GREEN YORK HOMES- LOT 26
(BELLE 1 EL-2)-BRAMPTON-ON

Engineering Note Page (ENP-2)

REVISION 2009-10-09

Please read all notes prior to installation of the component

DESIGN INFORMATION

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

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

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

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

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

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

CODE

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

COMPONENT

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

HANDLING AND INSTALLATION

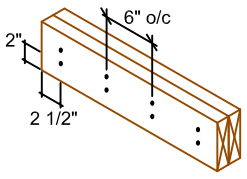
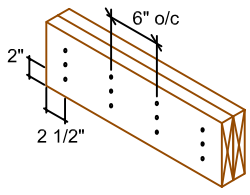
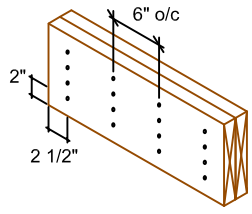
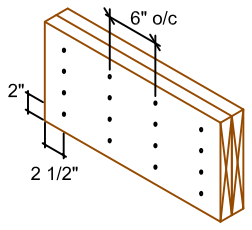
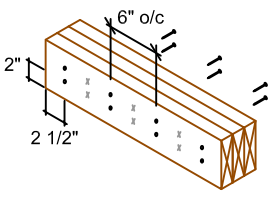
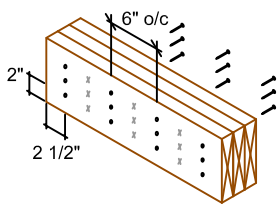
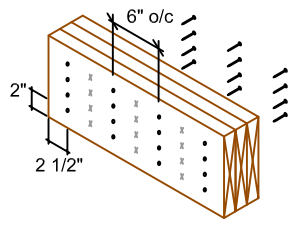
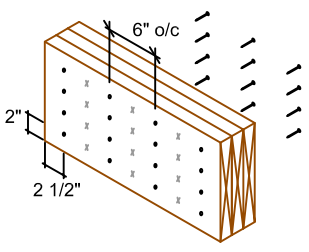
Do not drill any hole, cut or notch a certified building component without a written pre-authorization.

KOTT

MULTIPLE MEMBER CONNECTIONS

GREEN YORK HOMES- LOT 26
(BELLE 1 EL-2)-BRAMPTON-ON

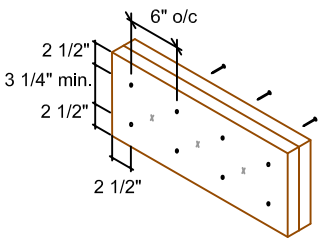
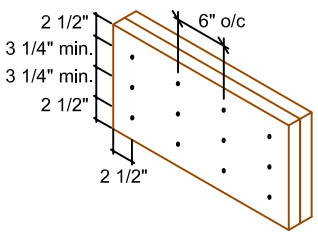
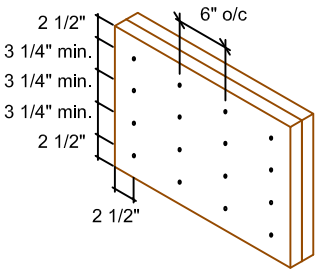
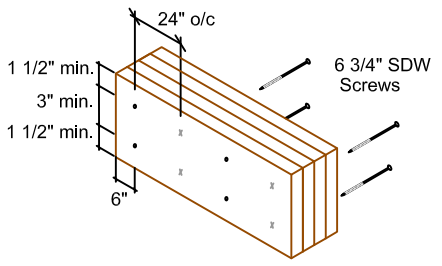
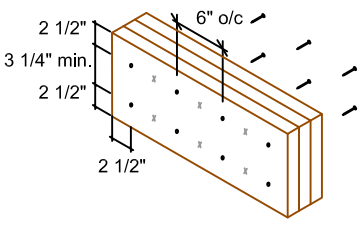
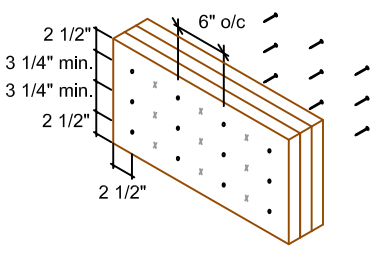
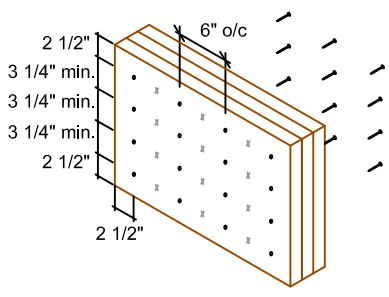
Conventional Connections (for uniform distributed loads)

	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)

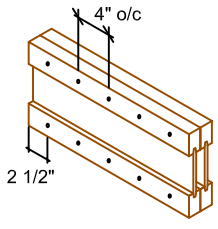
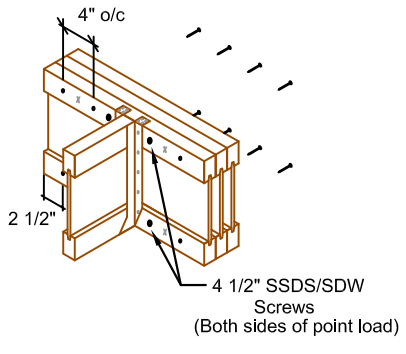
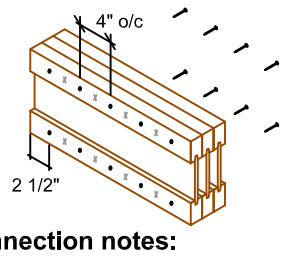
	9 1/2" LVL	11 7/8" - 14" LVL	16"-18" LVL	4-ply (Top load only)
2-ply				
3-ply				

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

LVL connection notes:

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

Vertical I-Joist Connections (for uniform distributed loads)

	9 1/2" - 11 7/8" I-Joist	3-ply I-Joist w/ point load (Joist Hanger)
2-ply		
3-ply		

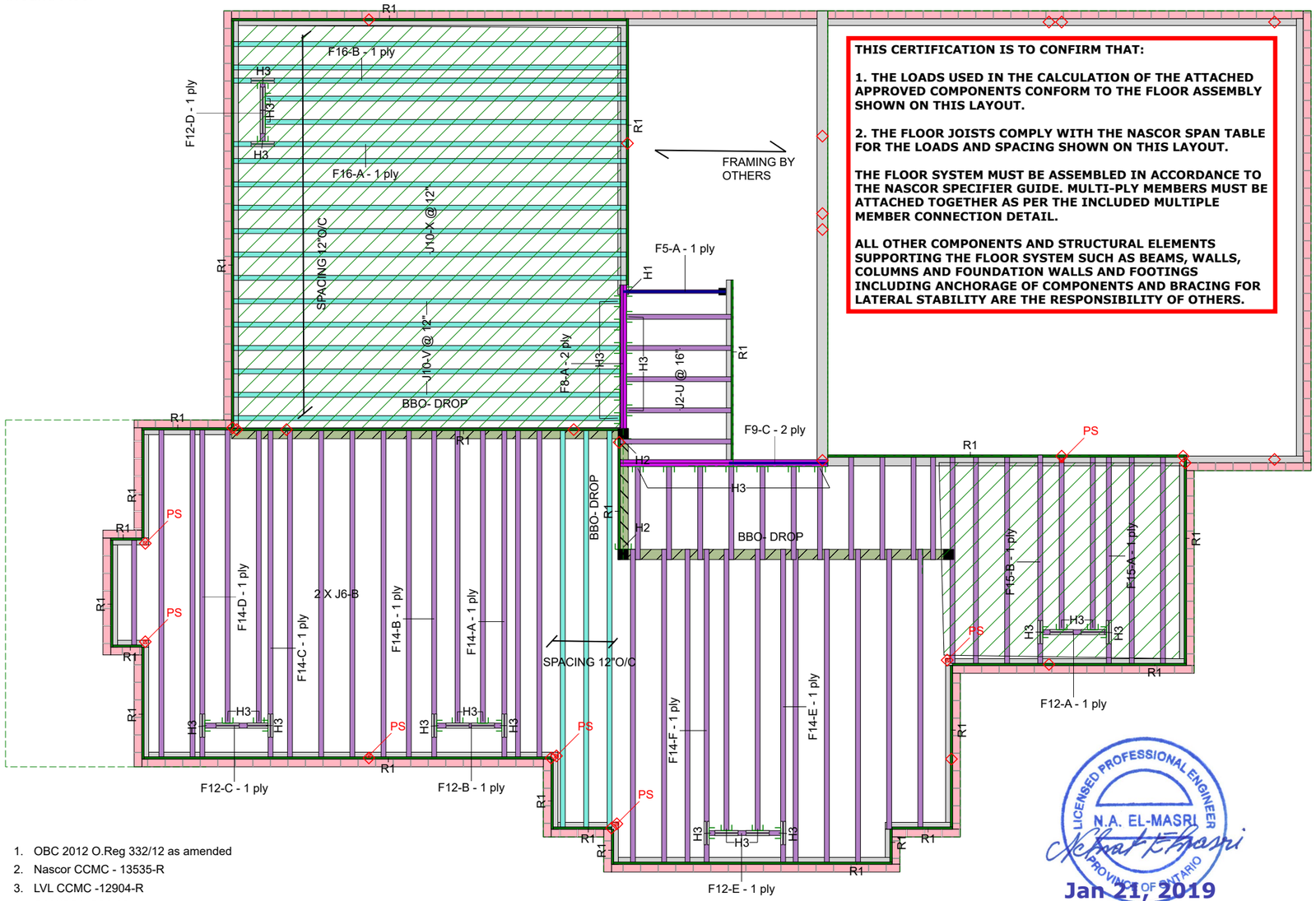
Vertical I-Joist connection notes:

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

MULTI -PLY CONNECTION DETAILS
Date: November 30, 2016
Scale: NTS

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

Ground Floor



1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -12904-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

JOISTS SPACING 16"O/C
UNLESS
NOTED OTHERWISE

Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN,ON L4K 3P3
Project # 17-55
Model: LOT-26 (BELLE 1 EL-2)
Date: Dec 21 ,2018

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019
NE0119-100

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

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

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

Ground Floor
LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F9	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	10-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	8-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F14	LPI 20Plus	2.5	11.875			6	14-0-0
F15	LPI 20Plus	2.5	11.875			2	10-0-0
F12	LPI 20Plus	2.5	11.875			5	4-0-0
J6	LPI 20Plus	2.5	11.875			21	14-0-0
J5	LPI 20Plus	2.5	11.875			2	12-0-0
J4	LPI 20Plus	2.5	11.875			5	10-0-0
J3	LPI 20Plus	2.5	11.875			2	8-0-0
J2	LPI 20Plus	2.5	11.875			10	6-0-0
J1	LPI 20Plus	2.5	11.875			7	4-0-0
J10	NJ60H	2.5	11.875			17	18-0-0
J7	NJ60H	2.5	11.875			2	16-0-0
F16	NJ60H	2.5	11.875			2	18-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			15	12

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	1	HUS1.81/10			30 16d	10 16d
H2	2	Unknown Hanger				
H3	37	LF2511			12 10dx1 1/2	1 #8x1 1/4WS

NOTES:

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

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

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

Legend

PS	Point Load Support
◇	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 11.875
	LPI 20Plus 11.875
	NJ60H 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 11.875
	5.25 X 10.25 (Dropped)

NASCOR

Layout Name
LOT-26 (BELLE 1 EL -2)

Design Method
LSD

Description
GREEN YORK HOMES
GRANELLI HOMES PROJECT
BRAMPTON,ON

Created
May 29, 2018

Builder

Sales Rep

Designer
S B

Shipping

Project

Builder's Project

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

Ground Floor

Design Method	LSD
Building Code	NBCC 2010 / OBC 2012

Floor

Loads	
Live	40
Dead	15
Deflection Joist	
LL Span L/	480
TL Span L/	360
LL Cant 2L/	480
TL Cant 2L/	360
Deflection Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	480
TL Cant 2L/	360
Decking	
Deck	OSB
Thickness	3/4"
Fastener	Nailed & Glued
Vibration	

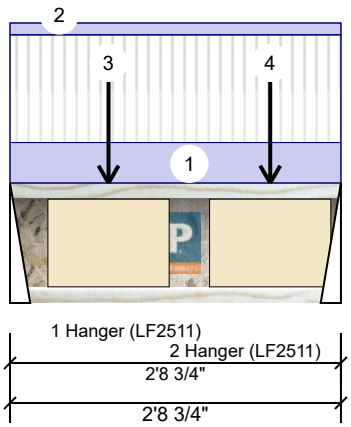
isDesign™

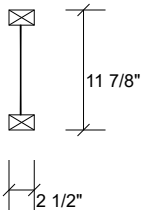
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F12-A LPI 20Plus 11.875" - PASSED

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	181	88	0	0
2	200	98	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	24%	110 / 271	381	L	1.25D+1.5L
2 - Hanger	2.000"	27%	123 / 301	424	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	251 ft-lb	9 3/4"	6250 ft-lb	0.040 (4%)	1.25D+1.5L	L
Shear	418 lb	2'7 1/2"	2345 lb	0.178 (18%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/24182)	1'1"	0.084 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/11782)	1' 7/8"	0.084 (L/360)	0.030 (3%)	L	L
TL Defl inch	0.004 (L/7922)	1' 7/8"	0.126 (L/240)	0.030 (3%)	D+L	L

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.001", Long Term = 0.002"
3 Fill all hanger nailing holes.
4 See manufacture installation guide note E4 for installation details
5 Girders are designed to be supported on the bottom edge only.
6 Top flange braced at bearings.
7 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-8-12	(Span)1-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-8-12		Top	3 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-9-12		Far Face	78 lb	161 lb	0 lb	0 lb	J3
4	Point	2-1-12		Far Face	72 lb	145 lb	0 lb	0 lb	J3

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.

