	314	L	1.25D+1.5L
				2-SPF 4	.375"	9%	36 / 114	150	L	1.25D+1.5L

Δ	na	lveie	Resu	lte
м	ria.	17515	resu	ııs

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	268 ft-lb	4'1"	3830 ft-lb	0.070 (7%)	1.25D+1.5L	L
Unbraced	268 ft-lb	4'1"	1068 ft-lb	0.251 (25%)	1.25D+1.5L	L
Shear	139 lb	2 3/4"	1580 lb	0.088 (9%)	1.25D+1.5L	L
Perm Defl in.	0.004 (L/22525)	4'1 1/16"	0.257 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.011 (L/8447)	4'1 1/16"	0.257 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.015 (L/6143)	4'1 1/16"	0.385 (L/240)	0.040 (4%)	D+L	L



Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 8-2-14	(Span)0-6-12	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-2 to 8-2-14	(Span)0-4-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	0-2-12		Тор	1 lb	2 lb	0 lb	0 lb	J2
5	Point	0-2-12		Тор	1 lb	0 lb	0 lb	0 lb	Wall Self Weight
6	Point	0-2-12		Тор	23 lb	61 lb	0 lb	0 lb	J2
7	Point	0-2-12		Тор	34 lb	0 lb	0 lb	requir	Thru Framing Squash Block is ed at all point loads over bearings

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

Calculated Structured Desig structural adequacy of this Lumber

chemicals

Handling & Installation

Handling & Installation

1. Noist flanges must not be cut or drilled

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

3. Demaged lobists must not be used

4. Design assumes top flange to be talerally 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 field points provided

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

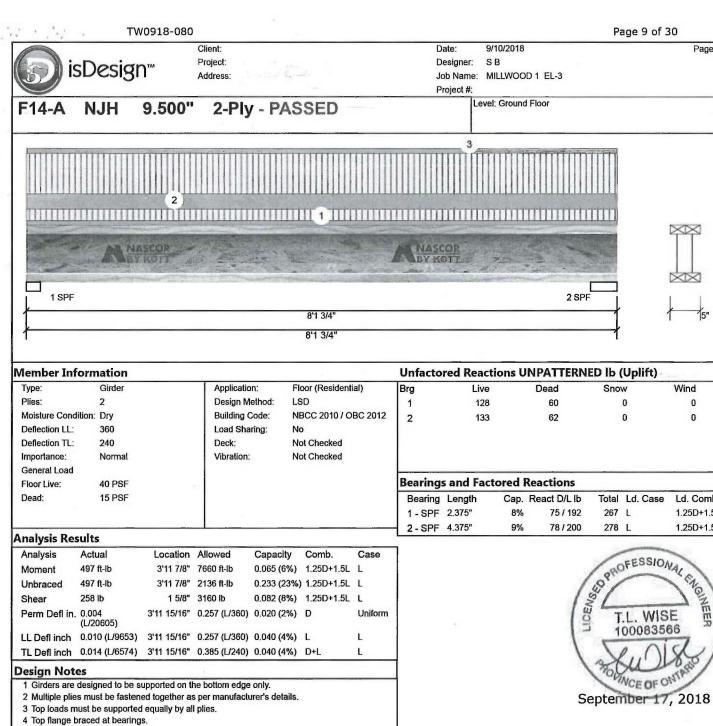
CONTAINS SPECIFICATIONS AND CRITERIA USED

Manufacturer Info Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada 14A7X4

This design is v

1/2



100083566 WCE OF ONTAR

Wind

0

Ld. Comb.

1.25D+1.5L

1.25D+1.5L

September 17, 2018

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 8-1-12	(Span)0-4-4	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 8-1-12	(Span)1-3-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-1 to 8-1-12		Тор	3 PLF	0 PLF	0 PLF	0 PLF	

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

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

Notes

Lumber

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

chemicals

Handling & Installation

Libel flarges must not be out or drifted.

Refer to latest copy of the Uoist product information details for framing details, stiffner tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details.

Damaged Uoist must not be used.
Design assumes top flarge to be laterally restrained by attached shealthing 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 lengthso-2.5 laterals.
 For flat roofs provide READ ALL NOTES O

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

This design is vi

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario





9/10/2018 Date:

Designer: S B

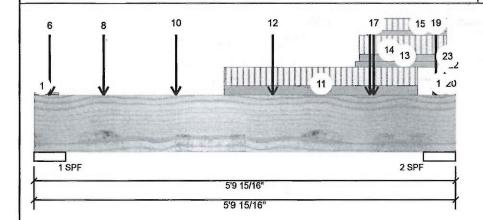
Job Name: MILLWOOD 1 EL-3

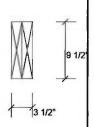
Project #:

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

2-Ply - PASSED

Level: Ground Floor





Wind

Page 1 of 2

D/L	om	hor	In	OF	mai	tion
II YII.		nei	TILL	UI	Ha	LIUI

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition	: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF	1	

Unfactored Reactions UNPATTERNED Ib (Uplift)

1	2962	1324	0	0
2	2826	1291	0	0
2	2826	1291	U	U

Dead

Snow

Bearings and Factored Reactions

Bearing Ler	ngth Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF 5.25	50" 54%	1655 / 4444	6099	L	1.25D+1.5L
2 - SPF 5.3	13" 51%	1614 / 4240	5853	L	1.25D+1.5L

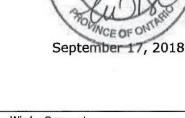
Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4369 ft-lb	3'3 9/16"	22724 ft-lb	0.192 (19%)	1.25D+1.5L	L
Unbraced	4369 ft-lb	3'3 9/16"	22724 ft-lb	0.192 (19%)	1.25D+1.5L	L
Shear	3973 lb	4'7 7/8"	9277 lb	0.428 (43%)	1.25D+1.5L	L
Perm Defl in	, 0.012 (L/5025)	3'1 1/2"	0.169 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.027 (L/2256)	3'1 11/16"	0.169 (L/360)	0.160 (16%)	L	L
TL Defl inch	0.039 (L/1557)	3'1 5/8"	0.254 (L/240)	0.150 (15%)	D+L	L

De

- 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.

esign Notes									
L Defl inch	0.039 (L/1557)	3'1 5/8"	0.254 (L/240)	0.150 (15%)	D+L	L			
L Defl inch	0.027 (L/2256)	3'1 11/16"	0.169 (L/360)	0.160 (16%)	L	L			
erm Defl in.	0.012 (L/5025)	3'1 1/2"	0.169 (L/360)	0.070 (7%)	D	Uniform			
hear	3973 lb	4'7 7/8"	9277 lb	0.428 (43%)	1.25D+1.5L	L			
Inbraced	4369 II-ID	33 9/16	22124 Tt-ID	0.192 (19%)	1.20D+1.5L	L			



/ Lateral	sienderness ratio based d	on full section wath.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)1-1-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-2-10		Тор	19 lb	49 lb	0 lb	0 lb	J4
3	Point	0-2-10		Тор	16 lb	0 lb	0 lb	0 lb	Wall Self Weight
4	Point	0-2-10		Тор	656 lb	1548 lb	0 lb	0 lb	BM6 BM6
5	Point	0-2-10		Тор	25 lb	68 lb	0 lb	0 lb	J4

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 Intended application, and to verify the dimensions and loads.

