Engineering Note Page (ENP-2)

GREEN YORK HOMES-BRAMPTON-ON-BELLE 1 ELE-1-2

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

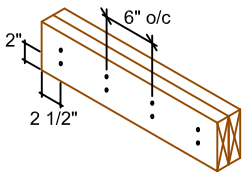
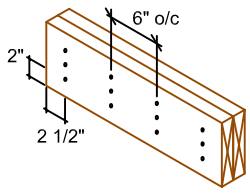
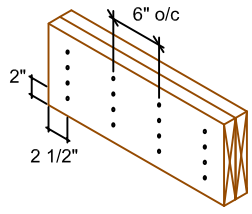
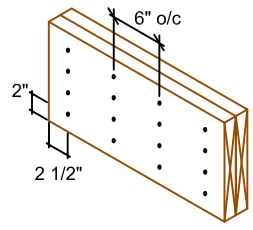
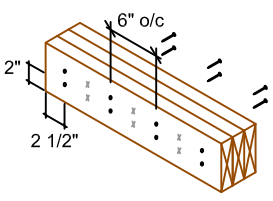
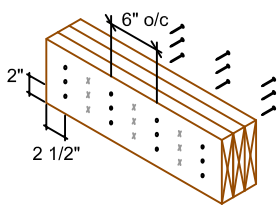
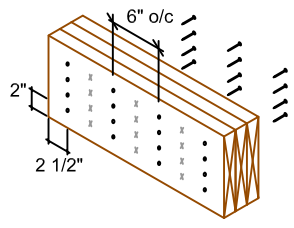
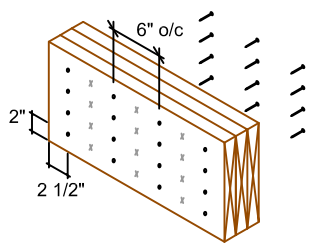
Do not drill any hole, cut or notch a certified building component without a written pre-authorization.

KOTT

MULTIPLE MEMBER CONNECTIONS

GREEN YORK HOMES-BRAMPTON-
ON-BELLE 1 ELE-1-2

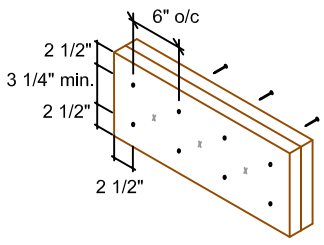
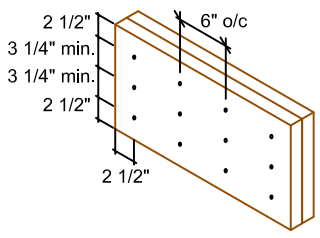
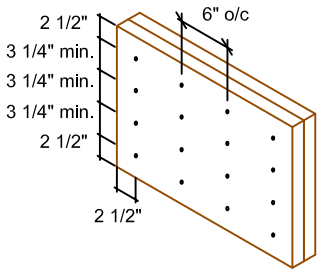
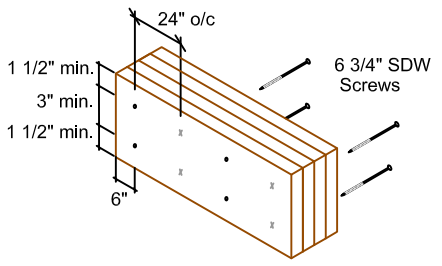
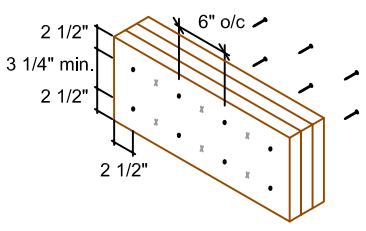
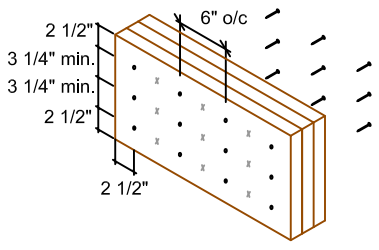
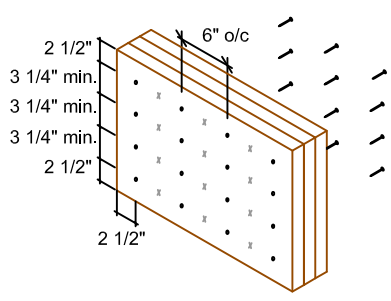
Conventional Connections (for uniform distributed loads)

	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.

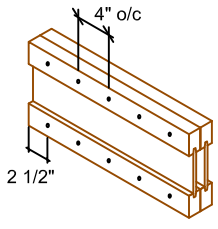
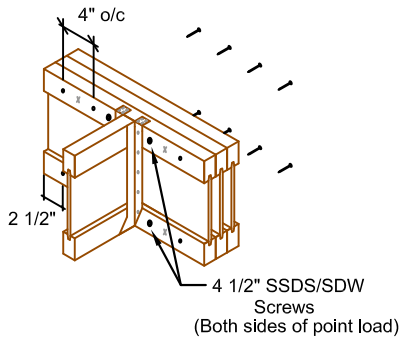
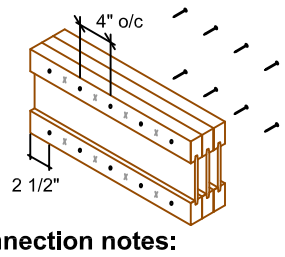
LVL Connections (for uniform distributed loads)

	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.