KOTT

This design is valid until 10/31/2020

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
CCMC: 12412-R APA: PR-L238C

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

NASCOR

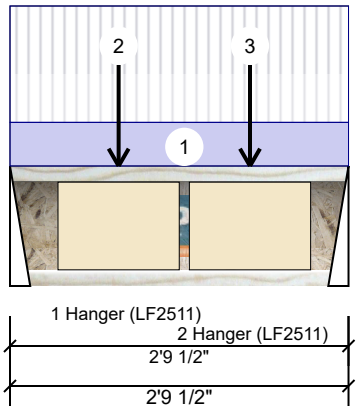
isDesign™

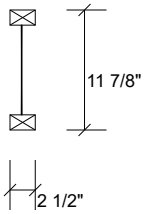
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F12-B LPI 20Plus 11.875" - PASSED

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	284	106	0	0
2	297	111	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	35%	133 / 427	560	L	1.25D+1.5L
2 - Hanger	2.000"	37%	138 / 445	583	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	422 ft-lb	11 15/16"	6250 ft-lb	0.067 (7%)	1.25D+1.5L	L
Shear	577 lb	2'8 1/4"	2345 lb	0.246 (25%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/17534)	1'3 1/4"	0.086 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/6545)	1'3 1/4"	0.086 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.007 (L/4766)	1'3 1/4"	0.129 (L/240)	0.050 (5%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.002", Long Term = 0.003"
3 Fill all hanger nailing holes.
4 See manufacture installation guide note E4 for installation details
5 Girders are designed to be supported on the bottom edge only.
6 Top flange braced at bearings.
7 Bottom flange braced at bearings.

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

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

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-9-8	(Span)1-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-10-12		Far Face	96 lb	257 lb	0 lb	0 lb	J6
3	Point	1-11-12		Far Face	92 lb	247 lb	0 lb	0 lb	J6

Notes

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KOTT

This design is valid until 10/31/2020

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
CCMC: 12412-R APA: PR-L238C

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14 Anderson Blvd, Ontario
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NASCOR

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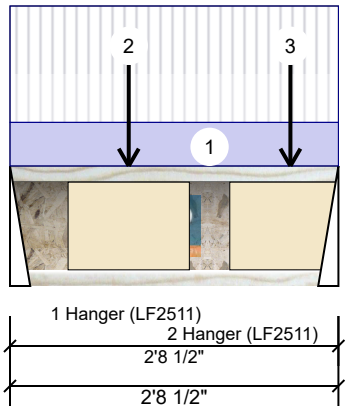
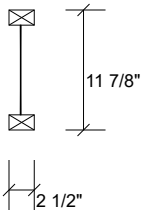
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F12-C LPI 20Plus 11.875" - PASSED

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	260	97	0	0
2	343	129	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	32%	122 / 390	512	L	1.25D+1.5L
2 - Hanger	2.000"	42%	161 / 514	675	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	422 ft-lb	11 3/4"	6250 ft-lb	0.068 (7%)	1.25D+1.5L	L
Shear	669 lb	2'7 1/4"	2345 lb	0.285 (29%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/17651)	11 3/4"	0.083 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.005 (L/6610)	11 3/4"	0.083 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.006 (L/4809)	11 3/4"	0.125 (L/240)	0.050 (5%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.002", Long Term = 0.003"
3 Fill all hanger nailing holes.
4 See manufacture installation guide note E4 for installation details
5 Girders are designed to be supported on the bottom edge only.
6 Top flange braced at bearings.
7 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-8-8	(Span)1-4-9 to 1-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-11-12		Far Face	113 lb	302 lb	0 lb	0 lb	J6
3	Point	2-3-12		Far Face	85 lb	226 lb	0 lb	0 lb	J6

Notes

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KOTT

This design is valid until 10/31/2020

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
CCMC: 12412-R APA: PR-L238C

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

NASCOR

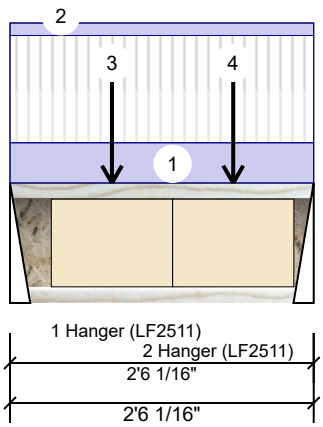
isDesign™

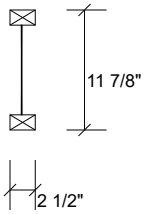
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F12-D LPI 20Plus 11.875" - PASSED

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	300	144	0	0
2	332	161	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	40%	181 / 450	630	L	1.25D+1.5L
2 - Hanger	2.000"	44%	202 / 498	699	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	445 ft-lb	10 1/8"	6250 ft-lb	0.071 (7%)	1.25D+1.5L	L
Shear	693 lb	2'4 13/16"	2345 lb	0.296 (30%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/12936)	11 3/16"	0.077 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.004 (L/6235)	10 15/16"	0.077 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.007 (L/4207)	11"	0.115 (L/240)	0.060 (6%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.002", Long Term = 0.003"
3 Fill all hanger nailing holes.
4 See manufacture installation guide note E4 for installation details
5 Girders are designed to be supported on the bottom edge only.
6 Top flange braced at bearings.
7 Bottom flange braced at bearings.

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

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-6-1	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-6-1		Top	3 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-10-1		Near Face	142 lb	297 lb	0 lb	0 lb	J7
4	Point	1-10-1		Near Face	132 lb	270 lb	0 lb	0 lb	J7

Notes

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KOTT

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CCMC: 12412-R APA: PR-L238C

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

NASCOR

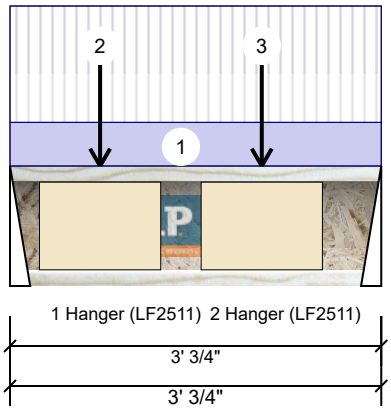
isDesign™

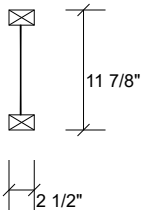
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F12-E LPI 20Plus 11.875" - PASSED

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	326	122	0	0
2	294	110	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	40%	153 / 489	642	L	1.25D+1.5L
2 - Hanger	2.000"	36%	138 / 441	578	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	485 ft-lb	2' 15/16"	6250 ft-lb	0.078 (8%)	1.25D+1.5L	L
Shear	637 lb	1 1/4"	2345 lb	0.272 (27%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/16564)	1'10 5/16"	0.095 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.006 (L/6216)	1'10 5/16"	0.095 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.008 (L/4520)	1'10 5/16"	0.143 (L/240)	0.050 (5%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.002", Long Term = 0.003"
3 Fill all hanger nailing holes.
4 See manufacture installation guide note E4 for installation details
5 Girders are designed to be supported on the bottom edge only.
6 Top flange braced at bearings.
7 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-0-12	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-8-15		Far Face	96 lb	256 lb	0 lb	0 lb	J6
3	Point	2-0-15		Far Face	107 lb	285 lb	0 lb	0 lb	J6

Notes

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KOTT

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905-642-4400

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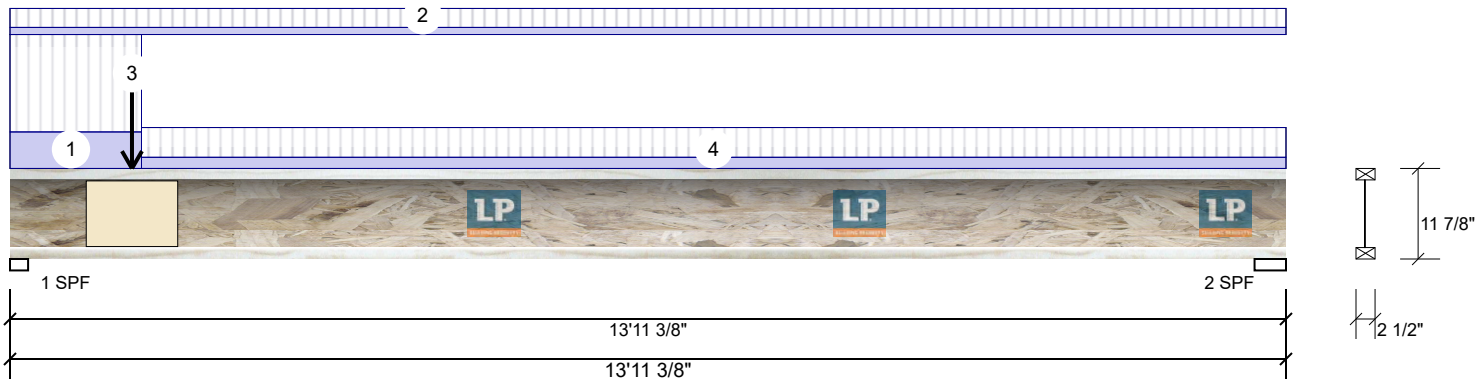
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F14-A LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	535	200	0	0
2	240	90	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	64%	250 / 803	1053	L	1.25D+1.5L
2 - SPF	4.125"	26%	113 / 360	473	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1764 ft-lb	5'11 1/4"	6250 ft-lb	0.282 (28%)	1.25D+1.5L	L
Shear	1034 lb	1 5/8"	2345 lb	0.441 (44%)	1.25D+1.5L	L
Perm Defl in.	0.042 (L/3882)	6'7 1/16"	0.451 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.112 (L/1455)	6'7 1/16"	0.451 (L/360)	0.250 (25%)	L	L
TL Defl inch	0.153 (L/1058)	6'7 1/16"	0.677 (L/240)	0.230 (23%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.042", Long Term = 0.063"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 7'8" o.c.
6 Bottom flange braced at bearings.

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-5-4	(Span)3-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-11-6	(Span)0-7-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-4-0		Far Face	111 lb	297 lb	0 lb	0 lb	F12
4	Tie-In	1-5-4 to 13-11-6	(Span)0-11-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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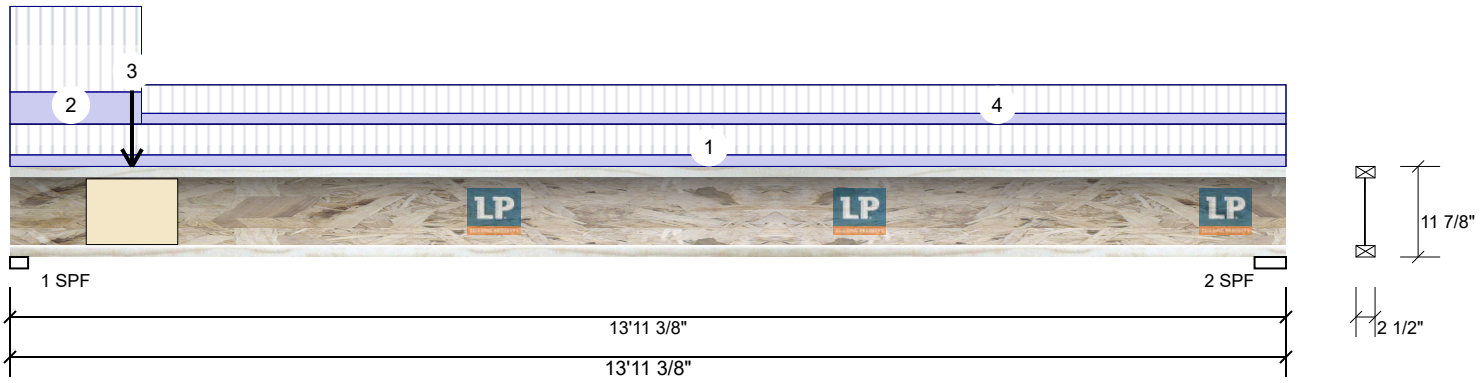
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F14-B LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	601	225	0	0
2	321	120	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	72%	281 / 902	1183	L	1.25D+1.5L
2 - SPF	4.125"	35%	151 / 482	632	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2263 ft-lb	6'2 7/8"	6250 ft-lb	0.362 (36%)	1.25D+1.5L	L
Shear	1162 lb	1 5/8"	2345 lb	0.495 (50%)	1.25D+1.5L	L
Perm Defl in.	0.054 (L/3033)	6'8 1/16"	0.451 (L/360)	0.120 (12%)	D	Uniform
LL Defl inch	0.143 (L/1136)	6'8 1/16"	0.451 (L/360)	0.320 (32%)	L	L
TL Defl inch	0.196 (L/827)	6'8 1/16"	0.677 (L/240)	0.290 (29%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.054", Long Term = 0.080"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 6'11" o.c.
6 Bottom flange braced at bearings.

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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-11-6	(Span)1-1-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-5-4	(Span)3-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-4-0		Near Face	106 lb	284 lb	0 lb	0 lb	F12
4	Tie-In	1-5-4 to 13-11-6	(Span)1-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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Client:
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Date: 1/21/2019
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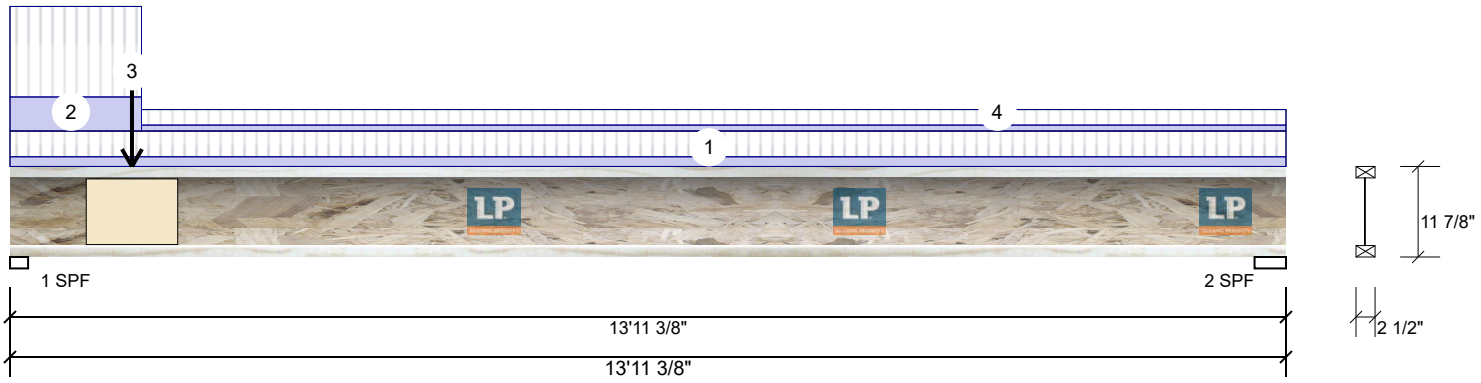
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F14-C LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	563	212	0	0
2	221	83	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	68%	264 / 845	1109	L	1.25D+1.5L
2 - SPF	4.125"	24%	104 / 332	436	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1688 ft-lb	5'7 3/4"	6250 ft-lb	0.270 (27%)	1.25D+1.5L	L
Shear	1089 lb	1 5/8"	2345 lb	0.464 (46%)	1.25D+1.5L	L
Perm Defl in.	0.040 (L/4054)	6'6 3/16"	0.451 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.107 (L/1522)	6'6 3/16"	0.451 (L/360)	0.240 (24%)	L	L
TL Defl inch	0.147 (L/1106)	6'6 3/16"	0.677 (L/240)	0.220 (22%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.040", Long Term = 0.060"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 7'10" o.c.
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 13-11-6	(Span)0-10-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-5-4	(Span)2-11-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-4-0		Far Face	129 lb	343 lb	0 lb	0 lb	F12
4	Tie-In	1-5-4 to 13-11-6	(Span)0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.