Lumber

chemicals

Handling & Installation

- andling & 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 ponding

Manufacturer Info Forex APA: PR-L318

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

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

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9/10/2018 Date: Designer: SB

Job Name: MILLWOOD 1 EL-3

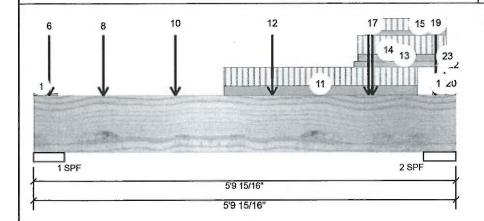
Project #:

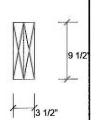
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Ground Floor





Page 2 of 2

m page 1							
Load Type	Location Tril	b Width Side	Dead	Live	Snow	Wind	Comments
Point	0-2-10	Тор	22 lb	0 lb	0 lb	0 lb	Wall Self Weight
Point	0-11-9	Far Face	99 lb	211 lb	0 lb	0 lb	J4
Point	0-11-9	Near Fa	ce 59 lb	158 lb	0 lb	0 lb	J3
Point	1-11-9	Far Face	e 150 lb	313 lb	0 lb	0 lb	J4
Point	1-11-9	Near Fa	ce 88 lb	235 lb	0 lb	0 lb	J3
Part. Uniform	2-7-9 to 5-3-9	Far Fac	e 130 PLF	268 PLF	0 PLF	0 PLF	
Point	3-3-9	Near Fa	ce 101 lb	268 lb	0 lb	0 lb	J3
Part. Uniform	4-5-3 to 5-8-6	Тор	82 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
Part. Uniform	4-5-13 to 5-8-6	Тор	102 PLF	272 PLF	0 PLF	0 PLF	J4
Part. Uniform	4-7-1 to 5-8-6	Тор	66 PLF	175 PLF	0 PLF	0 PLF	J3
Point	4-7-9	Near Fa	ce 85 lb	227 lb	0 lb	0 lb	J3
Point	4-8-4	Тор	523 lb	1280 lb	0 lb	0 lb	BM6 BM6
Part. Uniform	5-6-1 to 5-8-6	Тор	43 PLF	116 PLF	0 PLF	0 PLF	J3
Point	5-6-10	Near Fa	ce 51 lb	128 lb	0 lb	0 lb	F12
Part. Uniform	5-8-6 to 5-9-15	Тор	51 PLF	136 PLF	0 PLF	0 PLF	J4
Part. Uniform	5-8-6 to 5-9-15	Тор	22 PLF	58 PLF	0 PLF	0 PLF	J3
Part. Uniform	5-8-6 to 5-9-15	Тор	33 PLF	87 PLF	0 PLF	0 PLF	J3
Part. Uniform	5-8-6 to 5-9-15	Тор	41 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
Self Weight			8 PLF				
	Point Point Point Point Point Part. Uniform Point Part. Uniform Part. Uniform Part. Uniform Point Point Point Point Part. Uniform Point Part. Uniform Point Part. Uniform Point Part. Uniform Part. Uniform Part. Uniform Part. Uniform	Point 0-2-10 Point 0-11-9 Point 0-11-9 Point 1-11-9 Point 1-11-9 Part. Uniform 2-7-9 to 5-3-9 Point 3-3-9 Part. Uniform 4-5-3 to 5-8-6 Part. Uniform 4-5-13 to 5-8-6 Part. Uniform 4-7-1 to 5-8-6 Point 4-8-4 Part. Uniform 5-6-1 to 5-8-6 Point 5-8-6 to 5-9-15 Part. Uniform 5-8-6 to 5-9-15	Point 0-2-10 Top Point 0-11-9 Far Face Point 0-11-9 Near Fa Point 1-11-9 Far Face Point 1-11-9 Near Fa Part. Uniform 2-7-9 to 5-3-9 Far Face Point 3-3-9 Near Fa Part. Uniform 4-5-3 to 5-8-6 Top Part. Uniform 4-5-13 to 5-8-6 Top Part. Uniform 4-7-1 to 5-8-6 Top Point 4-7-9 Near Fa Point 4-8-4 Top Part. Uniform 5-6-1 to 5-8-6 Top Point 5-6-10 Near Fa Point 5-8-6 to 5-9-15 Top Part. Uniform 5-8-6 to 5-9-15 Top	Point 0-2-10 Top 22 lb Point 0-11-9 Far Face 99 lb Point 0-11-9 Near Face 59 lb Point 1-11-9 Far Face 150 lb Point 1-11-9 Near Face 88 lb Part. Uniform 2-7-9 to 5-3-9 Far Face 130 PLF Point 3-3-9 Near Face 101 lb Part. Uniform 4-5-3 to 5-8-6 Top 82 PLF Part. Uniform 4-5-13 to 5-8-6 Top 102 PLF Part. Uniform 4-7-1 to 5-8-6 Top 66 PLF Point 4-7-9 Near Face 85 lb Point 4-8-4 Top 523 lb Part. Uniform 5-6-1 to 5-8-6 Top 43 PLF Point 5-6-10 Near Face 51 lb Part. Uniform 5-8-6 to 5-9-15 Top 51 PLF Part. Uniform 5-8-6 to 5-9-15 Top 33 PLF Part. Uniform 5-8-6 to 5-9-15 Top 41 PLF <td>Point 0-2-10 Top 22 lb 0 lb Point 0-11-9 Far Face 99 lb 211 lb Point 0-11-9 Near Face 59 lb 158 lb Point 1-11-9 Far Face 150 lb 313 lb Point 1-11-9 Near Face 88 lb 235 lb Part. Uniform 2-7-9 to 5-3-9 Far Face 130 PLF 268 PLF Point 3-3-9 Near Face 101 lb 268 lb Part. Uniform 4-5-3 to 5-8-6 Top 82 PLF 0 PLF Part. Uniform 4-5-13 to 5-8-6 Top 102 PLF 272 PLF Part. Uniform 4-7-1 to 5-8-6 Top 66 PLF 175 PLF Point 4-7-9 Near Face 85 lb 227 lb Point 4-8-4 Top 523 lb 1280 lb Part. Uniform 5-6-1 to 5-8-6 Top 43 PLF 116 PLF Point 5-8-6 to 5-9-15 Top 51 lb 128 lb Part. Uni</td> <td>Point 0-2-10 Top 22 lb 0 lb 0 lb Point 0-11-9 Far Face 99 lb 211 lb 0 lb Point 0-11-9 Near Face 59 lb 158 lb 0 lb Point 1-11-9 Far Face 150 lb 313 lb 0 lb Point 1-11-9 Near Face 88 lb 235 lb 0 lb Part. Uniform 2-7-9 to 5-3-9 Far Face 130 PLF 268 PLF 0 PLF Point 3-3-9 Near Face 101 lb 268 lb 0 lb Part. Uniform 4-5-3 to 5-8-6 Top 82 PLF 0 PLF 0 PLF Part. Uniform 4-5-3 to 5-8-6 Top 102 PLF 272 PLF 0 PLF Part. Uniform 4-5-13 to 5-8-6 Top 66 PLF 175 PLF 0 PLF Part. Uniform 4-7-1 to 5-8-6 Top 66 PLF 175 PLF 0 PLF Point 4-7-9 Near Face 85 lb 227 lb 0 lb Part. Uniform</td> <td>Point 0-2-10 Top 22 lb 0 lb 0 lb 0 lb Point 0-11-9 Far Face 99 lb 211 lb 0 lb 0 lb Point 0-11-9 Near Face 59 lb 158 lb 0 lb 0 lb Point 1-11-9 Far Face 150 lb 313 lb 0 lb 0 lb Point 1-11-9 Near Face 88 lb 235 lb 0 lb 0 lb Point 1-11-9 Near Face 88 lb 235 lb 0 lb 0 lb Point 1-11-9 Near Face 88 lb 235 lb 0 lb 0 lb Point 3-3-9 Far Face 130 PLF 268 PLF 0 PLF 0 PLF Point 3-3-9 Near Face 101 lb 268 lb 0 lb 0 lb Part. Uniform 4-5-3 to 5-8-6 Top 82 PLF 0 PLF 0 PLF 0 PLF Part. Uniform 4-5-13 to 5-8-6 Top 102 PLF 272 PLF 0 PLF 0 PLF </td>	Point 0-2-10 Top 22 lb 0 lb Point 0-11-9 Far Face 99 lb 211 lb Point 0-11-9 Near Face 59 lb 158 lb Point 1-11-9 Far Face 150 lb 313 lb Point 1-11-9 Near Face 88 lb 235 lb Part. Uniform 2-7-9 to 5-3-9 Far Face 130 PLF 268 PLF Point 3-3-9 Near Face 101 lb 268 lb Part. Uniform 4-5-3 to 5-8-6 Top 82 PLF 0 PLF Part. Uniform 4-5-13 to 5-8-6 Top 102 PLF 272 PLF Part. Uniform 4-7-1 to 5-8-6 Top 66 PLF 175 PLF Point 4-7-9 Near Face 85 lb 227 lb Point 4-8-4 Top 523 lb 1280 lb Part. Uniform 5-6-1 to 5-8-6 Top 43 PLF 116 PLF Point 5-8-6 to 5-9-15 Top 51 lb 128 lb Part. Uni	Point 0-2-10 Top 22 lb 0 lb 0 lb Point 0-11-9 Far Face 99 lb 211 lb 0 lb Point 0-11-9 Near Face 59 lb 158 lb 0 lb Point 1-11-9 Far Face 150 lb 313 lb 0 lb Point 1-11-9 Near Face 88 lb 235 lb 0 lb Part. Uniform 2-7-9 to 5-3-9 Far Face 130 PLF 268 PLF 0 PLF Point 3-3-9 Near Face 101 lb 268 lb 0 lb Part. Uniform 4-5-3 to 5-8-6 Top 82 PLF 0 PLF 0 PLF Part. Uniform 4-5-3 to 5-8-6 Top 102 PLF 272 PLF 0 PLF Part. Uniform 4-5-13 to 5-8-6 Top 66 PLF 175 PLF 0 PLF Part. Uniform 4-7-1 to 5-8-6 Top 66 PLF 175 PLF 0 PLF Point 4-7-9 Near Face 85 lb 227 lb 0 lb Part. Uniform	Point 0-2-10 Top 22 lb 0 lb 0 lb 0 lb Point 0-11-9 Far Face 99 lb 211 lb 0 lb 0 lb Point 0-11-9 Near Face 59 lb 158 lb 0 lb 0 lb Point 1-11-9 Far Face 150 lb 313 lb 0 lb 0 lb Point 1-11-9 Near Face 88 lb 235 lb 0 lb 0 lb Point 1-11-9 Near Face 88 lb 235 lb 0 lb 0 lb Point 1-11-9 Near Face 88 lb 235 lb 0 lb 0 lb Point 3-3-9 Far Face 130 PLF 268 PLF 0 PLF 0 PLF Point 3-3-9 Near Face 101 lb 268 lb 0 lb 0 lb Part. Uniform 4-5-3 to 5-8-6 Top 82 PLF 0 PLF 0 PLF 0 PLF Part. Uniform 4-5-13 to 5-8-6 Top 102 PLF 272 PLF 0 PLF 0 PLF