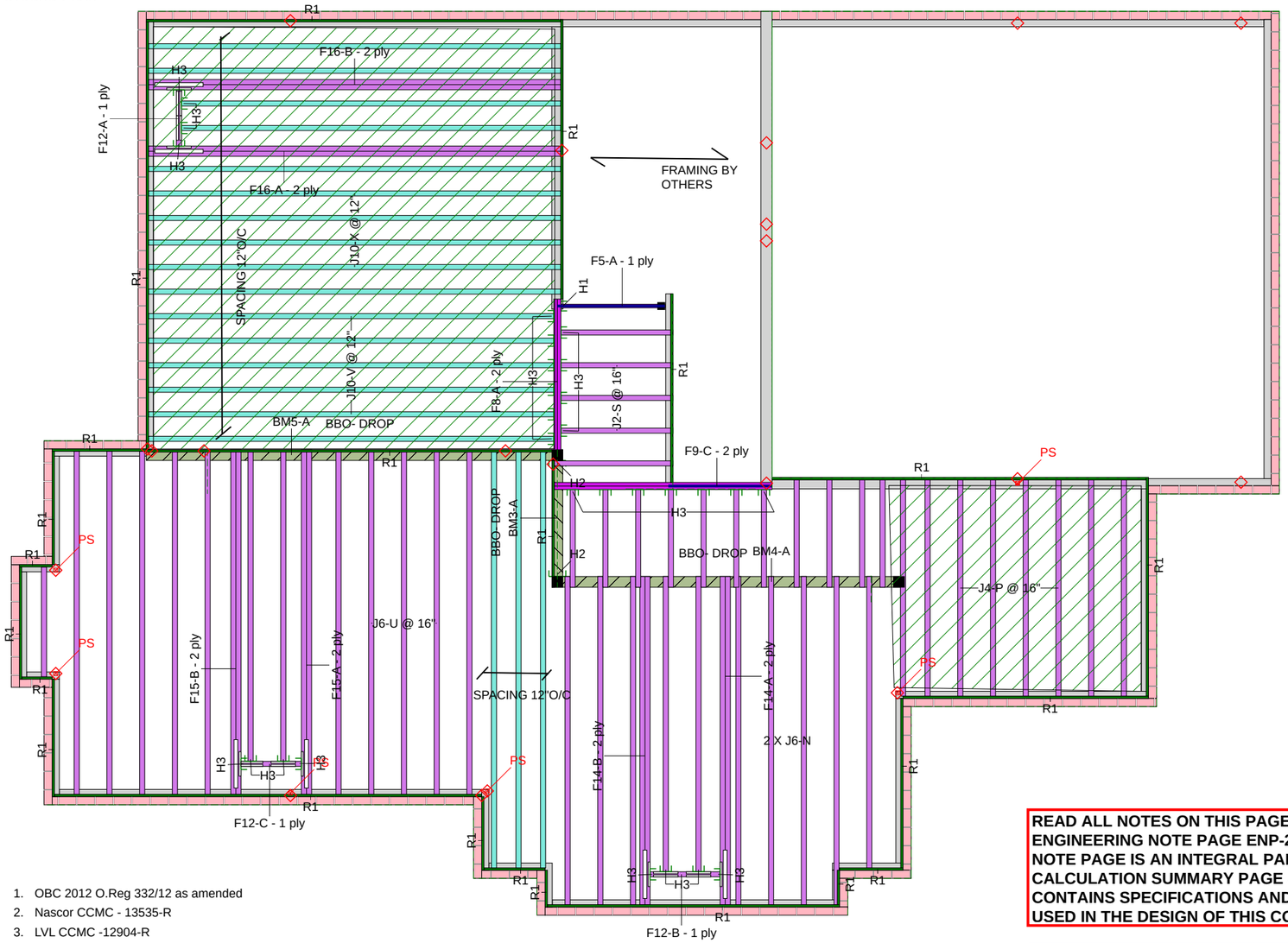
MULTI -PLY CONNECTION DETAILS

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: BELLE 1
Date: MAY 22,2018

EWP Studio
Simpson Strong-Tie®
Component Solutions™

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.

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
J10	NJ60H	2.5	11.875			17	18-0-0
J7	NJ60H	2.5	11.875			2	16-0-0
F16	NJH	2.5	11.875	2	2	4	18-0-0
F15	NJH	2.5	11.875	2	2	4	16-0-0
F14	NJH	2.5	11.875	2	2	4	14-0-0
F12	NJH	2.5	11.875			3	4-0-0
J6	NJH	2.5	11.875			21	14-0-0
J5	NJH	2.5	11.875			1	12-0-0
J4	NJH	2.5	11.875			8	10-0-0
J2	NJH	2.5	11.875			10	6-0-0
J1	NJH	2.5	11.875			7	4-0-0

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	29	LF2511			12 10d	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
	NJ60H 11.875
	NJH 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 11.875
	5.25 X 10.25 (Dropped)

NASCOR

Layout Name
BELLE 1 EL -1 & 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	

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jun 05, 2018
NE0618-031

SIMPSON Strong-Tie

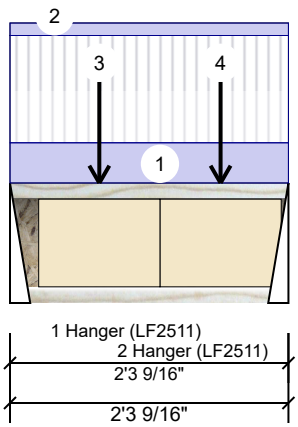
EWP Studio
Simpson Strong-Tie®
Component Solutions™

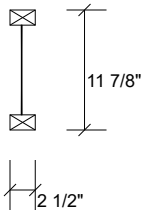
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

F12-A NJH 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	295	142	0	0
2	331	161	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	38%	178 / 443	621	L	1.25D+1.5L
2 - Hanger	2.000"	43%	201 / 496	697	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	378 ft-lb	8 7/8"	5390 ft-lb	0.070 (7%)	1.25D+1.5L	L
Unbraced	378 ft-lb	8 7/8"	5126 ft-lb	0.074 (7%)	1.25D+1.5L	L
Shear	691 lb	2'2 5/16"	1810 lb	0.382 (38%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/15078)	9 1/2"	0.070 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.003 (L/7262)	9 3/16"	0.070 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.005 (L/4901)	9 3/8"	0.104 (L/240)	0.050 (5%)	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 flange unbraced.
4 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-3-9	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-3-9		Top	3 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-8-13		Near Face	142 lb	297 lb	0 lb	0 lb	J7
4	Point	1-8-13		Near Face	132 lb	270 lb	0 lb	0 lb	J7

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

Manufacturer Info

Nascor by Kott

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

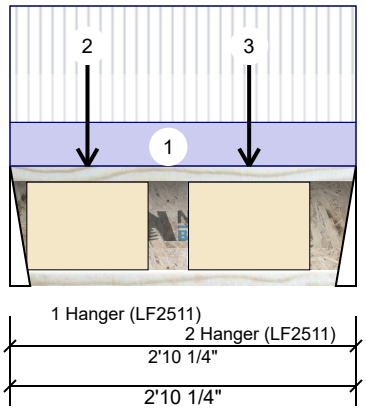
EWP Studio
Simpson Strong-Tie®
Component Solutions™

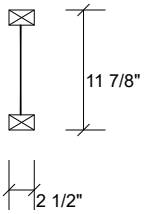
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

F12-B NJH 11.875" - PASSED

Level: Ground Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
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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	325	122	0	0
2	290	109	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	39%	152 / 487	639	L	1.25D+1.5L
2 - Hanger	2.000"	35%	136 / 435	571	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	424 ft-lb	1'11 11/16"	5390 ft-lb	0.079 (8%)	1.25D+1.5L	L
Unbraced	424 ft-lb	1'11 11/16"	4880 ft-lb	0.087 (9%)	1.25D+1.5L	L
Shear	634 lb	1 1/4"	1810 lb	0.350 (35%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/19125)	1'9 3/8"	0.088 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.004 (L/7177)	1'9 3/8"	0.088 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.006 (L/5219)	1'9 3/8"	0.132 (L/240)	0.050 (5%)	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

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-10-4	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-7-11		Far Face	96 lb	256 lb	0 lb	0 lb	J6
3	Point	1-11-11		Far Face	107 lb	285 lb	0 lb	0 lb	J6

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

Manufacturer Info

Nascor by Kott

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

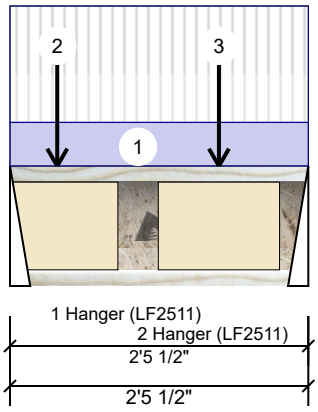
EWP Studio
Simpson Strong-Tie®
Component Solutions™

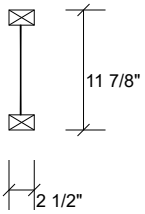
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

F12-C NJH 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	321	120	0	0
2	266	99	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	39%	150 / 481	631	L	1.25D+1.5L
2 - Hanger	2.000"	32%	124 / 398	523	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	317 ft-lb	1'8 11/16"	5390 ft-lb	0.059 (6%)	1.25D+1.5L	L
Unbraced	317 ft-lb	1'8 11/16"	5063 ft-lb	0.063 (6%)	1.25D+1.5L	L
Shear	626 lb	1 1/4"	1810 lb	0.346 (35%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/23231)	1'8 11/16"	0.075 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.003 (L/8704)	1'8 11/16"	0.075 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.004 (L/6332)	1'8 11/16"	0.113 (L/240)	0.040 (4%)	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 flange unbraced.
4 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-5-8	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-4-11		Far Face	90 lb	240 lb	0 lb	0 lb	J6
3	Point	1-8-11		Far Face	106 lb	283 lb	0 lb	0 lb	J6