KOTT

This design is valid until 10/31/2020

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
CCMC: 12412-R APA: PR-L238C

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

NASCOR

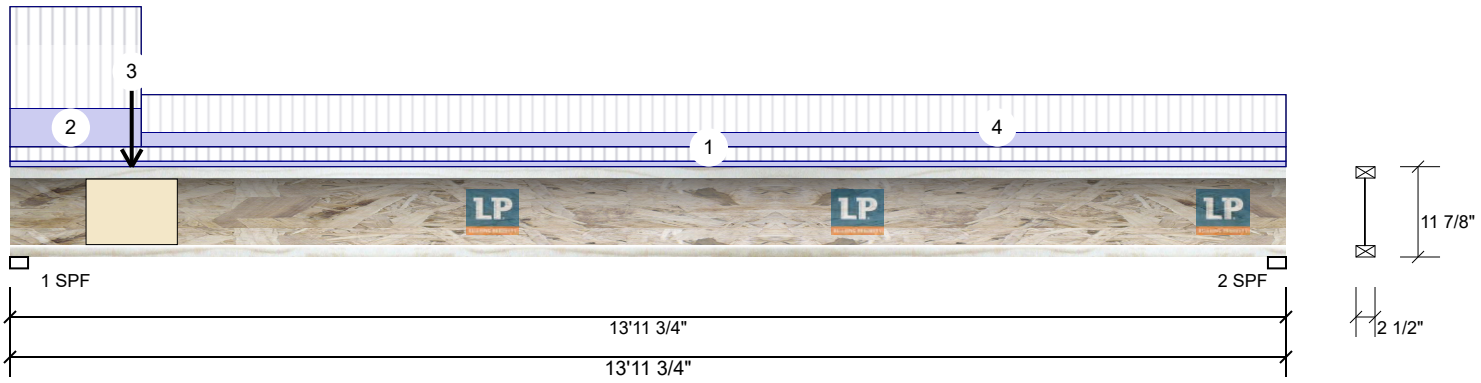
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F14-D LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	497	186	0	0
2	235	88	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	60%	233 / 746	979	L	1.25D+1.5L
2 - SPF	2.375"	28%	110 / 352	462	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1745 ft-lb	6'1 7/8"	6250 ft-lb	0.279 (28%)	1.25D+1.5L	L
Shear	961 lb	1 5/8"	2345 lb	0.410 (41%)	1.25D+1.5L	L
Perm Defl in.	0.042 (L/3893)	6'8 9/16"	0.457 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.113 (L/1458)	6'8 1/2"	0.457 (L/360)	0.250 (25%)	L	L
TL Defl inch	0.155 (L/1061)	6'8 9/16"	0.685 (L/240)	0.230 (23%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.042", Long Term = 0.063"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 7'9" o.c.
6 Bottom flange braced at bearings.

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-11-12	(Span)0-5-0 to 0-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-5-4	(Span)2-11-0 to 2-11-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-4-0		Near Face	97 lb	260 lb	0 lb	0 lb	F12
4	Tie-In	1-5-4 to 13-11-12	(Span)1-1-0 to 1-1-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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KOTT

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CCMC: 12412-R APA: PR-L238C

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

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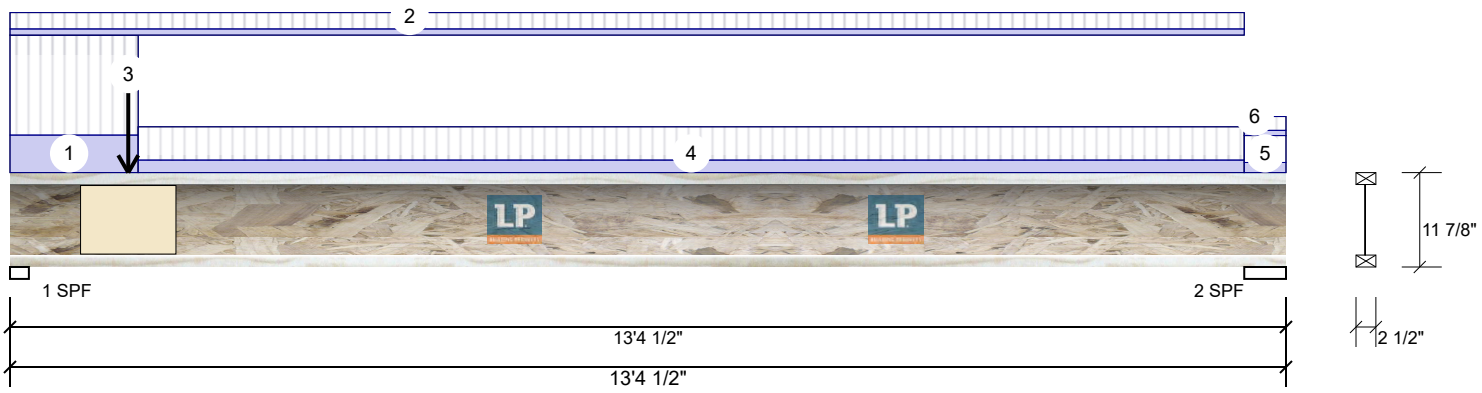
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F14-E LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	538	202	0	0
2	246	92	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	65%	252 / 808	1060	L	1.25D+1.5L
2 - SPF	5.250"	27%	115 / 370	485	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1698 ft-lb	5'8 9/16"	6250 ft-lb	0.272 (27%)	1.25D+1.5L	L
Shear	1039 lb	1 5/8"	2345 lb	0.443 (44%)	1.25D+1.5L	L
Perm Defl in.	0.037 (L/4178)	6'3 3/8"	0.429 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.099 (L/1566)	6'3 3/8"	0.429 (L/360)	0.230 (23%)	L	L
TL Defl inch	0.136 (L/1139)	6'3 3/8"	0.643 (L/240)	0.210 (21%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.037", Long Term = 0.055"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 7'10" o.c.
6 Bottom flange braced at bearings.

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-2	(Span)3-3-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 12-11-4	(Span)0-6-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-14		Far Face	110 lb	294 lb	0 lb	0 lb	F12
4	Tie-In	1-4-2 to 12-11-4	(Span)1-1-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	12-11-4 to 13-4-8	(Span)0-10-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	12-11-4 to 13-4-8	(Span)0-5-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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CCMC: 12412-R APA: PR-L238C

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NASCOR

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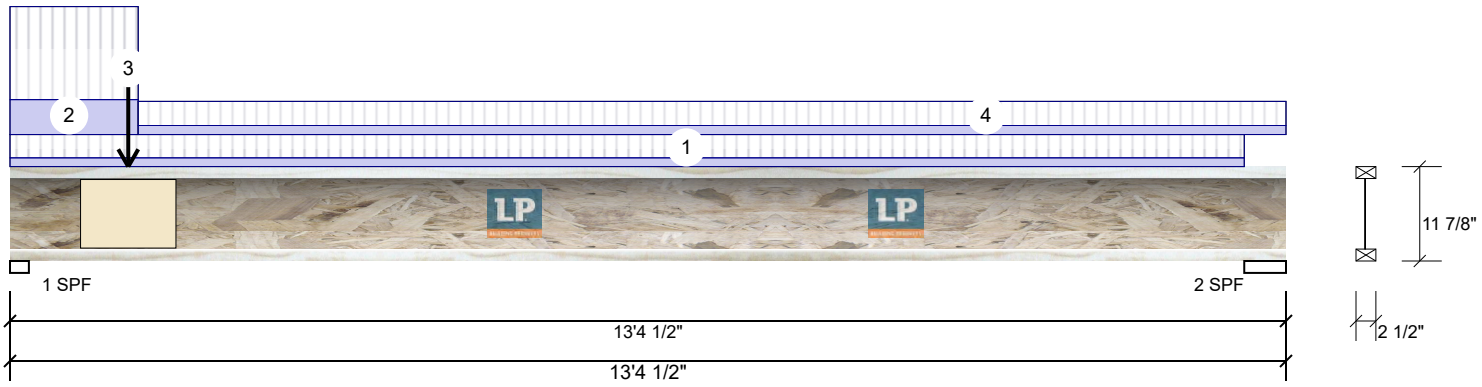
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F14-F LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	579	217	0	0
2	250	94	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	70%	271 / 869	1140	L	1.25D+1.5L
2 - SPF	5.250"	27%	117 / 376	493	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1774 ft-lb	5'7 3/4"	6250 ft-lb	0.284 (28%)	1.25D+1.5L	L
Shear	1118 lb	1 5/8"	2345 lb	0.477 (48%)	1.25D+1.5L	L
Perm Defl in.	0.039 (L/3996)	6'3 1/8"	0.429 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.103 (L/1498)	6'3 1/8"	0.429 (L/360)	0.240 (24%)	L	L
TL Defl inch	0.142 (L/1089)	6'3 1/8"	0.643 (L/240)	0.220 (22%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.039", Long Term = 0.058"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange must be laterally braced at a maximum of 7'8" o.c.
6 Bottom flange braced at bearings.

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-11-4	(Span)0-9-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-2	(Span)3-3-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-14		Near Face	122 lb	326 lb	0 lb	0 lb	F12
4	Tie-In	1-4-2 to 13-4-8	(Span)0-10-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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KOTT

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Manufacturer Info

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CCMC: 12412-R APA: PR-L238C

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L4A 7X4
905-642-4400

NASCOR

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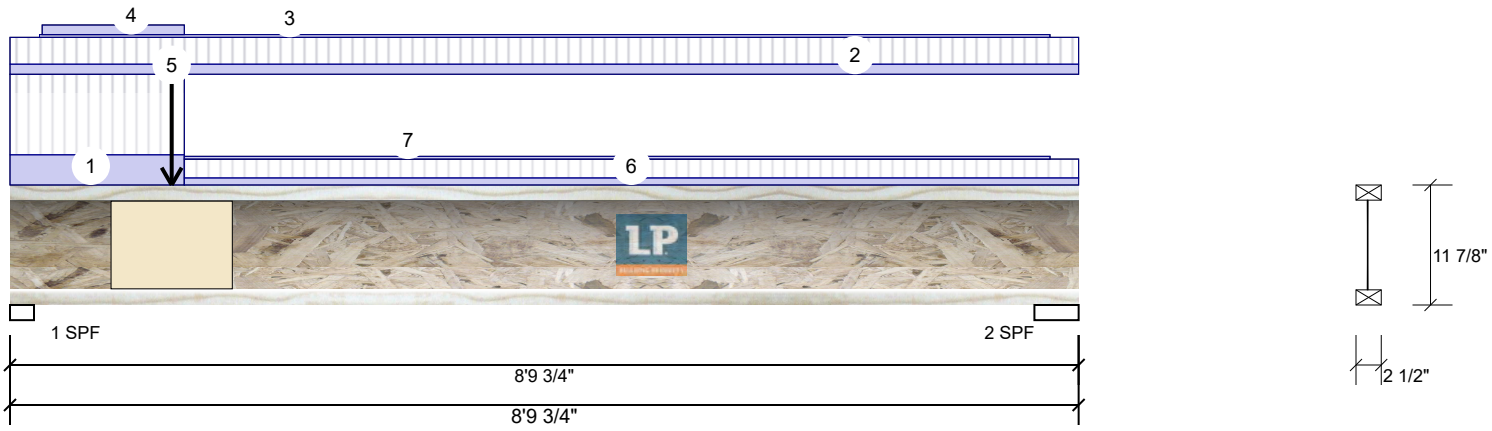
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F15-A LPI 20Plus 11.875" - PASSED

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	376	182	0	0
2	183	89	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	48%	228 / 563	791	L	1.25D+1.5L
2 - SPF	4.375"	21%	112 / 274	386	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	947 ft-lb	3'4"	6250 ft-lb	0.152 (15%)	1.25D+1.5L	L
Shear	770 lb	1 5/8"	2345 lb	0.328 (33%)	1.25D+1.5L	L
Perm Defl in.	0.013 (L/7805)	3'11 1/2"	0.279 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.026 (L/3847)	3'11 1/2"	0.279 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.039 (L/2577)	3'11 1/2"	0.419 (L/240)	0.090 (9%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.013", Long Term = 0.019"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange braced at bearings.
6 Bottom flange braced at bearings.