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

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

Notes

NOISE

Cacutated Structured 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 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
- Handling & Installation

 1. LVL beams must not be cut or drilled

 2. Refer to manufacturer's product information regarding installation requirements, mufti-pty 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

Manufacturer Info

APA: PR-L318

Kott Lumber Company 14 Anderson Blvd, Ontario

This design is valid until 7/10/2021



9/10/2018 Date: Designer: SB

Job Name: MILLWOOD 1 EL-3

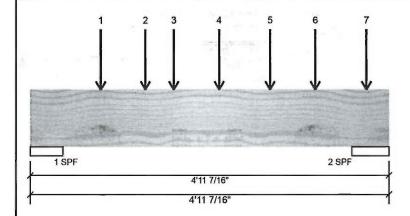
Project #

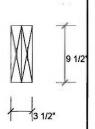
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor





Page 1 of 2

M	em	ber !	Info	rma	tior

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

Application: Floor (Residential) Design Method: LSD

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

Deck: Not Checked Vibration: Not Checked

Unfactored Reactions UNPATTERNED Ib (Uplift)

Brg	Live	Dead	Snow	Wind
1	1548	656	0	0
2	1280	523	0	0

Bearings and Factored Reactions

Bearing Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
1 - SPF 5.500"	27%	820 / 2322	3142	L	1.25D+1.5L	
2 - SPF 6.094"	20%	653 / 1920	2573	L	1.25D+1.5L	

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3495 ft-lb	1'11 11/16"	22724 ft-lb	0.154 (15%)	1.25D+1.5L	L
Unbraced	3495 ft-lb	1'11 11/16"	22724 ft-lb	0.154 (15%)	1.25D+1.5L	L
Shear	3023 lb	1'2 1/4"	9277 lb	0.326 (33%)	1.25D+1.5L	L
Perm Defl in.	0.007 (L/7527)	2'2 1/8"	0.137 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.016 (L/3135)	2'2 3/8"	0.137 (L/360)	0.110 (11%)	L	L
TL Defl inch	0.022 (L/2213)	2'2 5/16"	0.205 (L/240)	0.110 (11%)	D+L	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.
- 6 Bottom braced at bearings.
- 7 Lateral stenderness ratio based on full section width.

860	PROFESSIO	NAI ENGLI	
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1	100083	180	/
C	ON NOE OF	ONTAR	

September 17, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-11-11		Тор	77 lb	206 lb	0 lb	0 lb	J4
2	Point	1-7-0		Тор	569 lb	1304 lb	0 lb	0 lb	F8
3	Point	1-11-11		Тор	116 lb	310 lb	0 lb	0 lb	J4
4	Point	2-7-3		Тор	91 lb	241 lb	0 lb	0 lb	J3
5	Point	3-3-11		Тор	134 lb	356 lb	0 lb	0 lb	J4

Continued on page 2...

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 reguliements, multi-phy
fastening defails, beam strength values, and code

6. For flat roofs provide proper drainage to prevent

This design is

Manufacturer Info Forex APA: PR-L318

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

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





Client:

Project: Address:

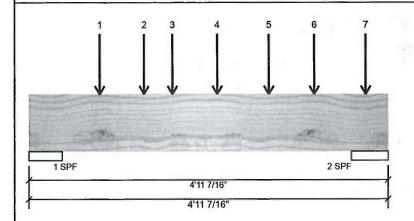
9/10/2018 Date:

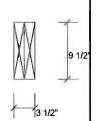
SB Designer:

Job Name: MILLWOOD 1 EL-3

Project #:

2-Ply - PASSED Level: Second Floor Forex 2.0E-3000Fb LVL 1.750" X 9.500" BM6-A





Page 2 of 2

Continued	from page 1							
ID	Load Type	Location Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-11-3	Тор	102 lb	272 lb	0 lb	0 lb	J3
7	Point	4-7-11	Тор	52 lb	139 lb	0 lb	0 lb	J4
100	Self Weight			8 PLF				

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

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

Calculated Structured 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 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
Handling & Installation

1. U.L. beams must not be cut for drilled

2. Refer to manufacturer's product information regarding installation requirements, multi-ply interpretable in the product information regarding installation requirements, multi-ply interpretable in the product of the provided in the product of the provided 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

Manufacturer Info Forex APA: PR-L318

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



This design is valid until 7/10/2021



Client: Project: Address:

9/10/2018 Date: Designer: SB

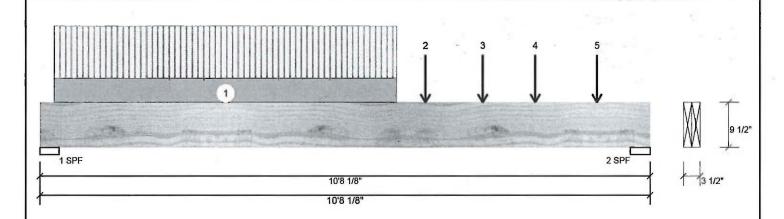
Job Name: MILLWOOD 1 EL-3

Project #:

Forex 2.0E-3000Fb LVL BM8-A

1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Member Infor	mation	2 44		Unfactor	ed Reac	tions U	NPATTERNI	ED lb (Uplift)	
Type:	Girder	 Application:	Floor (Residential)	Brg	Live		Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	1263		612	0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1259		559	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 l	Reactions		
Dead:	15 PSF			Bearing	Length	Сар.	React D/L lb	Total Ld. Case	Ld. Comb.
				1 - SPF	4.000"	31%	765 / 1895	2660 L	1.25D+1.5L
		 		2-SPF	4.188"	29%	699 / 1888	2587 L	1.25D+1.5L