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

Manufacturer Info

Nascor by Kott

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

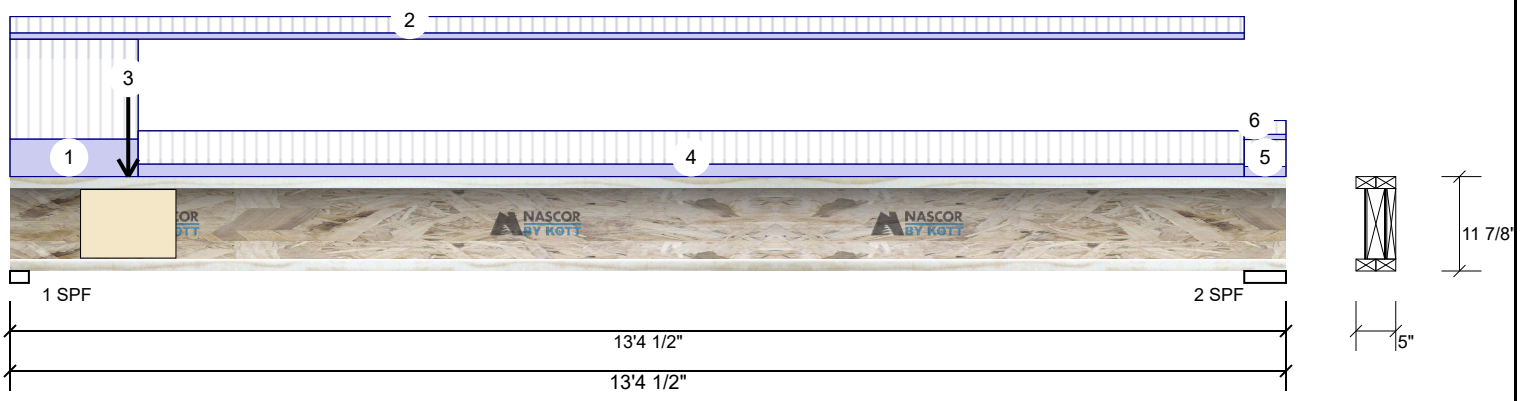
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

F14-A NJH 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	535	201	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"	32%	251 / 802	1053	L	1.25D+1.5L
2 - SPF	5.250"	13%	115 / 369	484	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1693 ft-lb	5'8 11/16"	10780 ft-lb	0.157 (16%)	1.25D+1.5L	L
Unbraced	1693 ft-lb	5'8 11/16"	1704 ft-lb	0.994 (99%)	1.25D+1.5L	L
Shear	1033 lb	1 5/8"	3620 lb	0.285 (29%)	1.25D+1.5L	L
Perm Defl in.	0.019 (L/8236)	6'3 7/16"	0.429 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.050 (L/3090)	6'3 7/16"	0.429 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.069 (L/2247)	6'3 7/16"	0.643 (L/240)	0.110 (11%)	D+L	L

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Multiple plies must be fastened together as per manufacturer's details.
3 Top loads must be supported equally by all plies.
4 Top flange must be laterally braced at a maximum of 9'10" o.c.
5 Bottom flange braced at bearings.

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

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
Jun 05, 2018

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	109 lb	290 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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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

Manufacturer Info

Nascor by Kott

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

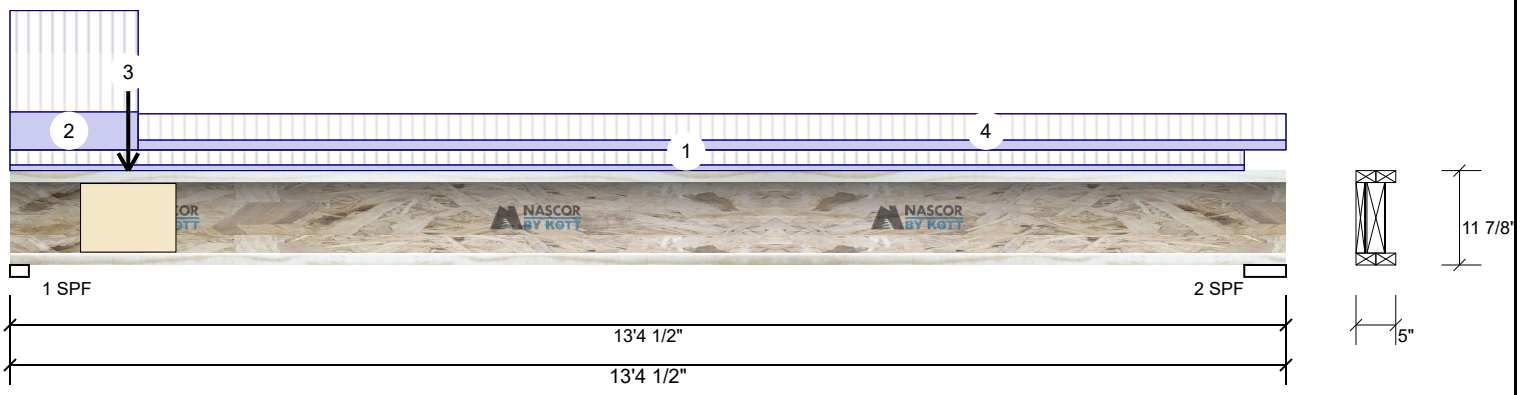
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

F14-B NJH 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	535	201	0	0
2	208	78	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	32%	251 / 802	1053	L	1.25D+1.5L
2 - SPF	5.250"	11%	97 / 312	409	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1509 ft-lb	5'5"	10780 ft-lb	0.140 (14%)	1.25D+1.5L	L
Unbraced	1509 ft-lb	5'5"	1509 ft-lb	1.000 (100%)	1.25D+1.5L	L
Shear	1033 lb	1 5/8"	3620 lb	0.285 (29%)	1.25D+1.5L	L
Perm Defl in.	0.017 (L/9242)	6'2 1/2"	0.429 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.045 (L/3467)	6'2 9/16"	0.429 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.061 (L/2521)	6'2 9/16"	0.643 (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
Jun 05, 2018

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-11-4	(Span)0-5-13	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	325 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

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

Manufacturer Info

Nascor by Kott

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

EWP Studio
Simpson Strong-Tie®
Component Solutions™

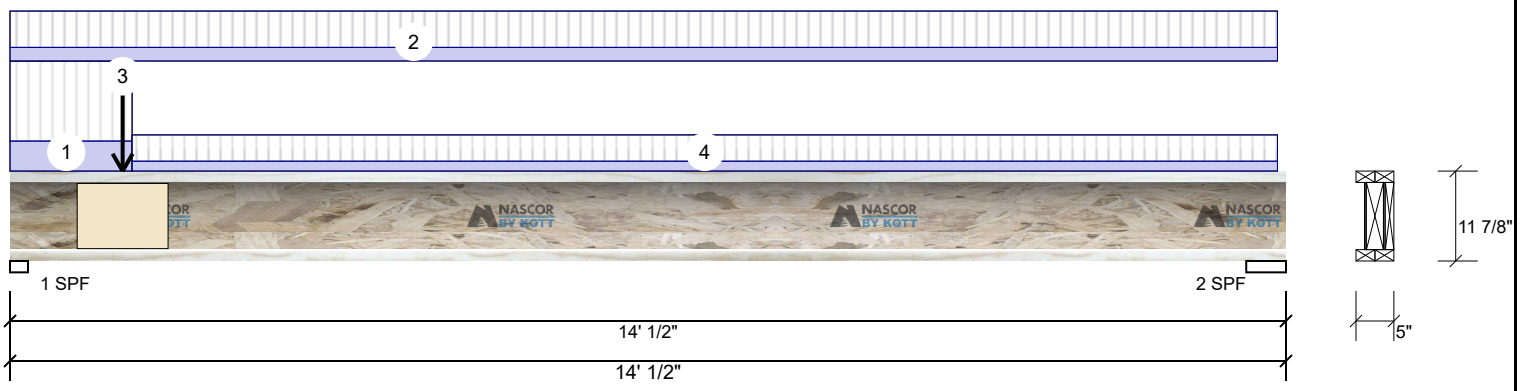
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

Page 1 of 1

F15-A NJH 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	605	226	0	0
2	341	128	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	36%	283 / 907	1190	L	1.25D+1.5L
2 - SPF	5.250"	19%	160 / 511	671	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2356 ft-lb	6'4 1/2"	10780 ft-lb	0.219 (22%)	1.25D+1.5L	L
Unbraced	2356 ft-lb	6'4 1/2"	2371 ft-lb	0.994 (99%)	1.25D+1.5L	L
Shear	1167 lb	1 5/8"	3620 lb	0.322 (32%)	1.25D+1.5L	L
Perm Defl in.	0.028 (L/5738)	6'8 9/16"	0.451 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.076 (L/2149)	6'8 9/16"	0.451 (L/360)	0.170 (17%)	L	L
TL Defl inch	0.104 (L/1564)	6'8 9/16"	0.677 (L/240)	0.150 (15%)	D+L	L

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Multiple plies must be fastened together as per manufacturer's details.
3 Top loads must be supported equally by all plies.
4 Top flange must be laterally braced at a maximum of 8'7" o.c.
5 Bottom flange braced at bearings.