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-5-4	(Span)2-11-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 8-9-12	(Span) 0-11-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-15 to 8-6-15		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-3-3 to 1-5-4		Top	7 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-4-0		Far Face	98 lb	200 lb	0 lb	0 lb	F12
6	Tie-In	1-5-4 to 8-9-12	(Span)0-8-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-5-4 to 8-6-15		Top	2 PLF	0 PLF	0 PLF	0 PLF	

Notes

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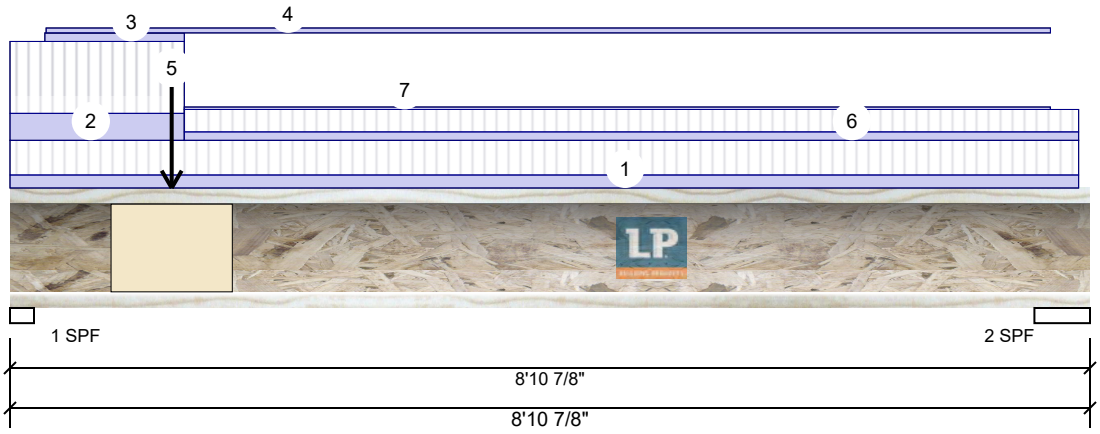
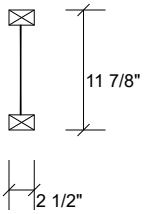
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F15-B LPI 20Plus 11.875" - PASSED

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	411	201	0	0
2	239	119	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	53%	251 / 616	867	L	1.25D+1.5L
2 - SPF	5.500"	28%	148 / 359	508	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1156 ft-lb	3'8 1/4"	6250 ft-lb	0.185 (18%)	1.25D+1.5L	L
Shear	844 lb	1 5/8"	2345 lb	0.360 (36%)	1.25D+1.5L	L
Perm Defl in.	0.016 (L/6296)	4' 7/8"	0.279 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.032 (L/3144)	4' 3/4"	0.279 (L/360)	0.110 (11%)	L	L
TL Defl inch	0.048 (L/2097)	4' 3/4"	0.419 (L/240)	0.110 (11%)	D+L	L

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Dead Load Deflection: Instant = 0.016", Long Term = 0.024"
3 See manufacture installation guide note E4 for installation details
4 Girders are designed to be supported on the bottom edge only.
5 Top flange braced at bearings.
6 Bottom flange braced at bearings.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 8-9-12	(Span)1-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-5-4	(Span)2-11-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-3-7 to 1-5-4		Top	7 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-3-9 to 8-6-15		Top	4 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-4-0		Near Face	88 lb	181 lb	0 lb	0 lb	F12
6	Tie-In	1-5-4 to 8-9-12	(Span)0-11-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-5-4 to 8-6-15		Top	2 PLF	0 PLF	0 PLF	0 PLF	

Notes

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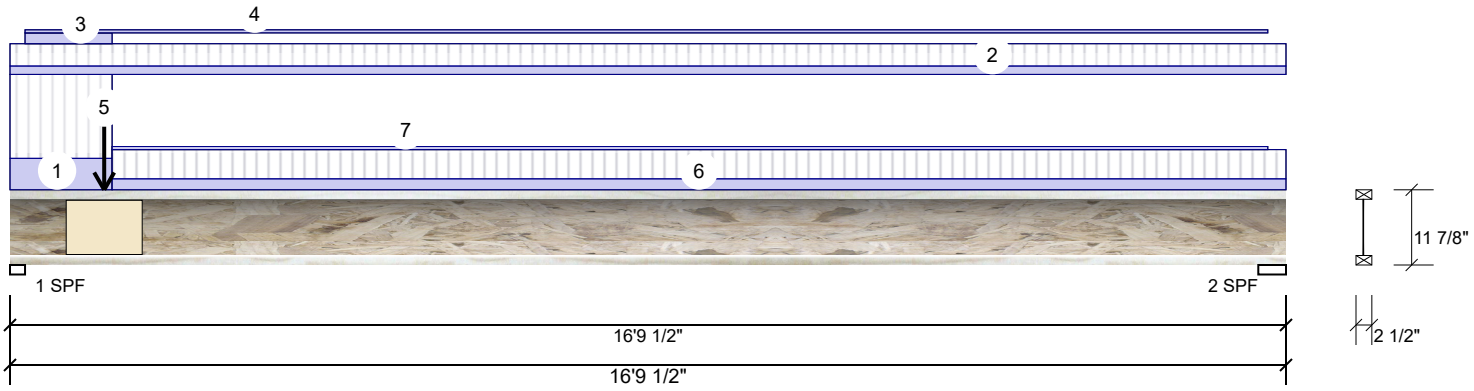
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F16-A NJ60H 11.875" - PASSED

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	603	293	0	0
2	304	149	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	75%	367 / 904	1271	L	1.25D+1.5L
2 - SPF	4.375"	34%	187 / 457	644	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2752 ft-lb	7'7 15/16"	7350 ft-lb	0.374 (37%)	1.25D+1.5L	L
Unbraced	2752 ft-lb	7'7 15/16"	2773 ft-lb	0.992 (99%)	1.25D+1.5L	L
Shear	1253 lb	1 5/8"	2350 lb	0.533 (53%)	1.25D+1.5L	L
Perm Defl in.	0.089 (L/2197)	8'1 3/16"	0.545 (L/360)	0.160 (16%)	D	Uniform
LL Defl inch	0.181 (L/1083)	8'1 1/8"	0.545 (L/360)	0.330 (33%)	L	L
TL Defl inch	0.270 (L/726)	8'1 1/8"	0.818 (L/240)	0.330 (33%)	D+L	L

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

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

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

LICENSED PROFESSIONAL ENGINEER N.A. EL-MASRI PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Top flange must be laterally braced at a maximum of 5'11" o.c.
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 1-4-2	(Span)2-8-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-9-8	(Span)0-8-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-6 to 1-4-2		Top	7 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-6 to 16-6-10		Top	2 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-14		Far Face	144 lb	300 lb	0 lb	0 lb	F12
6	Tie-In	1-4-2 to 16-9-8	(Span)0-11-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-2 to 16-6-10		Top	2 PLF	0 PLF	0 PLF	0 PLF	

Notes

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

Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
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 provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

KOTT Inc.
CCMC: 12787

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

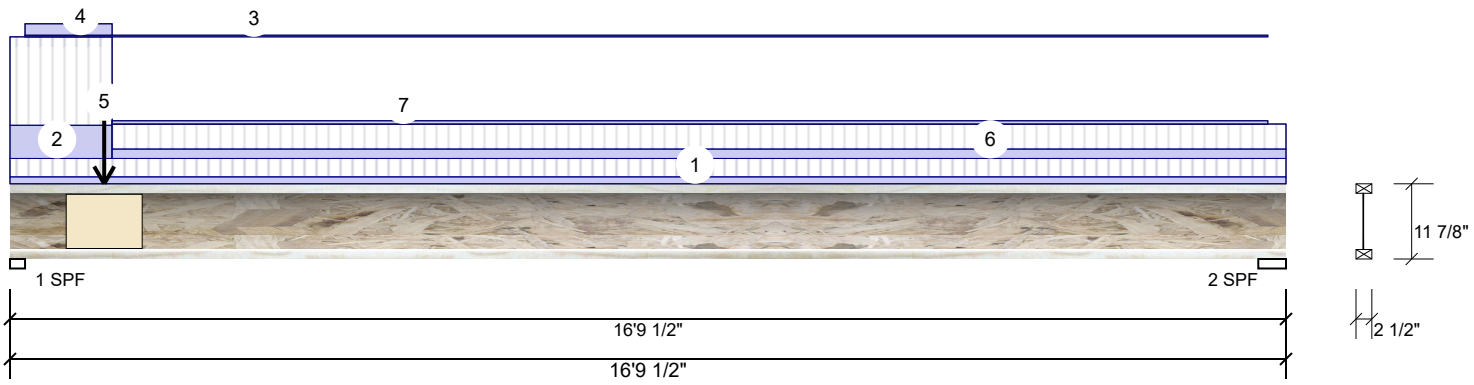
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F16-B NJ60H 11.875" - PASSED

Level: Ground Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	582	282	0	0
2	250	121	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	73%	353 / 873	1225	L	1.25D+1.5L
2 - SPF	4.375"	28%	152 / 375	527	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2320 ft-lb	7'4 7/8"	7350 ft-lb	0.316 (32%)	1.25D+1.5L	L
Unbraced	2320 ft-lb	7'4 7/8"	2322 ft-lb	0.999 (100%)	1.25D+1.5L	L
Shear	1208 lb	1 5/8"	2350 lb	0.514 (51%)	1.25D+1.5L	L
Perm Defl in.	0.075 (L/2619)	8' 1/4"	0.545 (L/360)	0.140 (14%)	D	Uniform
LL Defl inch	0.154 (L/1276)	8' 1/4"	0.545 (L/360)	0.280 (28%)	L	L
TL Defl inch	0.229 (L/858)	8' 1/4"	0.818 (L/240)	0.280 (28%)	D+L	L

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Top flange must be laterally braced at a maximum of 6'6" o.c.
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 16-9-8	(Span)0-6-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-2	(Span)2-8-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-6 to 16-6-10		Top	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-6 to 1-4-2		Top	7 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-14		Near Face	161 lb	332 lb	0 lb	0 lb	F12
6	Tie-In	1-4-2 to 16-9-8	(Span)0-9-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-2 to 16-6-10		Top	2 PLF	0 PLF	0 PLF	0 PLF	

Notes

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

Lumber

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

Handling & Installation

1. IJoist flanges must not be cut or drilled
2. Refer to latest copy of the IJoist product information details for framing details, stiffener tables, web hole chart, bridging details, multi-ply fastening details and handling/erection details
3. Damaged IJoists must not be used
4. Design assumes top flange to be laterally restrained by attached sheathing or as specified in engineering notes.
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 provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

KOTT Inc.
CCMC: 12787

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

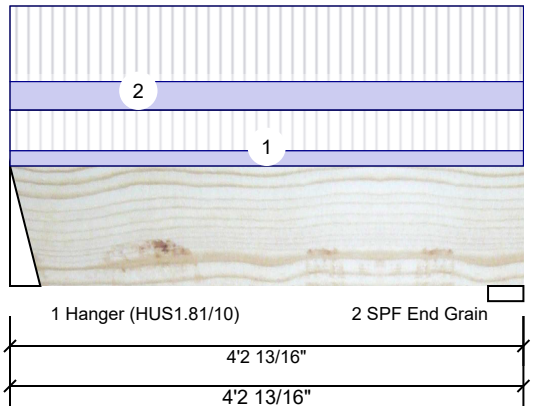
isDesign™

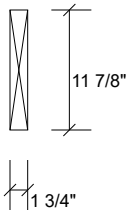
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F5-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor





Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	129	58	0	0
2	132	60	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	7%	73 / 194	267	L	1.25D+1.5L
2 - SPF End	3.500"	6%	74 / 197	272	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	232 ft-lb	2'1 1/8"	17130 ft-lb	0.014 (1%)	1.25D+1.5L	L
Unbraced	232 ft-lb	2'1 1/8"	11707 ft-lb	0.020 (2%)	1.25D+1.5L	L
Shear	117 lb	3' 3/16"	5798 lb	0.020 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/37434)	2'1 3/16"	0.127 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.002 (L/25774)	2'1 3/16"	0.191 (L/240)	0.010 (1%)	D+L	L

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

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

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

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-2-13	(Span)1-0-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 4-2-13		Top	15 PLF	40 PLF	0 PLF	0 PLF	
	Self Weight				5 PLF				

Notes

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

Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

KOTT

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

NASCOR

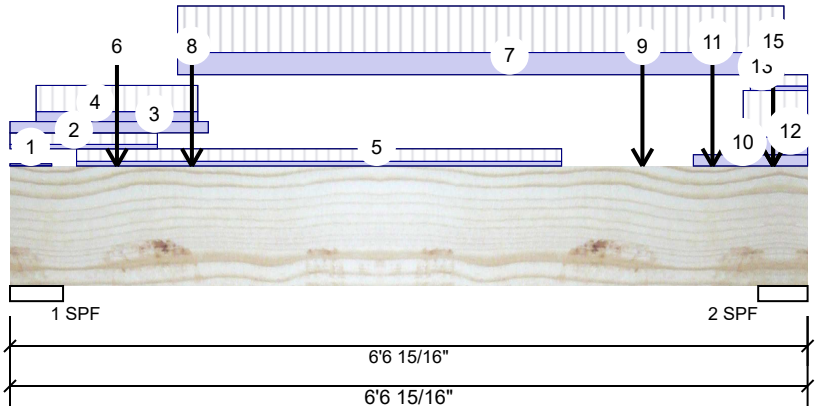
isDesign™

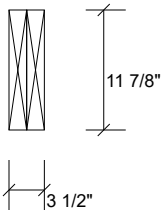
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	2271	1113	0	0
2	2657	1242	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	42%	1392 / 3406	4798	L	1.25D+1.5L
2 - SPF	4.890"	53%	1553 / 3985	5538	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5416 ft-lb	3' 3/16"	34261 ft-lb	0.158 (16%)	1.25D+1.5L	L
Unbraced	5416 ft-lb	3' 3/16"	32665 ft-lb	0.166 (17%)	1.25D+1.5L	L
Shear	4561 lb	1'4 3/8"	11596 lb	0.393 (39%)	1.25D+1.5L	L
Perm Defl in.	0.011 (L/6212)	3'2 7/16"	0.195 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.024 (L/2891)	3'2 7/16"	0.195 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.036 (L/1973)	3'2 7/16"	0.293 (L/240)	0.120 (12%)	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 slenderness ratio based on full section width.