Analysis Results

Γ	Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
ı	Moment	6663 ft-lb	5'3 11/16"	22724 ft-lb	0.293 (29%)	1.25D+1.5L	L
l	Unbraced	6663 ft-lb	5'3 11/16"	20700 ft-lb	0.322 (32%)	1.25D+1.5L	L
ı	Shear	2468 lb	9'7 3/16"	9277 lb	0.266 (27%)	1.25D+1.5L	L
l	Perm Defl in.	0.061 (L/2007)	5'3 5/8"	0.337 (L/360)	0.180 (18%)	D	Uniform
ı	LL Defl inch	0.129 (L/942)	5'4 1/16"	0.337 (L/360)	0.380 (38%)	L	L
	TL Defl inch	0.189 (L/641)	5'3 15/16"	0.506 (L/240)	0.370 (37%)	D+L	L

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

Laterara	olelidelliess tallo based o	ii iuli scollori mulii.							
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-3-0 to 6-3-0		Тор	115 PLF	248 PLF	0 PLF	0 PLF	
2	Point	6-9-0		Тор	106 lb	248 lb	0 lb	0 lb	J4 Framing Squash Block is
3	Point	7-9-0		Тор	89 lb	238 lb	0 lb	required a	t all point loads over bearings
4	Point	8-8-0		Тор	93 lb	248 lb	0 lb	0 lb	J4
5	Point	9-9-0		Тор	112 lb	300 lb	0 lb	Refer to M Detail for p	ultiple Member Connection oly to ply nailing or bolting
	Self Weight				8 PLF			requireme	

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

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

chemical's

Handling & Installation

andling & installation
LVL beams must not be cut or drilled
Refer to manufacturer's product information
regarding installation requirements, multi-ply
fasterling details, beam strength values, and code
approvals
Damaged Beams must not be used

For flat roofs provide proper drainage to prevent pending

This desig

Manufacturer Info Forex APA: PR-L318

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

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

T.L. WISE

100083566

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September 17, 2018



Version 18.40.162 Powered by iStruct™



Client: Project: Address:

9/10/2018 Date: Designer: SB

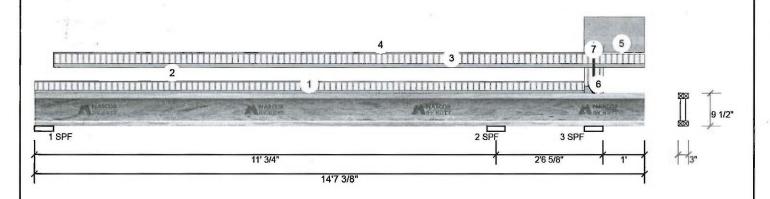
Job Name: MILLWOOD 1 EL-3

Project #:

9.500"

2-Ply - PASSED

Level: Second Floor



vlember Intor	mation	12 TO 12 TO 15	* +
Type:	Girder	Application:	Floor (Residential)
Plies:	2	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		

ults					
	Location	Allowed	Capacity	Comb.	Case
-835 ft-lb	11' 3/4"	7340 ft-lb	0.114 (11%)	1.25D+1.5L	LLL
-835 ft-lb	11' 3/4"	5510 ft-lb	0.151 (15%)	1.25D+1.5L	LLL
831 ft-lb	4'9 13/16"	7340 ft-lb	0.113 (11%)	1.25D+1.5L	L
	Actual -835 ft-lb -835 ft-lb 831 ft-lb	Actual Location -835 ft-lb 11' 3/4" -835 ft-lb 11' 3/4"	Actual Location Allowed -835 ft-lb 11' 3/4" 7340 ft-lb -835 ft-lb 11' 3/4" 5510 ft-lb	Actual Location Allowed Capacity -835 ft-lb 11' 3/4" 7340 ft-lb 0.114 (11%) -835 ft-lb 11' 3/4" 5510 ft-lb 0.151 (15%)	Actual Location Allowed Capacity Comb. -835 ft-lb 11' 3/4" 7340 ft-lb 0.114 (11%) 1.25D+1.5L -835 ft-lb 11' 3/4" 5510 ft-lb 0.151 (15%) 1.25D+1.5L

831 ft-lb 4'9 13/16" 832 ft-lb 0.998 1.25D+1.5L L_ Unbraced (100%)11' 3/4" 3080 lb Shear 532 lb 0.173 (17%) 1.25D+1.5L LLL Perm Defl in. 0.015 (L/8397) 5'4" 0.356 (L/360) 0.040 (4%) D Uniform LL Defl inch 0.031 (L/4139) 5'4 3/16" 0.356 (L/360) 0.090 (9%) L+0.5S L__ TL Defl inch 0.046 (L/2772) 5'4 1/8" 0.533 (L/240) 0.090 (9%) D+L+0.5S Rt Cant 0.200 LL Cant -0.001 0.005 (0%) L+0.5S LL_ (2L/24468) (2U480)

(2L/360)

Design Notes

TL Cant

1 Warning Note: right cant exceeds 1/3 of back span, wind uplift may need to be checked.

Rt Cant 0.300

- 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.

0.001

(2L/35150)

- 5 Top flange must be laterally braced at a maximum of 6'8" o.c.
- 6 Bottom flange must be laterally braced at a maximum of 6'3" o.c.

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	182	91	0	0
2	460	216	0	0
3	74	197	87	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld, Case	Ld. Comb.
1 - SPF	5.500"	13%	114 / 274	388	L	1.25D+1.5L
2 - SPF	5.250"	21%	270 / 696	966	LL_	1.25D+1.5L
3-SPF	5.250"	16%	246 / 403	649	_LL	1.25D+1.5L +0.5S



September 17, 2018

structural adequacy of this component based design criteria and loadings shown. It responsibility of the customer and/or the contraction the component suitability of the customer and/or the contraction of the component suitability of the disposition, and to write the component suitability of the disposition. ins is responsible day or the component based on the dings shown. It is the ner and/or the contractor to

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

chemicals

Handling & Installation

andling & instaniation

List flarges must not be cut or drifted

Refer to latest copy of the Lists product information
detals for framing detals, siftener tables, we will
chart, bridging detals, multi-ply fastening detals and
handling/erection detals

Damaged Lists must not be used

Lates assumes ton flarge to the laterality restrained.

0.002 (0%) D+L+0.5S

__L

This design is

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
 To fair roofs provide the provided of the provided of

READ ALL NOTES ON THIS PAGE AND ON THE IS AN INTEGRAL PART OF THIS DRAWING AS IT

ENGINEERING NOTE PAGE ENP-2. THE NOTE PAGE CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

Manufacturer Info

Nascor by Kott

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



Page 2 of 2



Client:

Project: Address:

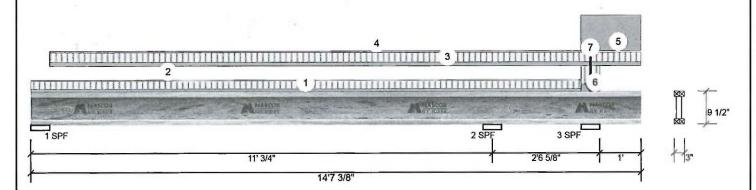
9/10/2018 Date:

Designer: SB Job Name: MILLWOOD 1 EL-3

Project #:

NJ 9.500" 2-Ply - PASSED

Level: Second Floor



ID	1	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	
1		Tie-In	0-0-0 to 13-2-2	(Span) 0-10-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
2		Part. Uniform	0-0-0 to 13-2-2		Тор	2 PLF	0 PLF	0 PLF	0 PLF		
3		Tie-In	0-5-8 to 14-7-6	(Span)1-1-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
4		Part. Uniform	0-5-8 to 13-2-10		Top	3 PLF	0 PLF	0 PLF	0 PLF		
5		Part. Uniform	13-2-0 to 14-7-6		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight	
6		Tie-In	13-2-2 to 13-7-8	(Span)2-1-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
7		Point	13-4-12		Тор	110 lb	149 lb	87 lb	0 lb	F2 F2	

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

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

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 Inlanded 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

- andling & Installation

 Joist flanges must not be cut or drilled
 Refer to letest copy of the Joist product information
 defails for framing details, stiffener tables, web hole
 chart, bridging details, musty-in fastening details end
 handling/erection details
 Demaged Joists 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 beering points to avoid lateral displacement and rotation
 Web stiffeness for point load as shown Minimum point load bearing length>= 3.5 inches
 For flat roots provide proper drainage to prevent ponding

This design is valid until 7/10/2021

Manufacturer Info

Nascor by Kott

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





Client:

Project: Address: Date: 9/10/2018

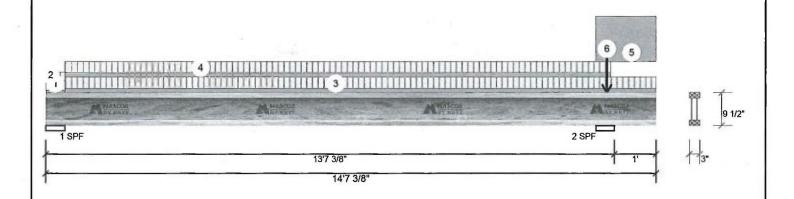
Designer: SB

Job Name: MILLWOOD 1 EL-3

Project #:

2-Ply - PASSED 9.500"

Level: Second Floor



Member Info	rmation			Unfactore	d Reacti	ions UNPATTER	RNED lb (Uplift)	
Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	269	98	0	0
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	288	372	264	0
Deflection LL:	360	Load Sharing:	No					
Deflection TL:	240	Deck:	Not Checked					
Importance:	Normal	Vibration:	Not Checked					
General Load								
Floor Live:	40 PSF			Bearings a	and Fact	ored Reactions		
Dead:	15 PSF			Bearing L	ength.	Cap. React D/L	b Total Ld. Case	Ld. Comb.
				1-SPF 5	.500"	17% 122 / 40	5 527 L	1.25D+1.5L

2-SPF 5.250"

23%

465 / 564

1029 LL

A	 lycic	D-	

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-70 ft-lb	13'7 3/8"	4771 ft-lb	0.015 (1%)	1.25D+1.5L	_L
Unbraced	-70 ft-lb	13'7 3/8"	4691 ft-lb	0.015 (1%)	1.25D+1.5L	_L
Pos Moment	1638 ft-lb	6'10 1/8"	7340 ft-lb	0.223 (22%)	1.25D+1.5L	L_
Unbraced	1638 ft-lb	6'10 1/8"	1647 ft-lb	0.994 (99%)	1.25D+1.5L	L_
Shear	540 lb	13'4 3/4"	3080 lb	0.175 (18%)	1.25D+1.5L	LL
Perm Defi in.	0.035 (L/4444)	6'9 15/16"	0.433 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.101 (L/1547)	6'10 3/4"	0.433 (L/360)	0.230 (23%)	L+0.5S	L_
TL Defl inch	0.136 (L/1148)	6'10 9/16"	0.650 (L/240)	0.210 (21%)	D+L+0.5S	L_
LL Cant	-0.023 (2L/1062)	Rt Cant	0.200 (2L/480)	0.113 (11%)	L+0.5S	L_
TL Cant	-0.029 (2L/817)	Rt Cant	0.300 (2L/360)	0.098 (10%)	D+L+0.5S	L_



1.25D+1.5L +0.58

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 5'1" o.c.
- 5 Bottom flange must be laterally braced at a maximum of 6'3" o.c.

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
 Uoist not to be treated with fire retardant or corrosive

Handling & Installation

Transising & Installation

1. Lioist flanges must not be cut or drilled

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

5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. Web stiffeners for point load as shown Minimum point load bearing length>= 3.5 Inches
7. For flat roofs provided.

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

Manufacturer Info

Nascor by Kott

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



This design is

Page 2 of 2



Client: Project:

Address:

9/10/2018 Date:

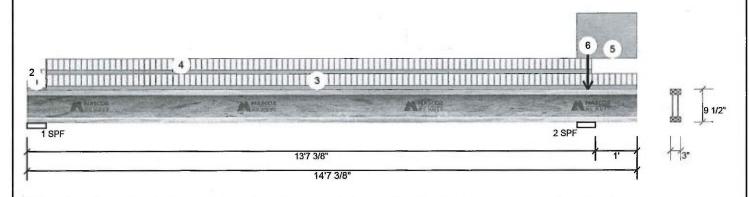
Designer: SB Job Name: MILLWOOD 1 EL-3

Project #:

9.500" NJ

2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-8	(Span)0-6-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-5-8	(Span)0-9-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-5-8 to 14-7-6	(Span)1-0-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	0-5-8 to 13-6-6	(Span) 0-11-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
5	Part. Uniform	13-2-0 to 14-7-6		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	13-5-4		Тор	145 lb	0 lb	264 lb	0 lb	F3 F3

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

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

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

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

Handling & Installation

- Handling & Installation

 1. Uoist flanges must not be cut or drided

 2. Refer to latest copy of the Uoist product information
 details for framing details, eitherer tables, web hole
 chart, bridging details, multi-byt festering details end
 handling/eraction details

 3. Demaged Lobists must not be used

 4. Design assumes top flange to be falterally restrained
 by attached shealthing 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 lengths—3.5 linches
 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

This design is valid until 7/10/2021



2 1 11

Client: Project:

Address:

9/10/2018 Date:

Designer: SB

Job Name: MILLWOOD 1 EL-3

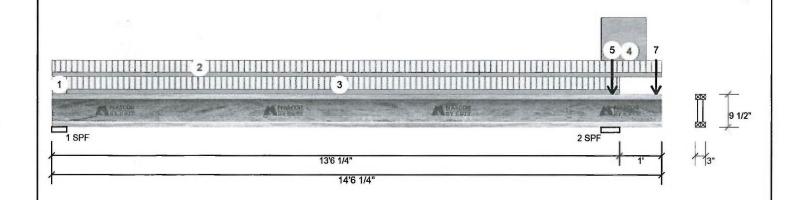
Project #:

9.500"

2-Ply - PASSED

Level: Second Floor

Unfactored Reactions UNPATTERNED Ib (Uplift)



Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	V	Wind
Plies:	2	Design Method:	LSD	1	309		111	0 (-1)	0
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012	2	331		428	31	9	0
Deflection LL:	360	Load Sharing:	No							
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										1.72
Floor Live:	40 PSF			Bearings	and Fac	tored R	eactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1 - SPF	4.375"	20%	139 / 465	604	L_	1.25D+1.5L
Analysis Resu	lts			2-SPF	5.250"	26%	536 / 656	1191	LL	1.25D+1.5L +0.5S

-		_	-
Ana	lvsis	Res	ults

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-102 ft-lb	13'6 1/4"	4771 ft-lb	0.021 (2%)	1.25D+1.5L	_L
Unbraced	-102 ft-lb	13'6 1/4"	4691 ft-lb	0.022 (2%)	1.25D+1.5L	_L
Pos Moment	1863 ft-lb	6'8 3/4"	7340 ft-lb	0.254 (25%)	1.25D+1.5L	L_
Unbraced	1863 ft-lb	6'8 3/4"	1875 ft-lb	0.994 (99%)	1.25D+1.5L	L_
Shear	617 lb	13'3 5/8"	3080 lb	0.200 (20%)	1.25D+1.5L +0.5S	LL
Perm Defl in.	0.039 (L/4002)	6'8 7/16"	0.433 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.115 (L/1352)	6'9 5/8"	0.433 (L/360)	0.270 (27%)	L	L_
TL Defl inch	0.154 (L/1010)	6'9 3/8"	0.650 (L/240)	0.240 (24%)	D+L	L_
LL Cant	-0.026 (2L/928)	Rt Cant	0.200 (2L/480)	0.129 (13%)	L	L_
TL Cant	-0.033 (2L/730)	Rt Cant	0.300 (2L/360)	0.110 (11%)	D+L	L_

T.L. WISE 100083566 100083566 OUNCE OF ONTRE September 17, 2018

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 must be laterally braced at a maximum of 6'3" o.c.

conversive 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 Insele

Lumber

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

chemicals

Handling & Installation

- Joining & Installiation

 Justif langes must not be cut or drilled

 Refer to latest copy of the Uoist product information

 details for framing details, stiffener tables, web hole

 chart, bridging details, smulfi-ply fastening details and
 handling/srection details

 Damaged Uoists 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 attlements for point load as shown Minimum point load bearing length> 3.5 inches
 For flat roofs provide READ ALL NOTES

This design is valid

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

Manufacturer Info

Nascor by Kott

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



Page 2 of 2



Client: Project: Address: Date: 9/10/2018

Designer: SB

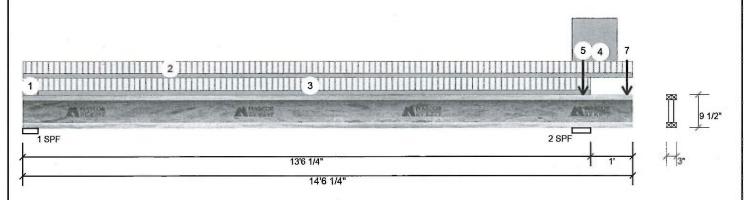
Job Name: MILLWOOD 1 EL-3

Project #:

F16-C NJ 9.500"

2-Ply - PASSED

Level: Second Floor



ID-	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-6	(Span)1-0-2	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 14-6-4	(Span)1-1-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-4-6 to 13-6-4	(Span)1-2-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part, Uniform	13-0-14 to 14-1-14		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Point	13-4-2		Тор	161 lb	0 lb	299 lb	0 lb	F3 F3
6	Point	14-4-10		Тор	8 lb	0 lb	19 lb	0 lb	
7	Point	14-4-10		Тор	44 lb	0 lb	0 lb	0 lb	Wall Self Weight

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

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

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.