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

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
Jun 05, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-2	(Span)2-10-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 13-11-6	(Span)1-3-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-14		Far Face	99 lb	266 lb	0 lb	0 lb	F12
4	Tie-In	1-4-2 to 13-11-6	(Span)0-11-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

Lumber

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

Manufacturer Info

Nascor by Kott

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

EWP Studio
Simpson Strong-Tie®
Component Solutions™

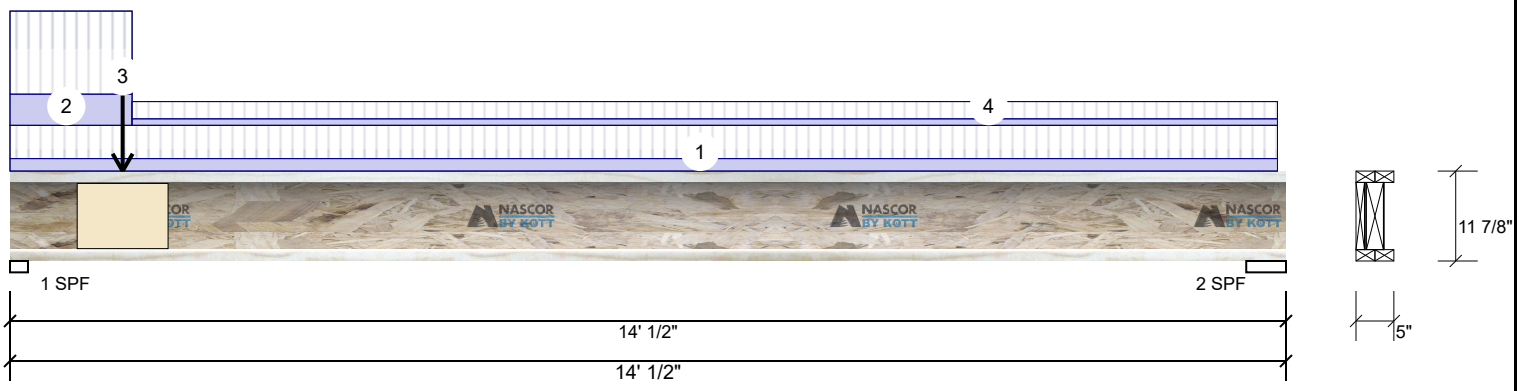
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

Page 1 of 1

F15-B NJH 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	595	223	0	0
2	275	103	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	35%	279 / 893	1171	L	1.25D+1.5L
2 - SPF	5.250"	15%	129 / 413	542	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1981 ft-lb	6'1"	10780 ft-lb	0.184 (18%)	1.25D+1.5L	L
Unbraced	1981 ft-lb	6'1"	1987 ft-lb	0.997 (100%)	1.25D+1.5L	L
Shear	1150 lb	1 5/8"	3620 lb	0.318 (32%)	1.25D+1.5L	L
Perm Defl in.	0.024 (L/6794)	6'7 9/16"	0.451 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.064 (L/2546)	6'7 9/16"	0.451 (L/360)	0.140 (14%)	L	L
TL Defl inch	0.088 (L/1852)	6'7 9/16"	0.677 (L/240)	0.130 (13%)	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
Jun 05, 2018

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Multiple plies must be fastened together as per manufacturer's details.
3 Top loads must be supported equally by all plies.
4 Top flange must be laterally braced at a maximum of 9'3" o.c.
5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 13-11-6	(Span)1-1-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-2	(Span)2-10-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-14		Near Face	120 lb	321 lb	0 lb	0 lb	F12
4	Tie-In	1-4-2 to 13-11-6	(Span)0-7-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Notes

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

Lumber

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

Manufacturer Info

Nascor by Kott

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

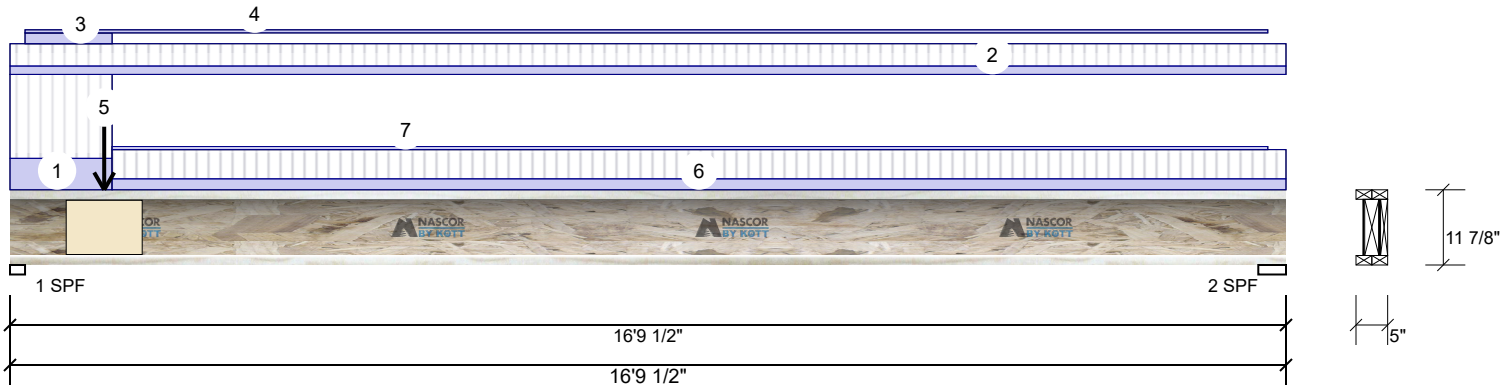
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

F16-A NJH 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	598	292	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"	38%	364 / 897	1262	L	1.25D+1.5L
2 - SPF	4.375"	18%	187 / 456	643	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2746 ft-lb	7'8 1/16"	10780 ft-lb	0.255 (25%)	1.25D+1.5L	L
Unbraced	2746 ft-lb	7'8 1/16"	2746 ft-lb	1.000 (100%)	1.25D+1.5L	L
Shear	1243 lb	1 5/8"	3620 lb	0.343 (34%)	1.25D+1.5L	L
Perm Defl in.	0.057 (L/3473)	8'1 1/4"	0.545 (L/360)	0.100 (10%)	D	Uniform
LL Defl inch	0.115 (L/1713)	8'1 3/16"	0.545 (L/360)	0.210 (21%)	L	L
TL Defl inch	0.171 (L/1147)	8'1 3/16"	0.818 (L/240)	0.210 (21%)	D+L	L

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

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

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

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jun 05, 2018

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Multiple plies must be fastened together as per manufacturer's details.
3 Top loads must be supported equally by all plies.
4 Top flange must be laterally braced at a maximum of 8' o.c.
5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 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	142 lb	295 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