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)0-7-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 1-2-9		Top	31 PLF	82 PLF	0 PLF	0 PLF	J2
3	Part. Uniform	0-0-0 to 1-7-10		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Part. Uniform	0-2-9 to 1-6-9		Top	70 PLF	186 PLF	0 PLF	0 PLF	J10
5	Part. Uniform	0-6-9 to 4-6-9		Near Face	33 PLF	89 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

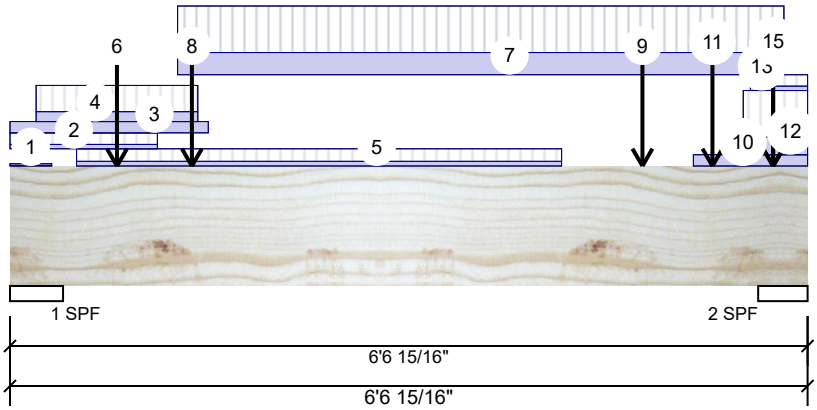
isDesign™

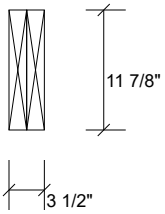
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	0-10-9		Far Face	117 lb	245 lb	0 lb	0 lb	J10
7	Part. Uniform	1-4-9 to 6-4-9		Far Face	157 PLF	330 PLF	0 PLF	0 PLF	
8	Point	1-6-0		Top	365 lb	917 lb	0 lb	0 lb	F7 F7
9	Point	5-2-9		Near Face	40 lb	107 lb	0 lb	0 lb	J2
10	Part. Uniform	5-7-10 to 6-6-15		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
11	Point	5-9-8		Top	395 lb	998 lb	0 lb	0 lb	F7 F7
12	Part. Uniform	6-0-9 to 6-6-15		Top	124 PLF	331 PLF	0 PLF	0 PLF	J10
13	Part. Uniform	6-1-4 to 6-6-15		Top	31 PLF	81 PLF	0 PLF	0 PLF	J2
14	Point	6-3-8		Top	1 lb	3 lb	0 lb	0 lb	
15	Point	6-3-8		Near Face	39 lb	86 lb	0 lb	0 lb	F5
	Self Weight				10 PLF				

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Notes

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

Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

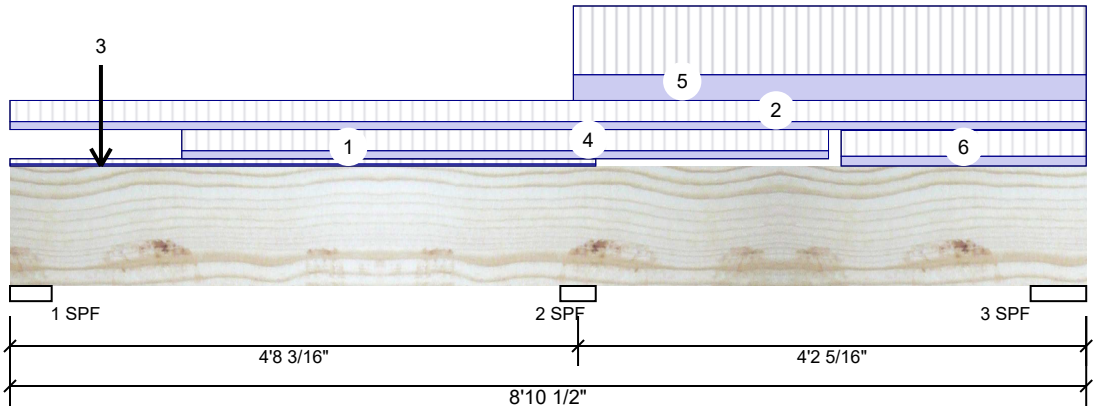
isDesign™

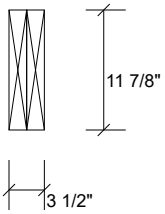
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F9-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	294	131	0	0
2	1320	543	0	0
3	801	318	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.125"	8%	150 / 511	661	L_	1.25D+1.5L
2 - SPF	3.500"	37%	709 / 2067	2775	LL	1.25D+1.5L
3 - SPF	5.500"	14%	382 / 1239	1621	_L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1087 ft-lb	4'8 3/16"	34261 ft-lb	0.032 (3%)	1.25D+1.5L	LL
Unbraced	-1087 ft-lb	4'8 3/16"	34261 ft-lb	0.032 (3%)	1.25D+1.5L	LL
Pos Moment	1049 ft-lb	6'10 3/8"	34261 ft-lb	0.031 (3%)	1.25D+1.5L	_L
Unbraced	1049 ft-lb	6'10 3/8"	34261 ft-lb	0.031 (3%)	1.25D+1.5L	_L
Shear	1170 lb	5'8 1/16"	11596 lb	0.101 (10%)	1.25D+1.5L	LL
Perm Defl in.	0.001 (L/36435)	6'7 13/16"	0.126 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/13352)	6'7 7/16"	0.126 (L/360)	0.030 (3%)	L	_L
TL Defl inch	0.005 (L/9772)	6'7 1/2"	0.190 (L/240)	0.020 (2%)	D+L	_L

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-9-15	(Span)0-11-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 8-10-8	(Span)3-8-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-9-0		Near Face	30 lb	79 lb	0 lb	0 lb	J1
4	Part. Uniform	1-5-0 to 6-9-0		Near Face	28 PLF	74 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

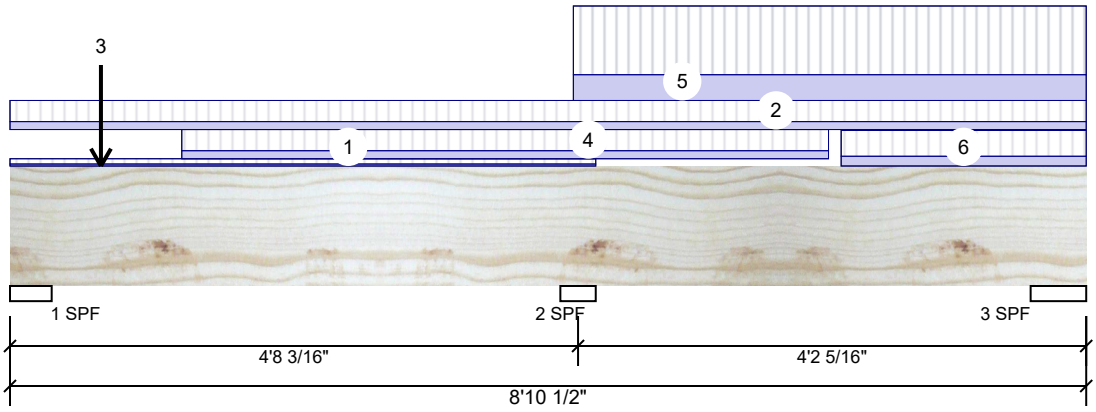
isDesign™

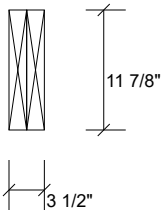
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F9-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Part. Uniform	4-7-12 to 8-10-8		Top	90 PLF	240 PLF	0 PLF	0 PLF	
6	Part. Uniform	6-10-4 to 8-10-8		Near Face	34 PLF	90 PLF	0 PLF	0 PLF	
	Self Weight				10 PLF				

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

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

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

Notes

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Forex
APA: PR-L318

KOTT

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

NASCOR

Second Floor

Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN,ON L4K 3P3
Project # 17-55
Model: LOT-26 (BELLE 1 EL-2)
Date: DEC21,2018

1. OBC 2012 O.Reg 332/12 as amended
2. Nascor CCMC - 13535-R
3. LVL CCMC -12904-R
4. CAN/CSA-O86-09
5. CCMC -12787-R APA PR-L310(C)

JOISTS SPACING 16"O/C
UNLESS
NOTED OTHERWISE

Legend

PS	Point Load Support
◇	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 11.875
	LPI 20Plus 11.875
	NJ60H 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 9.5 (Dropped)
	Forex 2.0E-3000Fb LVL 1.75 X 11.875 (Dropped)
	Forex 2.0E-3000Fb LVL 1.75 X 11.875
	1.75 X 9.5 (Dropped)
	5 X 10.25 (Dropped)
	5.25 X 10.25 (Dropped)

THIS CERTIFICATION IS TO CONFIRM THAT:

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

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

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

ALL OTHER COMPONENTS AND STRUCTURAL ELEMENTS SUPPORTING THE FLOOR SYSTEM SUCH AS BEAMS, WALLS, COLUMNS AND FOUNDATION WALLS AND FOOTINGS INCLUDING ANCHORAGE OF COMPONENTS AND BRACING FOR LATERAL STABILITY ARE THE RESPONSIBILITY OF OTHERS.

Second Floor

LVL/LSL (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F11	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	14-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	12-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	10-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	11.875	3	2	6	6-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	4-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BM8	Forex 2.0E-3000Fb LVL	1.75	9.5	1	3	3	4-0-0
BM9	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	14-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J9	LPI 20Plus	2.5	11.875			2	16-0-0
J6	LPI 20Plus	2.5	11.875			22	14-0-0
J5	LPI 20Plus	2.5	11.875			19	12-0-0
J4	LPI 20Plus	2.5	11.875			22	10-0-0
J3	LPI 20Plus	2.5	11.875			3	8-0-0
J2	LPI 20Plus	2.5	11.875			19	6-0-0
J1	LPI 20Plus	2.5	11.875			4	4-0-0
F13	LPI 20Plus	2.5	11.875			1	12-0-0
J10	NJ60H	2.5	11.875			21	18-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			17	12

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	LPI 20 Plus	2.5	11.875	LinFt		Varies	44-0-0
BLK1	NJ60H	2.5	11.875	LinFt		Varies	5-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H3	29	LF2511			12 10d	1 #8x1 1/4WS
H4	2	LF2511				
H5	6	LF3511			12 10d	2 #8x1 1/4WS

NOTES:

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

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

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

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

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

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

NASCOR

Layout Name
LOT-26 (BELLE 1 EL -2)

Design Method
LSD

Description
GREEN YORK HOMES
GRANELLI HOMES PROJECT
BRAMPTON,ON

Created
May 29, 2018

Builder

Sales Rep

Designer
S B

Shipping

Project

Builder's Project

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

Second Floor

Design Method	LSD
Building Code	NBCC 2010 / OBC 2012

Floor

Loads	
Live	40
Dead	15
Deflection Joist	
LL Span L/	480
TL Span L/	360
LL Cant 2L/	480
TL Cant 2L/	360
Deflection Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	480
TL Cant 2L/	360
Decking	
Deck	OSB
Thickness	5/8"
Fastener	Nailed & Glued
Vibration	
Ceiling:	Gypsum 1/2"

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019
NE0119-100

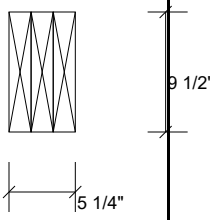
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

BM8-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 3-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	85	62	0	0
2	1087	552	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.152"	2%	78 / 127	205	L	1.25D+1.5L
2 - SPF	3.456"	28%	690 / 1631	2321	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	521 ft-lb	3'2 1/8"	35449 ft-lb	0.015 (1%)	1.25D+1.5L	L
Unbraced	521 ft-lb	3'2 1/8"	35449 ft-lb	0.015 (1%)	1.25D+1.5L	L
Shear	536 lb	2'7 3/8"	13915 lb	0.039 (4%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/48140)	2'6 7/8"	0.104 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.001 (L/30970)	2'6 3/16"	0.156 (L/240)	0.010 (1%)	D+L	L

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

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
2 Girders are designed to be supported on the bottom edge only.
3 Multiple plies must be fastened together as per manufacturer's details.
4 Top loads must be supported equally by all plies.
5 Top braced at bearings.
6 Bottom braced at bearings.
7 Lateral slenderness ratio based on full section width.

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	3-2-2		Top	209 lb	363 lb	0 lb	0 lb	F9
2	Point	3-2-3		Top	364 lb	809 lb	0 lb	0 lb	F10
	Self Weight				11 PLF				

Notes

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Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

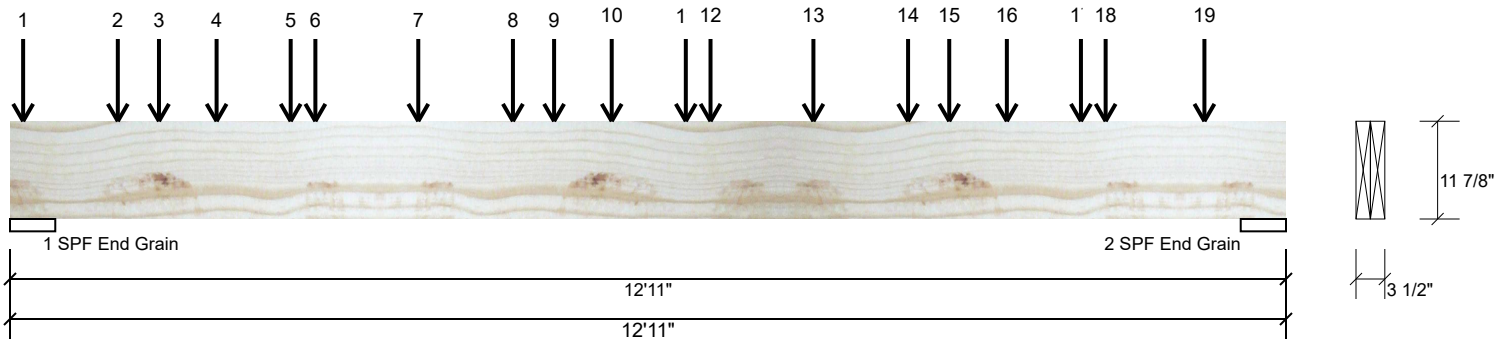
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

BM9-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	2274	955	0	0
2	2022	820	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	5.500"	32%	1194 / 3411	4605	L	1.25D+1.5L
2 - SPF End Grain	5.500"	28%	1025 / 3033	4058	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12341 ft-lb	6'10 1/16"	34261 ft-lb	0.360 (36%)	1.25D+1.5L	L
Unbraced	12341 ft-lb	6'10 1/16"	27420 ft-lb	0.450 (45%)	1.25D+1.5L	L
Shear	3768 lb	1'4 5/8"	11596 lb	0.325 (32%)	1.25D+1.5L	L
Perm Defl in.	0.074 (L/1965)	6'5 9/16"	0.404 (L/360)	0.180 (18%)	D	Uniform
LL Defl inch	0.183 (L/794)	6'5 5/8"	0.404 (L/360)	0.450 (45%)	L	L
TL Defl inch	0.257 (L/565)	6'5 5/8"	0.606 (L/240)	0.420 (42%)	D+L	L

Design Notes

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PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-1-10		Top	176 lb	369 lb	0 lb	0 lb	J2 J6
2	Point	1-1-2		Top	30 lb	79 lb	0 lb	0 lb	J2
3	Point	1-6-2		Top	131 lb	343 lb	0 lb	0 lb	J6
4	Point	2-1-2		Top	30 lb	79 lb	0 lb	0 lb	J2
5	Point	2-10-2		Top	129 lb	343 lb	0 lb	0 lb	J6

Continued on page 2...