Handling & Installation

- Handling & Installation

 1. Diolat itanges must not be cut or drised
 2. Refer to latest copy of the Libit product information
 details for framing details, stiffners tables, web hole
 chart, bridging details, multi-ply fastering details end
 handlingferection details
 3. Demaged Libits must not be used
 1. Design assumes top flange to be laterally restrained
 by attached sheathing or as specified in engineering
 notes.

Nascor by Kott

Manufacturer Info

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



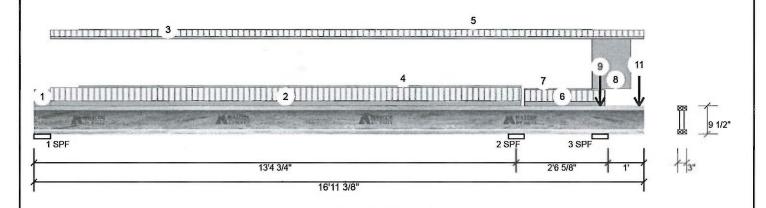
Client: Project: Address: 9/10/2018

Designer: SB

Job Name: MILLWOOD 1 EL-3

Project #:

9.500" 2-Ply - PASSED Level: Second Floor

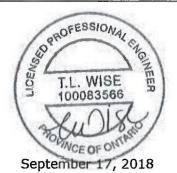


Member Info	rmation		
Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition	on: Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live: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

Brg	Live	Dead	Snow	Wind
1	175	83	0 (0)	0
2	482	223	0 (-4)	0
3	0 (-9)	176	128	0

I	Bearing:	s and Fac	tored l	Reactions			
Ì	Bearing	Length	Сар.	React D/L lb	Total	Ld. Case	Ld. Comb.
I	1 - SPF	5.500"	12%	104 / 263	367	L	1.25D+1.5L
ł	2-SPF	5.250"	22%	279 / 727	1006	LL_	1.25D+1.5L
l	3 - SPF	5.250"	14%	220 / 363	583	_LL	1.25D+1.5L +0.5S

Analysis Res		1 4:	A11	C-n-it.	Oh	0
Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1039 ft-lb	13'4 3/4"	7340 ft-lb	0.142 (14%)	1.25D+1.5L +0.5S	LLL
Unbraced	-1039 ft-lb	13'4 3/4"	5435 ft-lb	0.191 (19%)	1.25D+1.5L +0.5S	LLL
Pos Moment	951 ft-lb	5'8 5/8"	7340 ft-lb	0.130 (13%)	1.25D+1.5L	L
Unbraced	951 ft-lb	5'8 5/8"	956 ft-lb	0.995 (99%)	1.25D+1.5L	L
Shear	518 lb	13'4 3/4"	3080 lb	0.168 (17%)	1.25D+1.5L +0.5S	LLL
Perm Defl in.	0.024 (L/6483)	6'4 3/16"	0.433 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.049 (L/3205)	6'4 5/16"	0.433 (L/360)	0.110 (11%)	L	L
TL Defl inch	0.073 (L/2145)	6'4 5/16"	0.650 (L/240)	0.110 (11%)	D+L	L
LL Cant	-0.001 (2L/20851)	Rt Cant	0.200 (2L/480)	0.006 (1%)	L	LL_
TL Cant	0.001 (2L/31246)	Rt Cant	0.300 (2L/360)	0.003 (0%)	D+S+0.5L	_L



Design Notes

- 1 Warning Note: right cant exceeds 1/3 of back span, wind uplift may need to be checked.
- 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 must be laterally braced at a maximum of 6'4" o.c.
- 6 Bottom flange must be laterally braced at a maximum of 6'3" o.c.

Notes

Calculated Shuchared 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 coetractor 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

Handling & Installation

- Hardmann & Installation
 Hold flagges must not be cut or drifted
 Refer to latest copy of the Uoist product information details for framing details, stiftener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
 Demaged Uoists 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 lengths—3.5 Inches
 For flat roofs provided to the point load of the point load.

This design is

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

Manufacturer Info

Nascor by Kott

Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4



Page 2 of 2



Client: Project: Address:

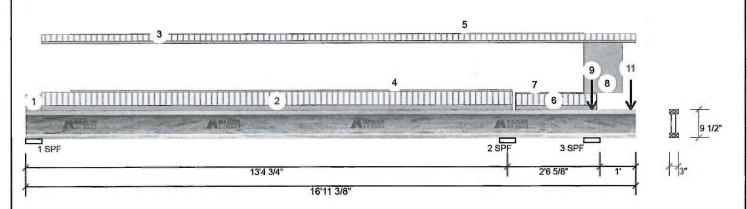
9/10/2018 Designer: SB

Job Name: MILLWOOD 1 EL-3

Project #:

9.500" 2-Ply - PASSED NJ

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-8	(Span)0-11-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-5-8 to 13-6-6	(Span)1-0-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-5-8 to 16-11-6	(Span)0-6-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	1-3-1 to 13-6-6		Тор	3 PLF	0 PLF	0 PLF	0 PLF	
5	Part. Uniform	1-3-2 to 15-6-3		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
6	Tie-In	13-7-8 to 15-10-6	(Span)0-11-1	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	13-7-8 to 15-6-2		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
8	Part. Uniform	15-6-0 to 16-7-0		Тор	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Point	15-8-12		Тор	121 lb	149 lb	112 lb	0 lb	F2 F2
10	Point	16-9-12		Тор	5 lb	0 lb	12 lb	0 lb	
11	Point	16-9-12		Тор	28 lb	0 lb	0 lb	0 lb	Wall Self Weight

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

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

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
 IJoist not to be treated with fire retardant or cor

Handling & Installation

- Handling & Installation

 1. Julish langes must not be cut or drilled

 2. Refer to latest copy of the I Joist product information details for framing details, stiffener tables, web hole chart, bridging details, multiply featering details and handling/erection details

 3. Damaged Joist 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

This design is valid until 7/10/2021



Date: 9/10/2018

Designer: SB

Job Name: MILLWOOD 1 EL-3

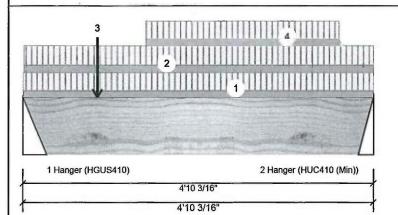
Level: Second Floor

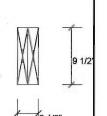
Project #:

Forex 2.0E-3000Fb LVL

Floor (Residential)

1.750" X 9.500" 2-Ply - PASSED





Page 1 of 1

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

Application:

Brg Live Dead Snow Wind 521 214 0 0 491 0 2 202 0

Unfactored Reactions UNPATTERNED lb (Uplift)

Bearings and Factored Reactions Cap. React D/L lb Bearing Length Total Ld. Case Ld. Comb. 10% 268 / 781 1.25D+1.5L 4.000" 1049 L Hanger 2.500" 15% 253 / 736 1.25D+1.5L 989 L Hanger

Analysis Results Analysis Actual Location Allowed Capacity Comb. Moment 1091 ft-lb 2'5 13/16" 22724 ft-lb 0.048 (5%) 1.25D+1.5L L 1091 ft-lb 2'5 13/16" 22724 ft-lb 0.048 (5%) 1.25D+1.5L L Unbraced 791 lb 1' 3/4" 9277 lb 0.085 (9%) 1.25D+1.5L L Shear 2'5 13/16" 0.148 (L/360) 0.020 (2%) D Perm Defl in. 0.002 Uniform (L/22723) LL Defl inch 0.006 (L/9302) 2'5 13/16" 0.148 (L/360) 0.040 (4%) L L TL Defl inch 0.008 (L/6600) 2'5 13/16" 0.222 (L/240) 0.040 (4%) D+L

Design Notes

1 Fill all hanger nailing holes.

Member Information

Type:

Girder

- 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.