Manufacturer Info

Nascor by Kott

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

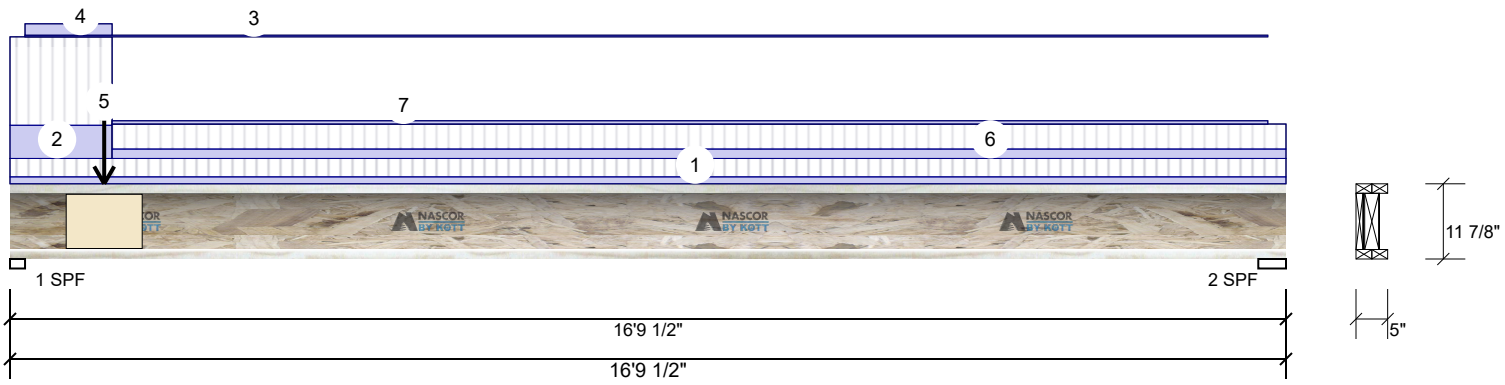
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

F16-B NJH 11.875" 2-Ply - PASSED

Level: Ground Floor



Member Information

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

Application:	Floor (Residential)
Design Method:	LSD
Building Code:	NBCC 2010 / OBC 2012
Load Sharing:	No
Deck:	Not Checked
Vibration:	Not Checked

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	581	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"	37%	353 / 871	1224	L	1.25D+1.5L
2 - SPF	4.375"	15%	152 / 375	527	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2319 ft-lb	7'4 7/8"	10780 ft-lb	0.215 (22%)	1.25D+1.5L	L
Unbraced	2319 ft-lb	7'4 7/8"	2331 ft-lb	0.995 (99%)	1.25D+1.5L	L
Shear	1206 lb	1 5/8"	3620 lb	0.333 (33%)	1.25D+1.5L	L
Perm Defl in.	0.048 (L/4131)	8' 5/16"	0.545 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.097 (L/2014)	8' 5/16"	0.545 (L/360)	0.180 (18%)	L	L
TL Defl inch	0.145 (L/1354)	8' 5/16"	0.818 (L/240)	0.180 (18%)	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
Jun 05, 2018

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Multiple plies must be fastened together as per manufacturer's details.
3 Top loads must be supported equally by all plies.
4 Top flange must be laterally braced at a maximum of 8'8" o.c.
5 Bottom flange braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 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	331 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

Manufacturer Info

Nascor by Kott

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

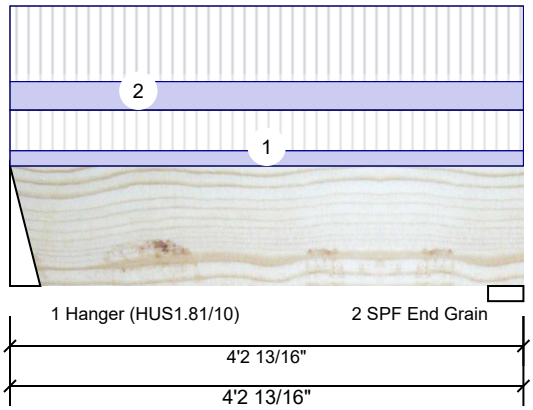
EWP Studio
Simpson Strong-Tie®
Component Solutions™

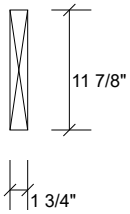
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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 Grain	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

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.

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 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

Manufacturer Info

Forex
APA: PR-L318

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

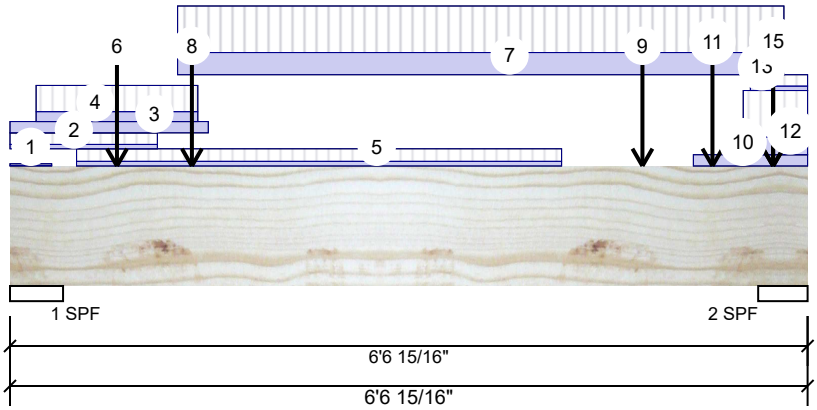
EWP Studio
Simpson Strong-Tie®
Component Solutions™

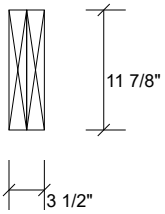
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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	2286	1121	0	0
2	2658	1243	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	43%	1401 / 3429	4830	L	1.25D+1.5L
2 - SPF	4.890"	53%	1554 / 3988	5541	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5426 ft-lb	3' 1/8"	34261 ft-lb	0.158 (16%)	1.25D+1.5L	L
Unbraced	5426 ft-lb	3' 1/8"	32665 ft-lb	0.166 (17%)	1.25D+1.5L	L
Shear	4593 lb	1'4 3/8"	11596 lb	0.396 (40%)	1.25D+1.5L	L
Perm Defl in.	0.011 (L/6200)	3'2 7/16"	0.195 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.024 (L/2886)	3'2 7/16"	0.195 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.036 (L/1969)	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.

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

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

Manufacturer Info

Forex
APA: PR-L318

KOTT

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

NASCOR

EWP Studio
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Client:
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Date: 5/30/2018
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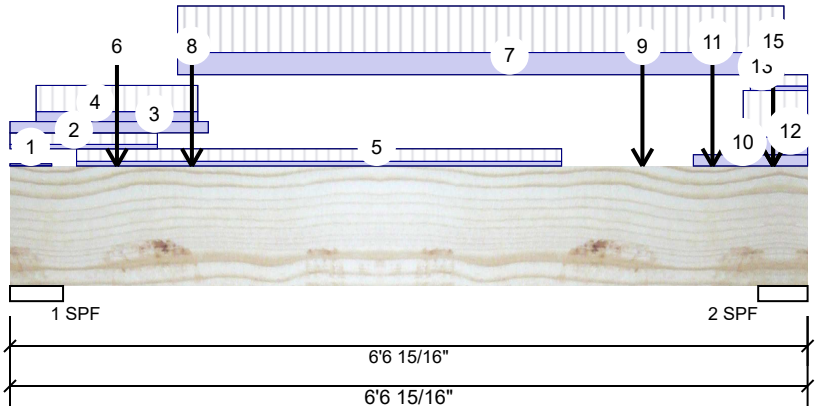
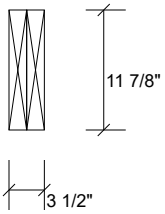
F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

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	125 lb	262 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.