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BM9-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

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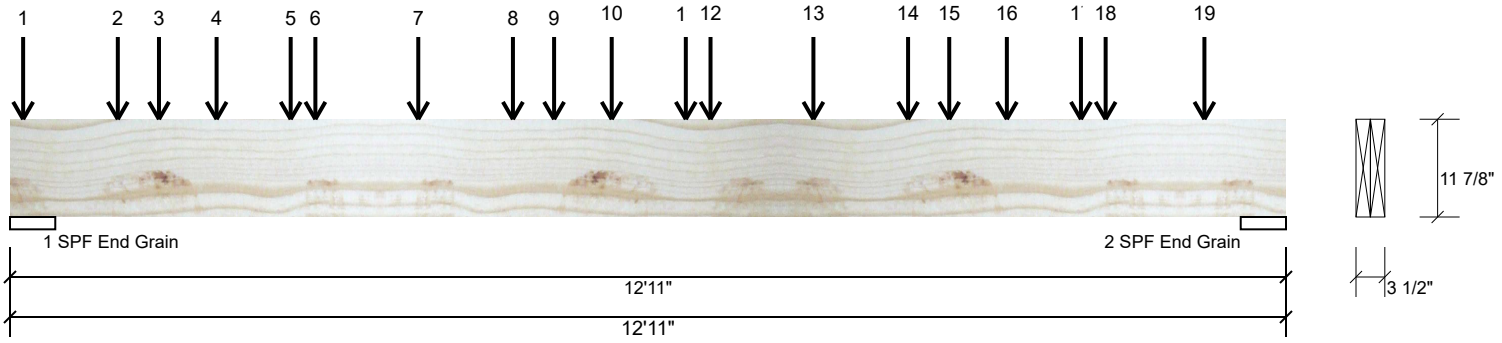

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	3-1-2		Top	29 lb	79 lb	0 lb	0 lb	J2
7	Point	4-1-10		Top	158 lb	421 lb	0 lb	0 lb	J2 J6
8	Point	5-1-2		Top	30 lb	79 lb	0 lb	0 lb	J2
9	Point	5-6-2		Top	129 lb	343 lb	0 lb	0 lb	J6
10	Point	6-1-2		Top	30 lb	79 lb	0 lb	0 lb	J2
11	Point	6-10-2		Top	129 lb	343 lb	0 lb	0 lb	J6
12	Point	7-1-2		Top	29 lb	79 lb	0 lb	0 lb	J2
13	Point	8-1-10		Top	158 lb	421 lb	0 lb	0 lb	J2 J6
14	Point	9-1-2		Top	30 lb	81 lb	0 lb	0 lb	J2
15	Point	9-6-2		Top	129 lb	343 lb	0 lb	0 lb	J6
16	Point	10-1-2		Top	30 lb	81 lb	0 lb	0 lb	J2
17	Point	10-10-2		Top	110 lb	294 lb	0 lb	0 lb	J5
18	Point	11-1-2		Top	30 lb	80 lb	0 lb	0 lb	J2
19	Point	12-1-2		Top	135 lb	360 lb	0 lb	0 lb	J2 J5
	Self Weight				10 PLF				

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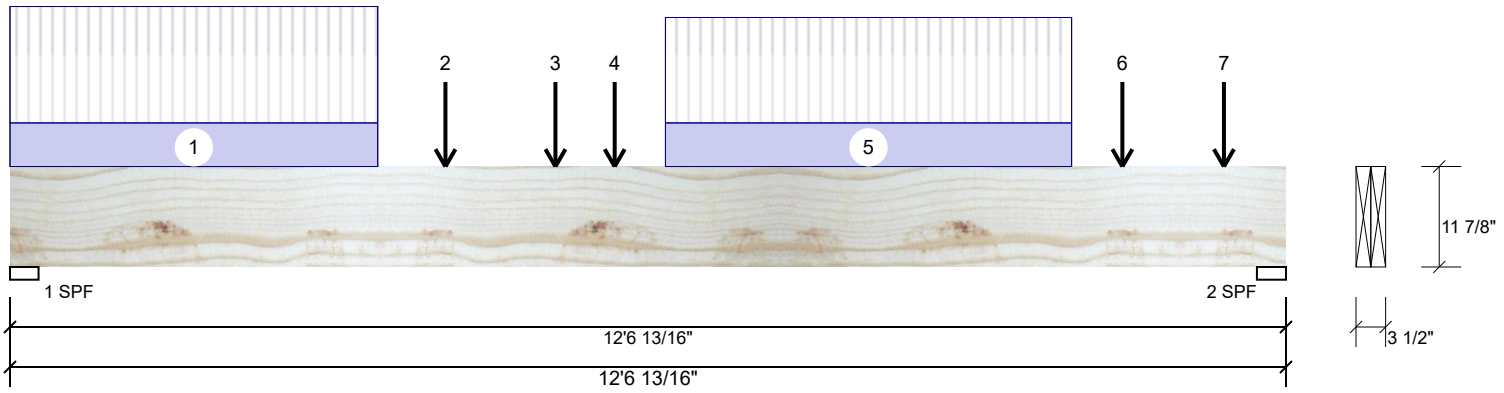
Level: Second Floor



Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1837	770	0	0
2	1788	813	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.375"	51%	962 / 2755	3718	L	1.25D+1.5L
2 - SPF	3.438"	50%	1016 / 2682	3699	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	10691 ft-lb	5'11 7/16"	34261 ft-lb	0.312 (31%)	1.25D+1.5L	L
Unbraced	10691 ft-lb	5'11 7/16"	27423 ft-lb	0.390 (39%)	1.25D+1.5L	L
Shear	3259 lb	11'4 1/4"	11596 lb	0.281 (28%)	1.25D+1.5L	L
Perm Defl in.	0.068 (L/2152)	6'3 7/16"	0.404 (L/360)	0.170 (17%)	D	Uniform
LL Defl inch	0.156 (L/931)	6'3"	0.404 (L/360)	0.390 (39%)	L	L
TL Defl inch	0.224 (L/650)	6'3 1/8"	0.606 (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 width X 4.5.
2 Girders are designed to be supported on the bottom edge only.
3 Multiple plies must be fastened together as per manufacturer's details.
4 Top loads must be supported equally by all plies.
5 Top braced at bearings.
6 Bottom braced at bearings.
7 Lateral slenderness ratio based on full section width.

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-7-7		Top	115 PLF	307 PLF	0 PLF	0 PLF	
2	Point	4-3-7		Top	126 lb	336 lb	0 lb	0 lb	J6
3	Point	5-4-7		Top	87 lb	232 lb	0 lb	0 lb	J6
4	Point	5-11-7		Top	91 lb	220 lb	0 lb	0 lb	J6
5	Part. Uniform	6-5-7 to 10-5-7		Top	115 PLF	278 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

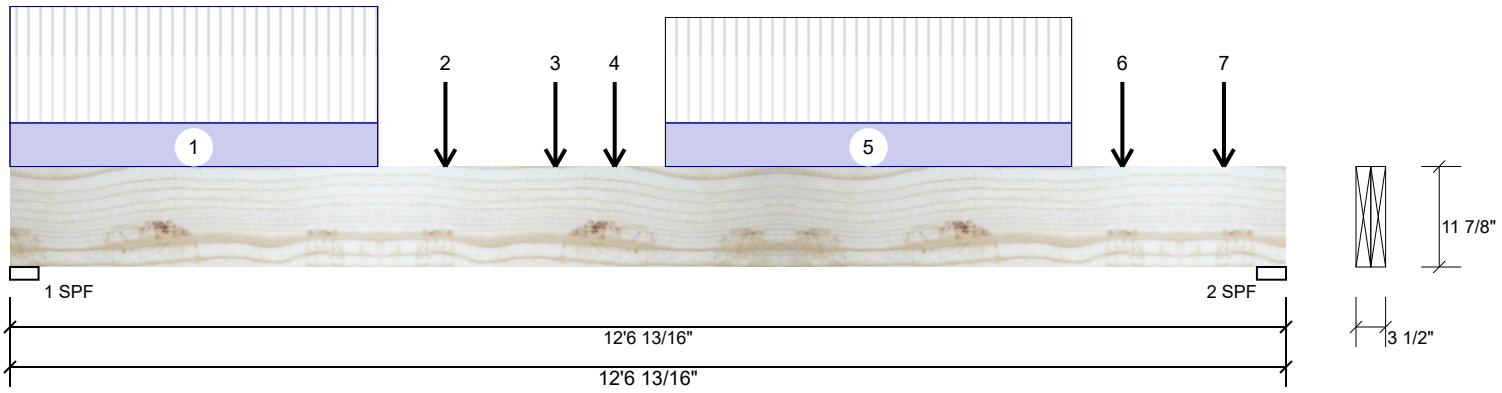
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

BM9-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	10-11-7		Top	126 lb	278 lb	0 lb	0 lb	J6
7	Point	11-11-7		Top	157 lb	335 lb	0 lb	0 lb	J10
	Self Weight				10 PLF				

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

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

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

Notes

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

Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

KOTT

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

NASCOR

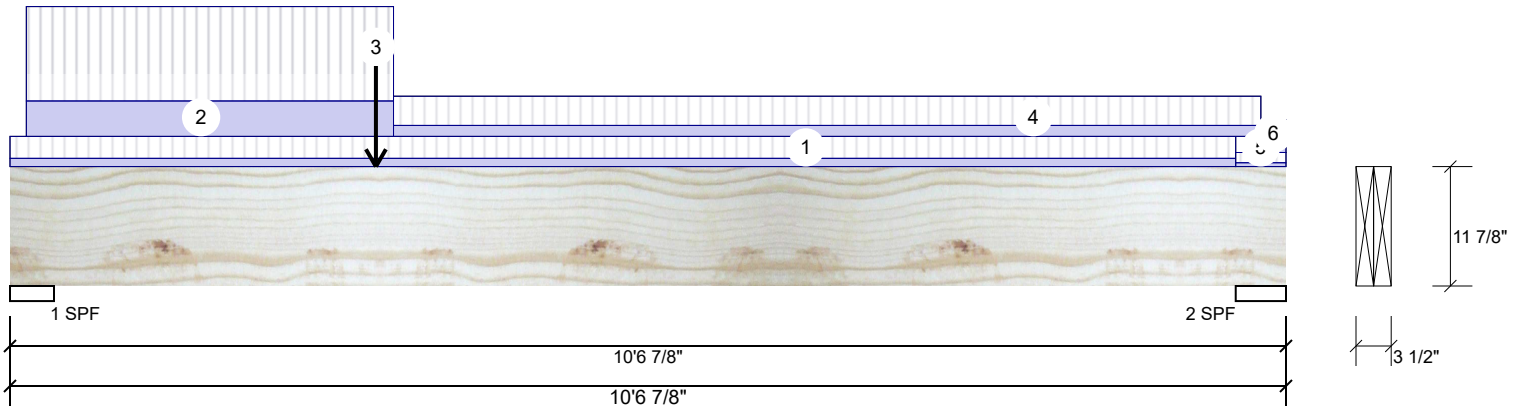
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F10-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	784	356	0	0
2	397	204	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.375"	17%	444 / 1176	1620	L	1.25D+1.5L
2 - SPF	5.000"	8%	255 / 596	851	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3608 ft-lb	3' 3/8"	34261 ft-lb	0.105 (11%)	1.25D+1.5L	L
Unbraced	3608 ft-lb	3' 3/8"	29686 ft-lb	0.122 (12%)	1.25D+1.5L	L
Shear	1393 lb	1'3 1/2"	11596 lb	0.120 (12%)	1.25D+1.5L	L
Perm Defl in.	0.015 (L/8028)	4'9 9/16"	0.331 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.032 (L/3747)	4'8 9/16"	0.331 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.047 (L/2555)	4'8 7/8"	0.496 (L/240)	0.090 (9%)	D+L	L

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-1-14	(Span)0-10-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-10 to 3-2-2	(Span)3-8-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	3-0-6		Far Face	245 lb	611 lb	0 lb	0 lb	F6
4	Tie-In	3-2-2 to 10-4-6	(Span)1-1-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	10-1-14 to 10-6-14	(Span)0-4-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	10-4-6 to 10-6-14	(Span)0-11-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