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September 17, 2018

7 Lateral	slenderness 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 4-10-3	(Span)3-7-7	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-3 to 4-10-3	(Span) 3-10-14	Тор	15 PSF	40 PSF	0 PSF		Framing Squash Block is
3	Point	1-0-7		Near Face	34 lb	91 lb	0 lb	required a	t all point loads over bearings
4	Part. Uniform	1-8-7 to 4-4-7		Near Face	27 PLF	72 PLF	0 PLF	Refer to M	lultiple Member Connection
	Self Weight				8 PLF				ply to ply nailing or bolting

This des

Notes

Lumber

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

Handling & Installation

LVL beams must not be cut or drilled
 Refer to manufacturer's product inform regarding installation requirements, mu fastening details, beam strength values, and

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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

requirements

APA: PR-L318

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

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





Client: Project: Address:

9/10/2018 Date:

Designer: SB

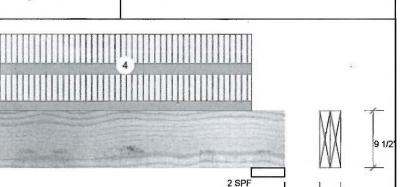
Job Name: MILLWOOD 1 EL-3

evel: Second Floor

Project #:

1.750" X 9.500"

8'4 3/4 8'4 3/4'



Unfactored Reactions UNPATTERNED Ib (Uplift)

Type:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	v	Wind
Plies:	2	Design Method:	LSD	1	362		177	(0	0
Moisture Condition	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	411		196		0	0
Deflection LL:	360	Load Sharing:	No	1.77						
Deflection TL:	240	Deck:	Not Checked							
Importance:	Normal	Vibration:	Not Checked							
General Load										
Floor Live:	40 PSF			Bearings	and Fac	tored	Reactions			
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
				1-SPF	5.500"	6%	221 / 543	764	L	1.25D+1.5L
				2-SPF	5.500"	7%	245 / 617	862	L	1.25D+1.5L

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2515 ft-lb	4'3 13/16"	22724 ft-lb	0.111 (11%)	1.25D+1.5L	L
Unbraced	2515 ft-lb	4'3 13/16"	21582 ft-lb	0.117 (12%)	1.25D+1.5L	L
Shear	786 lb	7'2 1/2"	9277 lb	0.085 (8%)	1.25D+1.5L	L
Perm Defl in.	0.012 (L/7866)	4'3 13/16"	0.253 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.025 (L/3582)	4'3 13/16"	0.253 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.037 (L/2461)	4'3 13/16"	0.380 (L/240)	0.100 (10%)	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 braced at bearings.
- 5 Bottom braced at bearings.
- 6 Lateral slenderness ratio based on full section width.

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September 17, 2018

	O Luiciai Sici	acificas fatto basca t	of fall ocolloff fridat.										
П	ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments			
	1	Tie-In	0-0-0 to 0-2-12	(Span)1-3-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF				
1	2	Tie-In	0-2-12 to 7-11-4	(Span)1-0-13	Тор	15 PSF	40 PSF	0 PSF	0 PSF				
1	3	Point	4-3-13		Far Face	214 lb	521 lb	0 lb	0 lb	F6			
4	4	Tie-In	4-5-9 to 7-11-4	(Span)1-2-3	Тор	15 PSF	40 PSF	0 PSF	Pass Tyru Framing Squash Block is				
		Self Weight				8 PLF			required at all point loads over beari				

This design is

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

Notes

Lumber

Handling & Installation

- I. IVI. 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 restral
 Provide lateral support at bearing points
 lateral displacement and rotation

Manufacturer Info

APA: PR-L318

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

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





Project: Address:

9/10/2018 Designer: SB

Job Name: MILLWOOD 1 EL-3

Project #:

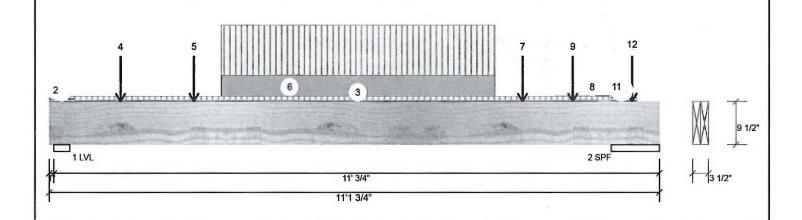
Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor

Unfactored Reactions UNPATTERNED Ib (Uplift)



Type:	Girder	Application:	Floor (Residential)	Brg	Live	Dead	Snow	Wind
Plies:	2	Design Method:	LSD	1	1304	569	0	0
Moisture Conditio	n: Dry	Building Code:	NBCC 2010 / OBC 2012	2	1586	695	0	0
Deflection LL:	360	Load Sharing:	No					
Deflection TL:	240	Deck:	Not Checked	1				
Importance:	Normal	Vibration:	Not Checked					
General Load								
Floor Live:	40 PSF			Bearings	and Fact	ored Reactions		
Dead:	15 PSF			Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
				1 - LVL	3.500"	29% 712 / 1956	2668 LL	1.25D+1.5L
				2-SPF	10.502"	14% 868 / 2380	3248 _L	1.25D+1.5L

Analysis Results

Member Information

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7404 ft-lb	5'3 9/16"	22724 ft-lb	0.326 (33%)	1.25D+1.5L	_L
Unbraced	7404 ft-lb	5'3 9/16"	20708 ft-lb	0.358 (36%)	1.25D+1.5L	_L
Shear	2770 lb	9'6 1/2"	9277 lb	0.299 (30%)	1.25D+1.5L	_L
Perm Defl in.	0.064 (L/1890)	5'3 9/16"	0.337 (L/360)	0.190 (19%)	D	Uniform
LL Defl inch	0.145 (L/837)	5'3 7/16"	0.337 (L/360)	0.430 (43%)	L	_L
TL Defl inch	0.209 (L/580)	5'3 7/16"	0.505 (L/240)	0.410 (41%)	D+L	_L
LL Cant	-0.003 (2L/574)	Lt Cant	0.200 (2L/480)	0.017 (2%)	L	_L
TL Cant	-0.005 (2L/398)	Lt Cant	0.300 (2L/360)	0.017 (2%)	D+L	<u>_</u> L