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

Manufacturer Info

Forex
APA: PR-L318

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

EWP Studio
Simpson Strong-Tie®
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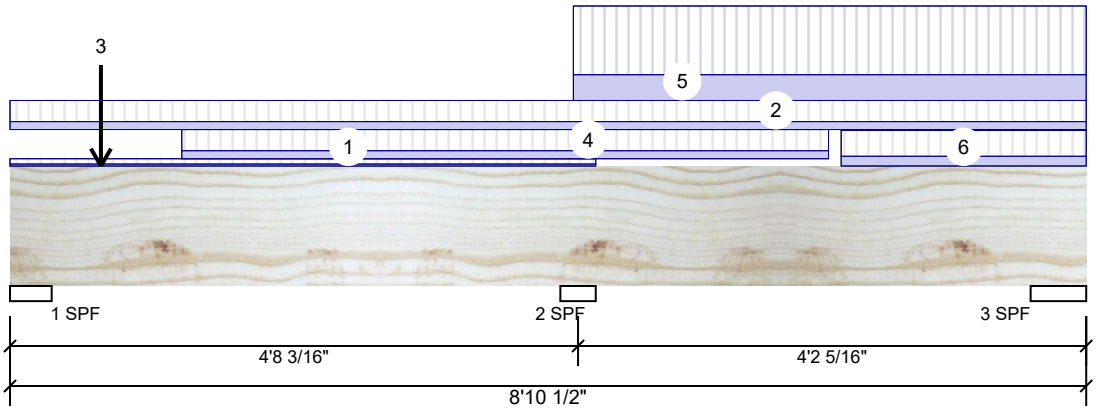
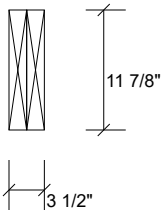
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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.

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

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

Manufacturer Info

Forex
APA: PR-L318

KOTT

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

NASCOR

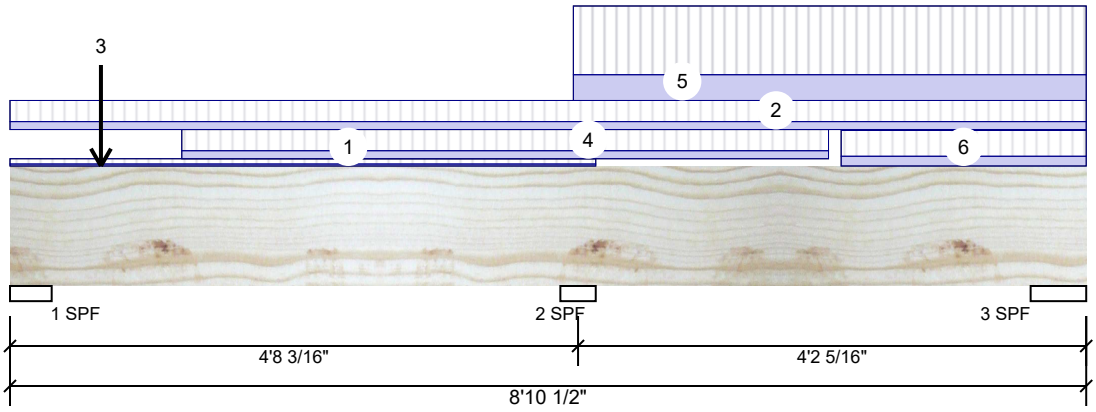
EWP Studio
Simpson Strong-Tie®
Component Solutions™

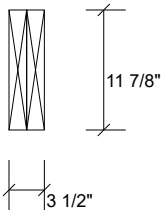
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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				

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

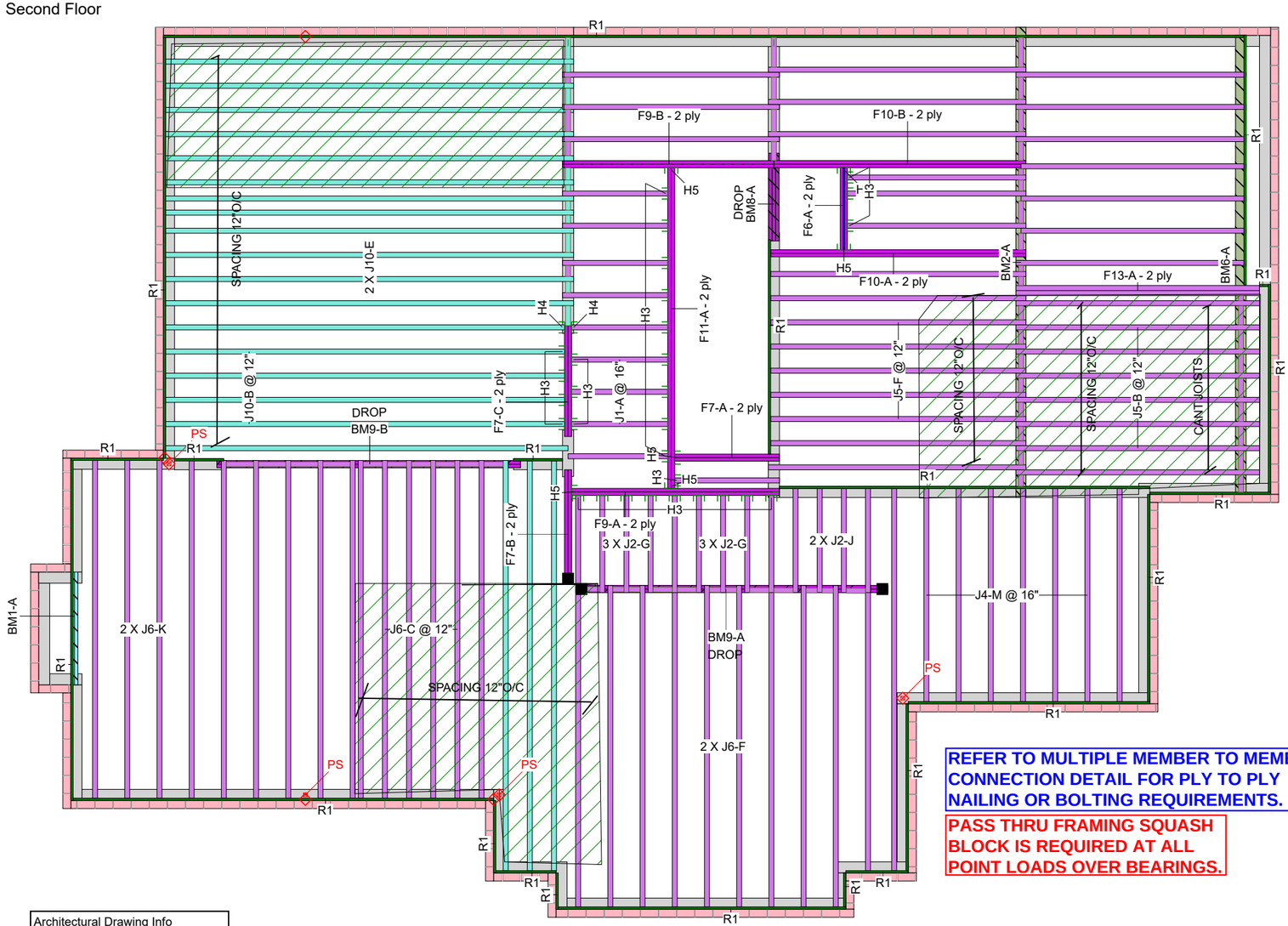
1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support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

Manufacturer Info

Forex
APA: PR-L318

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

Second Floor



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.

Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN,ON L4K 3P3
Project # 17-55
Model: BELLE 1
Date: MAY 22,2018

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
	NJ60H 11.875
	NJH 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
J10	NJ60H	2.5	11.875			21	18-0-0
J9	NJH	2.5	11.875			2	16-0-0
J6	NJH	2.5	11.875			23	14-0-0
J5	NJH	2.5	11.875			21	12-0-0
J4	NJH	2.5	11.875			17	10-0-0
J3	NJH	2.5	11.875			3	8-0-0
J2	NJH	2.5	11.875			19	6-0-0
J1	NJH	2.5	11.875			4	4-0-0
F13	NJH	2.5	11.875	1	2	2	12-0-0

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
BLK2	NJ60H	2.5	11.875	LinFt		Varies	6-0-0
BLK1	NJH	2.5	11.875	LinFt		Varies	39-0-0
BLK2	NJH	2.5	11.875	LinFt		Varies	3-0-0

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.