Notes

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

Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

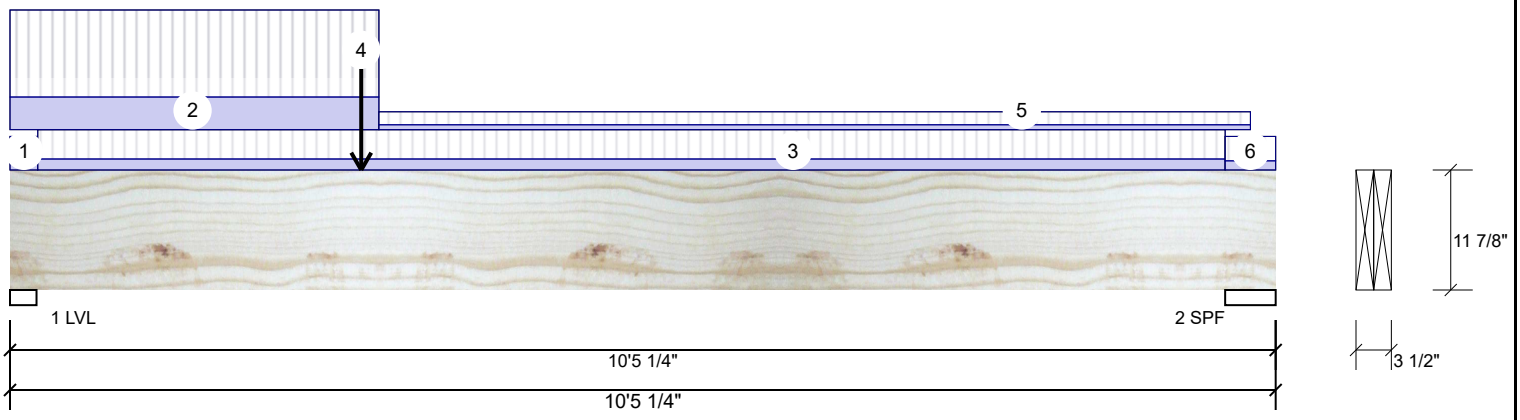
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F10-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	809	364	0	0
2	389	201	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - LVL	2.625"	24%	455 / 1213	1668	L	1.25D+1.5L
2 - SPF	5.000"	8%	251 / 584	835	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3712 ft-lb	2'10 3/4"	34261 ft-lb	0.108 (11%)	1.25D+1.5L	L
Unbraced	3712 ft-lb	2'10 3/4"	29676 ft-lb	0.125 (13%)	1.25D+1.5L	L
Shear	1433 lb	1'1 3/4"	11596 lb	0.124 (12%)	1.25D+1.5L	L
Perm Defl in.	0.015 (L/7923)	4'7 9/16"	0.331 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.032 (L/3690)	4'6 7/16"	0.331 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.047 (L/2518)	4'6 13/16"	0.496 (L/240)	0.100 (10%)	D+L	L

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-12	(Span)1-0-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 3-0-8	(Span)3-8-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-12 to 10-0-4	(Span)1-2-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	2-10-12		Near Face	255 lb	637 lb	0 lb	0 lb	F6
5	Tie-In	3-0-8 to 10-2-12	(Span)0-6-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	10-0-4 to 10-5-4	(Span)1-0-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

Notes

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Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

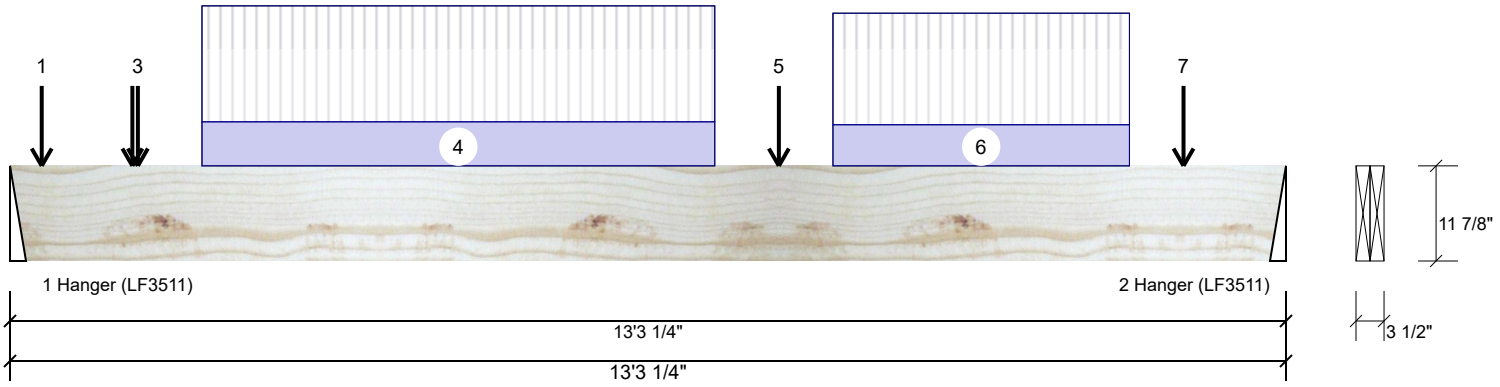
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F11-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	574	297	0	0
2	502	253	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	24%	372 / 860	1232	L	1.25D+1.5L
2 - Hanger	2.000"	21%	317 / 753	1070	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3675 ft-lb	6'7 1/8"	34261 ft-lb	0.107 (11%)	1.25D+1.5L	L
Unbraced	3675 ft-lb	6'7 1/8"	26322 ft-lb	0.140 (14%)	1.25D+1.5L	L
Shear	1219 lb	1'1 1/8"	11596 lb	0.105 (11%)	1.25D+1.5L	L
Perm Defl in.	0.030 (L/5266)	6'7 5/16"	0.435 (L/360)	0.070 (7%)	D	Uniform
LL Defl inch	0.059 (L/2643)	6'7 1/2"	0.435 (L/360)	0.140 (14%)	L	L
TL Defl inch	0.089 (L/1760)	6'7 7/16"	0.653 (L/240)	0.140 (14%)	D+L	L

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

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

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

LICENSED PROFESSIONAL ENGINEER N.A. EL-MASRI APPROVED PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-3-15		Near Face	21 lb	57 lb	0 lb	0 lb	J2
2	Point	1-3-4		Near Face	34 lb	38 lb	0 lb	0 lb	F7
3	Point	1-3-15		Far Face	43 lb	114 lb	0 lb	0 lb	J2
4	Part. Uniform	1-11-15 to 7-3-15		Far Face	30 PLF	79 PLF	0 PLF	0 PLF	
5	Point	7-11-15		Far Face	41 lb	108 lb	0 lb	0 lb	J2
6	Part. Uniform	8-6-11 to 11-7-11		Far Face	28 PLF	76 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

KOTT

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

NASCOR

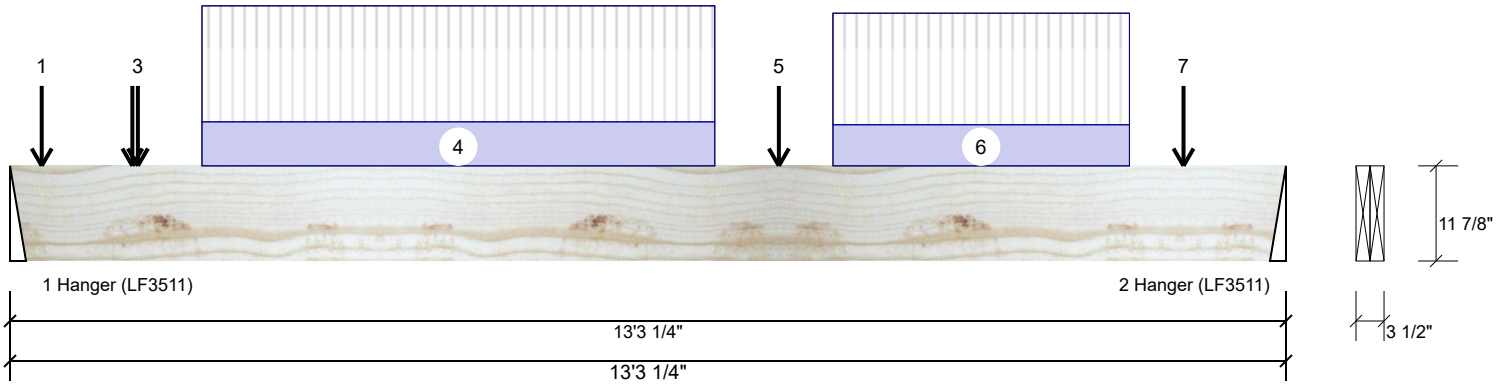
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F11-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	12-2-7		Far Face	39 lb	103 lb	0 lb	0 lb	J2
	Self Weight				10 PLF				

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

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

Notes

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

Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
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6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

KOTT

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

NASCOR

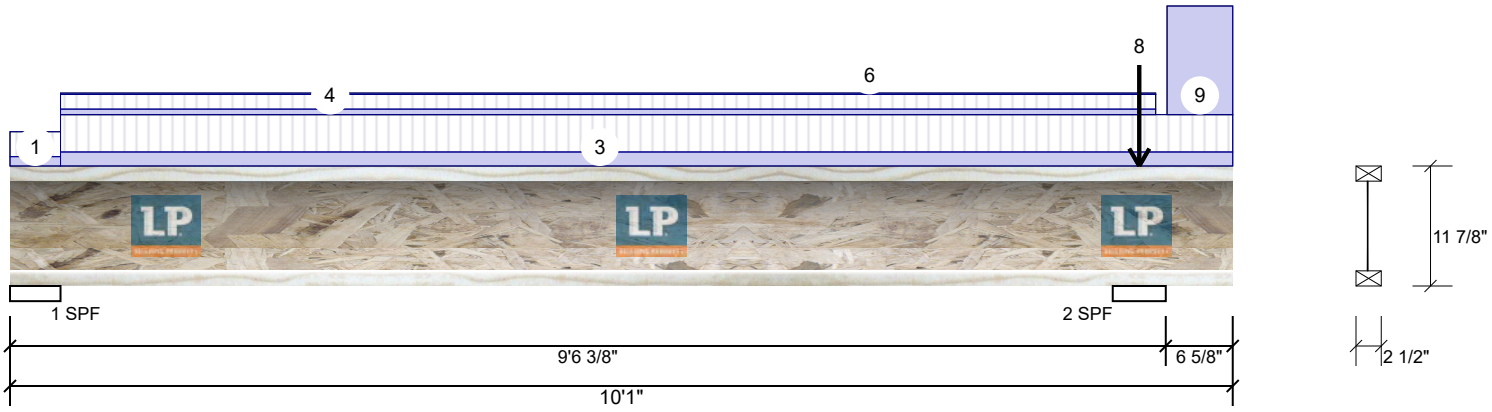
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F13-A LPI 20Plus 11.875" - PASSED

Level: Second Floor



Member Information

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

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	173	67	0	0
2	198	164	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.000"	19%	84 / 261	345	L_	1.25D+1.5L
2 - SPF	5.250"	16%	205 / 297	502	LL	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-31 ft-lb	9'6 3/8"	4063 ft-lb	0.008 (1%)	1.25D+1.5L	_L
Pos Moment	730 ft-lb	4'8 5/8"	6250 ft-lb	0.117 (12%)	1.25D+1.5L	L_
Shear	341 lb	9'1 7/8"	2345 lb	0.145 (15%)	1.25D+1.5L	LL
Perm Defl in.	0.009 (L/12108)	4'8 5/8"	0.293 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.023 (L/4580)	4'9 1/16"	0.293 (L/360)	0.080 (8%)	L	L_
TL Defl inch	0.032 (L/3323)	4'8 15/16"	0.440 (L/240)	0.070 (7%)	D+L	L_
LL Cant	-0.003 (2L/4055)	Rt Cant	0.200 (2L/480)	0.016 (2%)	L	L_
TL Cant	-0.004 (2L/3307)	Rt Cant	0.300 (2L/360)	0.013 (1%)	D+L	L_

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

1 Provide restraint at supports to ensure lateral stability.
2 Applied loads over end bearings and loads exceeding 250 lbs over intermediate bearings must be transferred directly to the support by rim board, blocking, squash blocks, or other device.
3 Dead Load Deflection: Instant = 0.009", Long Term = 0.013"
4 Girders are designed to be supported on the bottom edge only.
5 Top flange braced at bearings.
6 Bottom flange braced at bearings.

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.

KOTT

This design is valid until 10/31/2020

Manufacturer Info

Louisiana-Pacific Corp
414 Union Street, Suite 2000
Nashville, TN 37219
(888) 820-0325
www.lpcorp.com
CCMC: 12412-R APA: PR-L238C

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

NASCOR

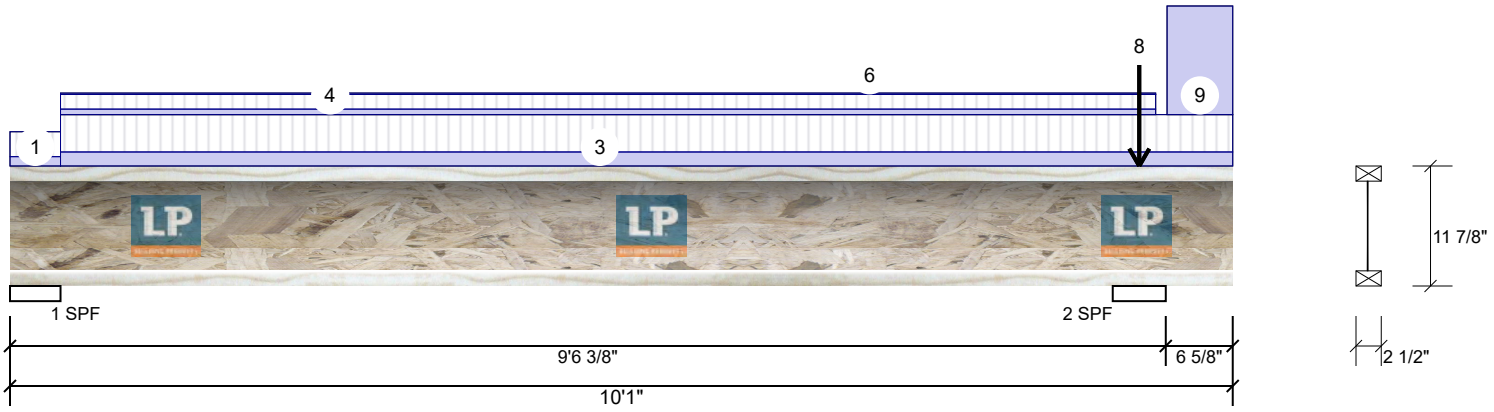
isDesign™

Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F13-A LPI 20Plus 11.875" - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-0	(Span)0-11-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-5-0 to 10-1-0	(Span)1-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	0-5-0 to 9-5-6	(Span)0-6-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Part. Uniform	0-5-0 to 9-5-6		Top	1 PLF	0 PLF	0 PLF	0 PLF	
7	Point	9-3-12		Top	37 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-1-8							
8	Point	9-3-12		Top	3 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-1-8							
9	Part. Uniform	9-6-8 to 10-1-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight

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

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

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

Notes

This component analysis is based on the loads, geometry and other conditions as entered by the user and listed in this report. The user is responsible to ensure the accuracy of the input and the applicability to the actual conditions of the structure for which this component is intended. This analysis is valid only for the product listed.