Design Notes

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

enderness ratio based	on full section width.							
Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
Tie-In	0-0-0 to 0-5-8	(Span)0-4-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
Tie-In	0-0-0 to 0-5-8	(Span)0-7-5	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
Tie-In	0-5-8 to 10-3-4	(Span)1-0-3	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
Point	1-3-12		Near Face	122 lb	326 lb	0 lb	0 lb	J4
	Load Type Tie-In Tie-In Tie-In	Tie-In 0-0-0 to 0-5-8 Tie-In 0-0-0 to 0-5-8 Tie-In 0-5-8 to 10-3-4	Load Type Location Trib Width Tie-In 0-0-0 to 0-5-8 (Span)0-4-11 Tie-In 0-0-0 to 0-5-8 (Span)0-7-5 Tie-In 0-5-8 to 10-3-4 (Span)1-0-3	Load Type Location Trib Width Side Tie-In 0-0-0 to 0-5-8 (Span)0-4-11 Top Tie-In 0-0-0 to 0-5-8 (Span)0-7-5 Top Tie-In 0-5-8 to 10-3-4 (Span)1-0-3 Top	Load Type Location Trib Width Side Dead Tie-In 0-0-0 to 0-5-8 (Span)0-4-11 Top 15 PSF Tie-In 0-0-0 to 0-5-8 (Span)0-7-5 Top 15 PSF Tie-In 0-5-8 to 10-3-4 (Span)1-0-3 Top 15 PSF	Load Type Location Trib Width Side Dead Live Tie-In 0-0-0 to 0-5-8 (Span)0-4-11 Top 15 PSF 40 PSF Tie-In 0-0-0 to 0-5-8 (Span)0-7-5 Top 15 PSF 40 PSF Tie-In 0-5-8 to 10-3-4 (Span)1-0-3 Top 15 PSF 40 PSF	Load Type Location Trib Width Side Dead Live Snow Tie-In 0-0-0 to 0-5-8 (Span)0-4-11 Top 15 PSF 40 PSF 0 PSF Tie-In 0-0-0 to 0-5-8 (Span)0-7-5 Top 15 PSF 40 PSF 0 PSF Tie-In 0-5-8 to 10-3-4 (Span)1-0-3 Top 15 PSF 40 PSF 0 PSF	Load Type Location Trib Width Side Dead Live Snow Wind Tie-In 0-0-0 to 0-5-8 (Span)0-4-11 Top 15 PSF 40 PSF 0 PSF 0 PSF Tie-In 0-0-0 to 0-5-8 (Span)0-7-5 Top 15 PSF 40 PSF 0 PSF 0 PSF Tie-In 0-5-8 to 10-3-4 (Span)1-0-3 Top 15 PSF 40 PSF 0 PSF 0 PSF

Continued on page 2...

Notes

Calculated Shuchired 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

- Idinating & 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 conding

This design is

Manufacturer Info Forex APA: PR-L318

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

T.L. WISE 100083566 ONCE OF ONTRE September 17, 2018

> Kott Lumber Company 14 Anderson Blvd, Ontario Canada L4A 7X4



Page 2 of 2



Client: Project: Address: Date: 9/10/2018 Designer: SB

Job Name: MILLWOOD 1 EL-3

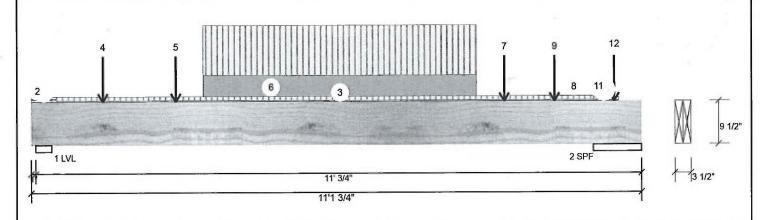
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



Continued	from page 1								
ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	2-7-12		Near Face	124 lb	307 lb	0 lb	0 lb	J4
6	Part. Uniform	3-1-12 to 8-1-12		Near Face	112 PLF	263 PLF	0 PLF	0 PLF	
7	Point	8-7-12		Near Face	108 lb	252 lb	0 lb	0 lb	J4
8	Part. Uniform	9-3-0 to 10-3-4		Тор	2 PLF	0 PLF	0 PLF	0 PLF	
9	Point	9-6-12		Near Face	102 lb	263 lb	dl 0	0 lb	J4
10	Tie-In	10-3-4 to 10-8-12 ((Span)0-8-11	Тор	15 PSF	40 PSF	0 PSF	0 PSF	
11	Part. Uniform	10-3-4 to 10-8-12		Тор	1 PLF	0 PLF	0 PLF	0 PLF	
12	Point	10-7-12		Near Face	80 lb	212 lb	0 lb	0 lb	J4
	Self Weight				8 PLF				

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

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

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

chemicals

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 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

This design is valid until 7/10/2021

Forex APA: PR-L318

Manufacturer Info

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



Client: Project: Address:

9/10/2018 Date:

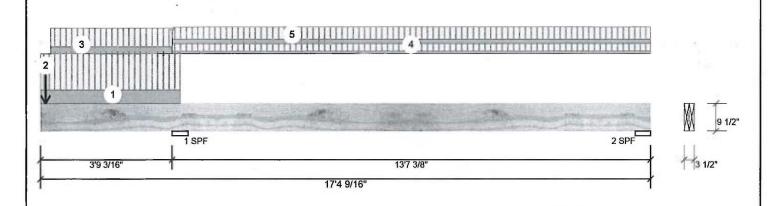
Designer: SB

Job Name: MILLWOOD 1 EL-3

Project #:

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

Level: Second Floor



Member Inforr	nation			Unfactored Reactions UNPATTERNED lb (Uplift)							
Туре:	Girder	Application:	Floor (Residential)	Brg	Live		Dead	Snov	v	Wind	
Plies:	2	Design Method:	LSD	1	1136		534		0	0	
Moisture Condition	: Dry	Building Code:	NBCC 2010 / OBC 2012	2	8		46	0.0	0	0	
Deflection LL:	360	Load Sharing:	No	_							
Deflection TL:	240	Deck:	Not Checked	1							
Importance:	Normal	Vibration:	Not Checked	1							
General Load											
Floor Live:	40 PSF			Bearings	and Fac	tored R	leactions				
Dead:	15 PSF			Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.	
				1-SPF	5.500"	20%	667 / 1704	2371	LL	1.25D+1.5L	
nalysis Results				2-SPF	5.250"	3%	58 / 275	333 (-207)	T	1.25D+1.5L	

Analysis Re	sults
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Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-4651 ft-lb	3'11 15/16"	22724 ft-lb	0.205 (20%)	1.25D+1.5L	L_
Unbraced	-4651 ft-lb	3'11 15/16"	19381 ft-lb	0.240 (24%)	1.25D+1.5L	L_
Pos Moment	783 ft-lb	11'8 1/2"	20451 ft-lb	0.038 (4%)	0.9D+1.5L	_L
Unbraced	783 ft-lb	11'8 1/2"	18837 ft-lb	0.042 (4%)	0.9D+1.5L	_L
Shear	1447 lb	2'11 11/16"	9277 lb	0.156 (16%)	1.25D+1.5L	L_
Perm Defl in.	0.014 (L/10786)	7'11 7/8"	0.434 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.086 (L/1820)	9'5 15/16"	0.434 (L/360)	0.200 (20%)	L	L_
TL Defl inch	0.099 (L/1572)	9'2 7/8"	0.651 (L/240)	0.150 (15%)	D+L	L_
LL Cant	0.174 (2L/520)	Lt Cant	0.200 (2L/480)	0.868 (87%)	L	L_
TL Cant	0.227 (2L/398)	Lt Cant	0.300 (2L/360)	0.756 (76%)	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 Tie-down connection required at bearing 2 for uplift 207 lb (Combination 0.9D+1.5L, Load Case L_).
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

Notes

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Lumber

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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

For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex APA: PR-L318

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

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



This design

Page 2 of 2



Client:

Project: Address:

9/10/2018 Date:

Designer: SB

Job Name: MILLWOOD 1 EL-3

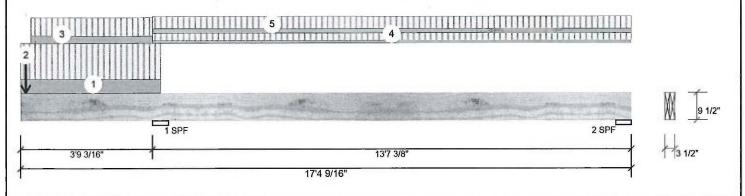
Project #:

Forex 2.0E-3000Fb LVL

1.750" X 9.500"

2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments	-
1	Part. Uniform	0-0-0 to 3-11-15		Тор	19 PLF	50 PLF	0 PLF	0 PLF		
2	Point	0-1-12		Near Face	202 lb	491 lb	0 lb	0 lb	F6	
3	Tie-In	0-3-8 to 3-9-3	(Span)1-3-8	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
4	Tie-In	3-9-3 to 17-4-9	(Span)0-6-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
5	Tie-In	3-9-3 to 17-4-9	(Span)0-10-0	Тор	15 PSF	40 PSF	0 PSF	0 PSF		
	Self Weight				8 PLF					

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

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

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Manufacturer Info Forex APA: PR-L318

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

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