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
BELLE 1 EL -1

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

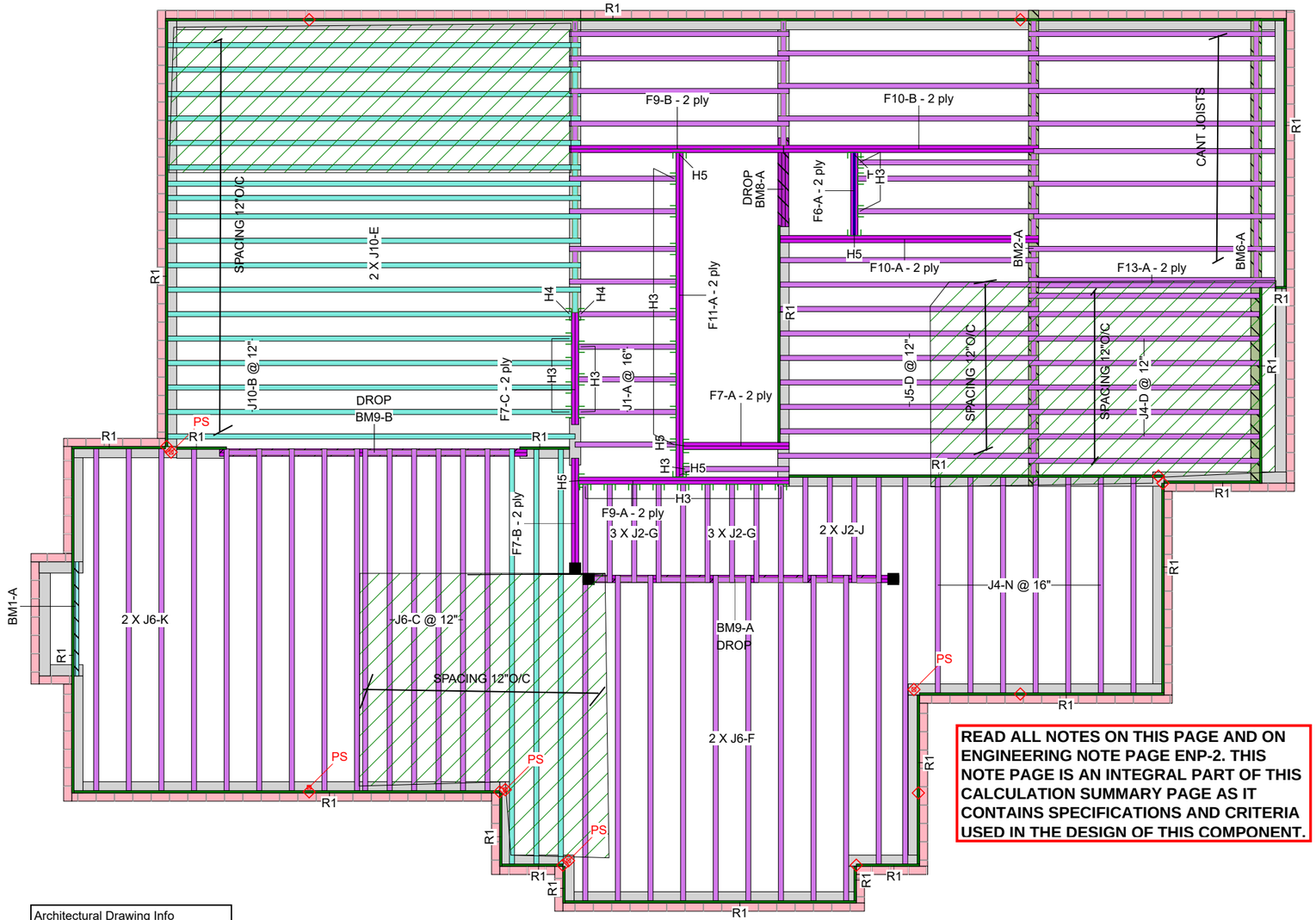
Second Floor

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"

Second Floor



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

Second Floor
LVL/LSL (Flush)

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
J10	NJ60H	2.5	11.875			21	18-0-0
J9	NJH	2.5	11.875			2	16-0-0
J6	NJH	2.5	11.875			23	14-0-0
J5	NJH	2.5	11.875			18	12-0-0
J4	NJH	2.5	11.875			22	10-0-0
J3	NJH	2.5	11.875			3	8-0-0
J2	NJH	2.5	11.875			19	6-0-0
J1	NJH	2.5	11.875			4	4-0-0
F13	NJH	2.5	11.875	1	2	2	12-0-0

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	NJ60H	2.5	11.875	LinFt		Varies	5-0-0
BLK1	NJH	2.5	11.875	LinFt		Varies	44-0-0

Hanger

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	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.

NASCOR

Layout Name
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"

Architectural Drawing Info

JARDIN DESIGN GROUP
64 JARDIN DR, SUITE 3A
VAUGHAN,ON L4K 3P3
Project # 17-55
Model: BELLE 1
Date: MAY 22,2018

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
	NJ60H 11.875
	NJH 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.

LICENSED PROFESSIONAL ENGINEER
N.A. EL-MASRI
PROVINCE OF ONTARIO
Jun 05, 2018
NE0618-031

EWP Studio
Simpson Strong-Tie®
Component Solutions™

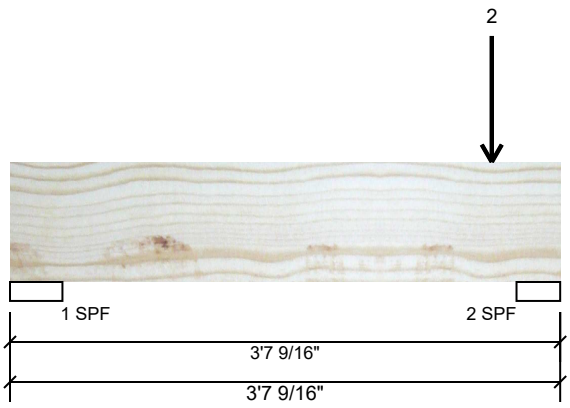
EWP Studio
Simpson Strong-Tie®
Component Solutions™

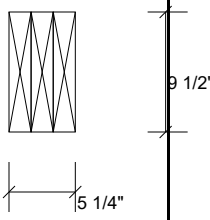
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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

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

ID	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

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

Manufacturer Info

Forex
APA: PR-L318

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

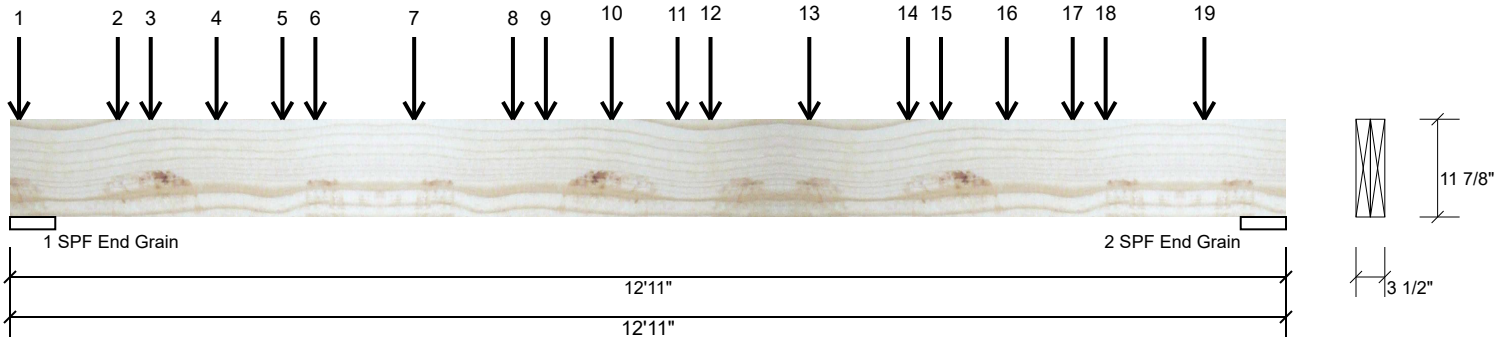
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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	2304	969	0	0
2	2034	826	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	5.500"	33%	1211 / 3456	4667	L	1.25D+1.5L
2 - SPF End Grain	5.500"	29%	1033 / 3051	4084	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	12457 ft-lb	6'9 1/8"	34261 ft-lb	0.364 (36%)	1.25D+1.5L	L
Unbraced	12457 ft-lb	6'9 1/8"	27420 ft-lb	0.454 (45%)	1.25D+1.5L	L
Shear	3836 lb	1'4 5/8"	11596 lb	0.331 (33%)	1.25D+1.5L	L
Perm Defl in.	0.075 (L/1945)	6'5 5/8"	0.404 (L/360)	0.190 (19%)	D	Uniform
LL Defl inch	0.185 (L/788)	6'5 11/16"	0.404 (L/360)	0.460 (46%)	L	L
TL Defl inch	0.260 (L/561)	6'5 11/16"	0.606 (L/240)	0.430 (43%)	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
Jun 05, 2018