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905-642-4400

NASCOR

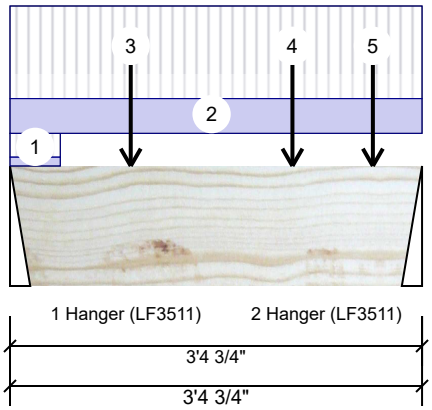
isDesign™

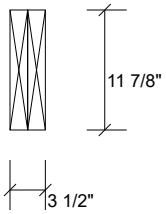
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	611	245	0	0
2	637	255	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	24%	307 / 917	1224	L	1.25D+1.5L
2 - Hanger	2.000"	25%	319 / 955	1274	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	936 ft-lb	1'8 7/16"	34261 ft-lb	0.027 (3%)	1.25D+1.5L	L
Unbraced	936 ft-lb	1'8 7/16"	34261 ft-lb	0.027 (3%)	1.25D+1.5L	L
Shear	745 lb	2'3 5/8"	11596 lb	0.064 (6%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/43484)	1'8 7/16"	0.106 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/17428)	1'8 7/16"	0.106 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.003 (L/12441)	1'8 7/16"	0.159 (L/240)	0.020 (2%)	D+L	L

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-0	(Span)3-0-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-4-12		Top	90 PLF	240 PLF	0 PLF	0 PLF	
3	Point	0-11-15		Near Face	66 lb	177 lb	0 lb	0 lb	J3
4	Point	2-3-15		Near Face	54 lb	143 lb	0 lb	0 lb	J3

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

KOTT

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

NASCOR

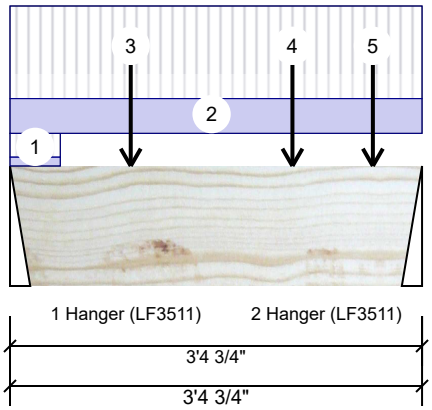
isDesign™

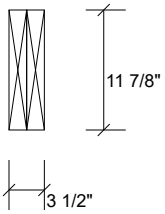
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F6-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	2-11-15		Near Face	33 lb	87 lb	0 lb	0 lb	J3
	Self Weight				10 PLF				

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

Notes

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Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
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5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

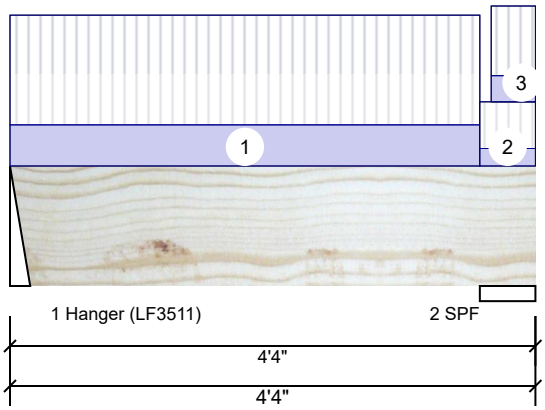
isDesign™

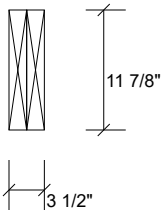
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F7-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	38	34	0	0
2	43	38	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	2%	42 / 57	99	L	1.25D+1.5L
2 - SPF	5.500"	1%	48 / 65	112	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	90 ft-lb	2' 1/4"	34261 ft-lb	0.003 (0%)	1.25D+1.5L	L
Unbraced	90 ft-lb	2' 1/4"	34261 ft-lb	0.003 (0%)	1.25D+1.5L	L
Shear	45 lb	2'11 3/8"	11596 lb	0.004 (0%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-10-8	(Span)0-11-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	3-10-8 to 4-4-0	(Span)0-4-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	3-11-10 to 4-4-0	(Span)0-7-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

Notes

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Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

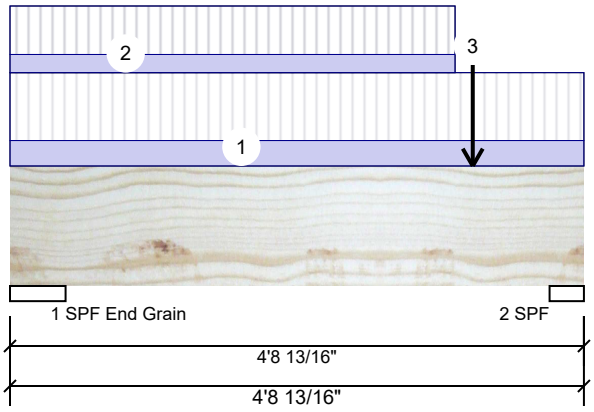
isDesign™

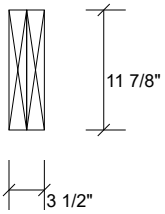
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F7-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	168	100	0	0
2	626	323	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	5.500"	3%	125 / 252	377	L	1.25D+1.5L
2 - SPF	3.399"	18%	404 / 939	1343	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	921 ft-lb	3'9 13/16"	34261 ft-lb	0.027 (3%)	1.25D+1.5L	L
Unbraced	921 ft-lb	3'9 13/16"	34261 ft-lb	0.027 (3%)	1.25D+1.5L	L
Shear	1298 lb	3'6 1/4"	11596 lb	0.112 (11%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/47016)	3'1 1/8"	0.137 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/24894)	3'2 1/8"	0.137 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.003 (L/16281)	3'1 13/16"	0.206 (L/240)	0.010 (1%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-8-13	(Span)0-7-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 3-8-1	(Span)0-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	3-9-13		Near Face	346 lb	708 lb	0 lb	0 lb	F9
	Self Weight				10 PLF				

Notes

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

Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

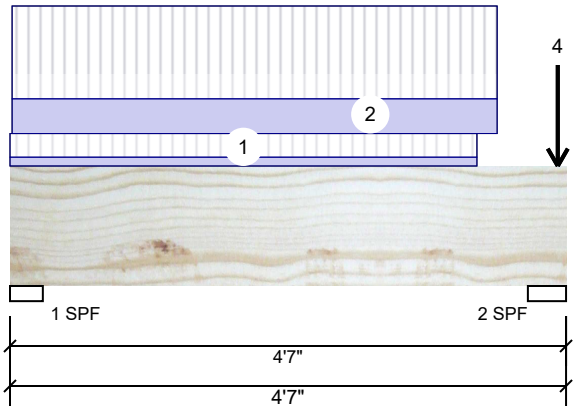
isDesign™

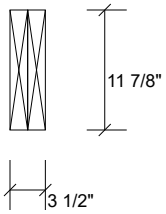
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F7-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	917	365	0	0
2	998	395	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.250"	26%	456 / 1375	1831	L	1.25D+1.5L
2 - SPF	3.778"	24%	494 / 1497	1991	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1711 ft-lb	2'3 1/16"	34261 ft-lb	0.050 (5%)	1.25D+1.5L	L
Unbraced	1711 ft-lb	2'3 1/16"	34261 ft-lb	0.050 (5%)	1.25D+1.5L	L
Shear	1685 lb	3'4 1/8"	11596 lb	0.145 (15%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/24623)	2'3 1/8"	0.137 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.005 (L/9794)	2'3 1/8"	0.137 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.007 (L/7007)	2'3 1/8"	0.206 (L/240)	0.030 (3%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-10-3		Near Face	31 PLF	83 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-0-3 to 4-0-3		Far Face	122 PLF	326 PLF	0 PLF	0 PLF	
3	Point	4-6-3		Far Face	82 lb	219 lb	0 lb	0 lb	J10
4	Point	4-6-3		Near Face	27 lb	72 lb	0 lb	0 lb	J1
	Self Weight				10 PLF				

Notes

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Lumber

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

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
APA: PR-L318

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

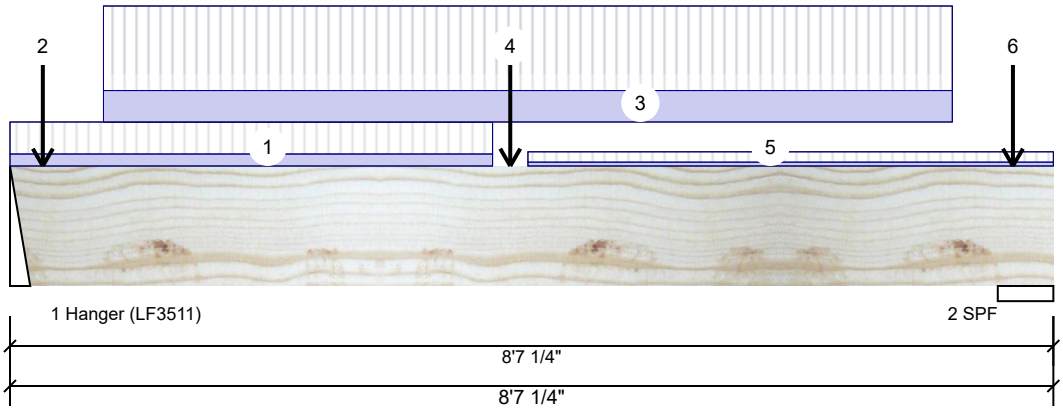
isDesign™

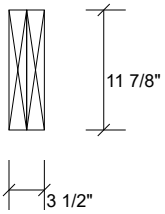
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F9-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





Member Information

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		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	708	346	0	0
2	678	336	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	29%	432 / 1061	1493	L	1.25D+1.5L
2 - SPF	5.500"	12%	420 / 1017	1437	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4128 ft-lb	4'1 1/2"	34261 ft-lb	0.120 (12%)	1.25D+1.5L	L
Unbraced	4128 ft-lb	4'1 1/2"	31205 ft-lb	0.132 (13%)	1.25D+1.5L	L
Shear	1452 lb	1'1 1/8"	11596 lb	0.125 (13%)	1.25D+1.5L	L
Perm Defl in.	0.013 (L/7491)	4'1 9/16"	0.270 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.026 (L/3726)	4'1 9/16"	0.270 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.039 (L/2489)	4'1 9/16"	0.405 (L/240)	0.100 (10%)	D+L	L

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-11-12	(Span)1-5-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-3-4		Near Face	21 lb	55 lb	0 lb	0 lb	J2
3	Part. Uniform	0-9-4 to 7-9-4		Near Face	29 PLF	78 PLF	0 PLF	0 PLF	
4	Point	4-1-8		Far Face	297 lb	574 lb	0 lb	0 lb	F11
5	Tie-In	4-3-4 to 8-7-4	(Span)0-5-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	8-3-4		Near Face	19 lb	52 lb	0 lb	0 lb	J2
	Self Weight				10 PLF				

Notes

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Lumber

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2. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 10/18/2021

Manufacturer Info

Forex
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Kott Lumber Company
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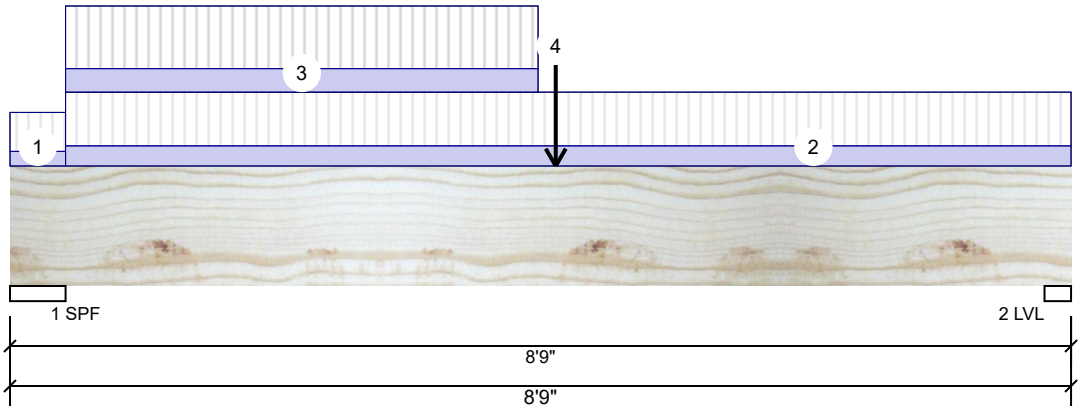
isDesign™

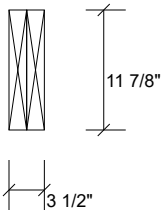
Client:
Project:
Address:

Date: 1/21/2019
Designer: S B
Job Name: LOT-26 (BELLE 1 EL -2)
Project #:

F9-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





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Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	413	230	0	0
2	363	209	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	8%	287 / 619	906	L	1.25D+1.5L
2 - LVL	2.625"	12%	261 / 544	806	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2821 ft-lb	4'6"	34261 ft-lb	0.082 (8%)	1.25D+1.5L	L
Unbraced	2821 ft-lb	4'6"	31134 ft-lb	0.091 (9%)	1.25D+1.5L	L
Shear	794 lb	1'4 5/8"	11596 lb	0.068 (7%)	1.25D+1.5L	L
Perm Defl in.	0.009 (L/10552)	4'6"	0.273 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.017 (L/5739)	4'6"	0.273 (L/360)	0.060 (6%)	L	L
TL Defl inch	0.026 (L/3717)	4'6"	0.410 (L/240)	0.060 (6%)	D+L	L

Design Notes

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LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jan 21, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-8	(Span)0-9-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-5-8 to 8-9-0	(Span)1-0-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-5-8 to 4-4-4	(Span)1-2-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	4-6-0		Near Face	253 lb	502 lb	0 lb	0 lb	F11
	Self Weight				10 PLF				

Notes

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Manufacturer Info

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NASCOR