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-1-2		Top	172 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	1-5-2		Top	137 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	2-9-2		Top	129 lb	343 lb	0 lb	0 lb	J6

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

Manufacturer Info

Forex
APA: PR-L318

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

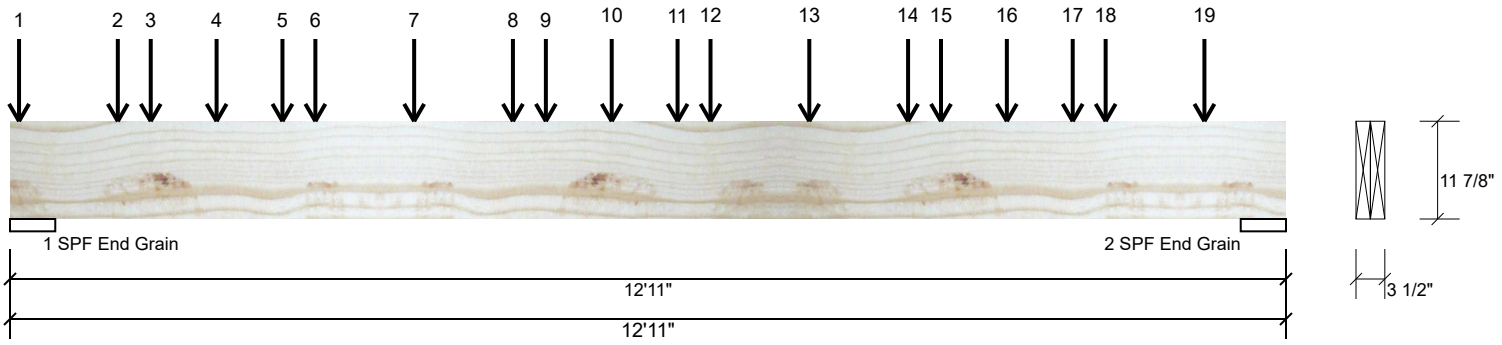
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

BM9-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
6	Point	3-1-2		Top	30 lb	79 lb	0 lb	0 lb	J2
7	Point	4-1-2		Top	162 lb	432 lb	0 lb	0 lb	J2 J6
8	Point	5-1-2		Top	30 lb	79 lb	0 lb	0 lb	J2
9	Point	5-5-2		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	6-9-2		Top	129 lb	343 lb	0 lb	0 lb	J6
12	Point	7-1-2		Top	30 lb	79 lb	0 lb	0 lb	J2
13	Point	8-1-2		Top	162 lb	432 lb	0 lb	0 lb	J2 J6
14	Point	9-1-2		Top	30 lb	81 lb	0 lb	0 lb	J2
15	Point	9-5-2		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	10-9-2		Top	114 lb	303 lb	0 lb	0 lb	J6
18	Point	11-1-2		Top	30 lb	81 lb	0 lb	0 lb	J2
19	Point	12-1-2		Top	139 lb	370 lb	0 lb	0 lb	J2 J5
	Self Weight				10 PLF				

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

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Notes

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Lumber

1. Dry service conditions, unless noted otherwise
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Handling & Installation

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

Manufacturer Info

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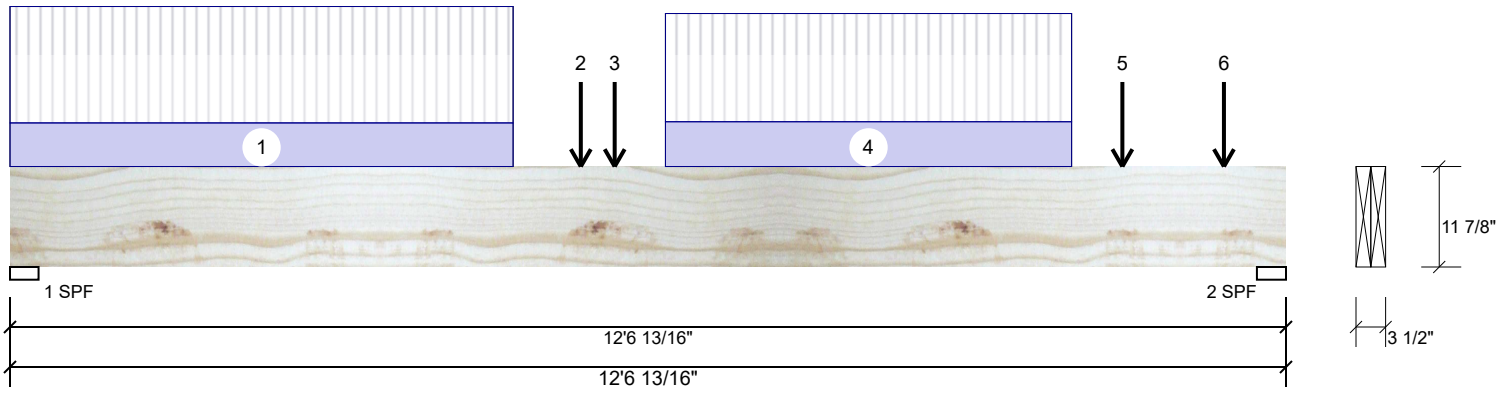
Job Name: BELLE 1 EL -1
Project #:

BM9-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	1830	767	0	0
2	1793	815	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.375"	51%	959 / 2745	3704	L	1.25D+1.5L
2 - SPF	3.438"	50%	1019 / 2690	3709	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	10759 ft-lb	5'11 7/16"	34261 ft-lb	0.314 (31%)	1.25D+1.5L	L
Unbraced	10759 ft-lb	5'11 7/16"	27423 ft-lb	0.392 (39%)	1.25D+1.5L	L
Shear	3269 lb	11'4 1/4"	11596 lb	0.282 (28%)	1.25D+1.5L	L
Perm Defl in.	0.068 (L/2143)	6'3 7/16"	0.404 (L/360)	0.170 (17%)	D	Uniform
LL Defl inch	0.157 (L/927)	6'3"	0.404 (L/360)	0.390 (39%)	L	L
TL Defl inch	0.225 (L/647)	6'3 1/8"	0.606 (L/240)	0.370 (37%)	D+L	L

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

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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
Jun 05, 2018

Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 4-11-7		Top	112 PLF	299 PLF	0 PLF	0 PLF	
2	Point	5-7-7		Top	87 lb	232 lb	0 lb	0 lb	J6
3	Point	5-11-7		Top	78 lb	185 lb	0 lb	0 lb	J6
4	Part. Uniform	6-5-7 to 10-5-7		Top	115 PLF	278 PLF	0 PLF	0 PLF	
5	Point	10-11-7		Top	126 lb	278 lb	0 lb	0 lb	J6

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

Manufacturer Info

Forex
APA: PR-L318

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

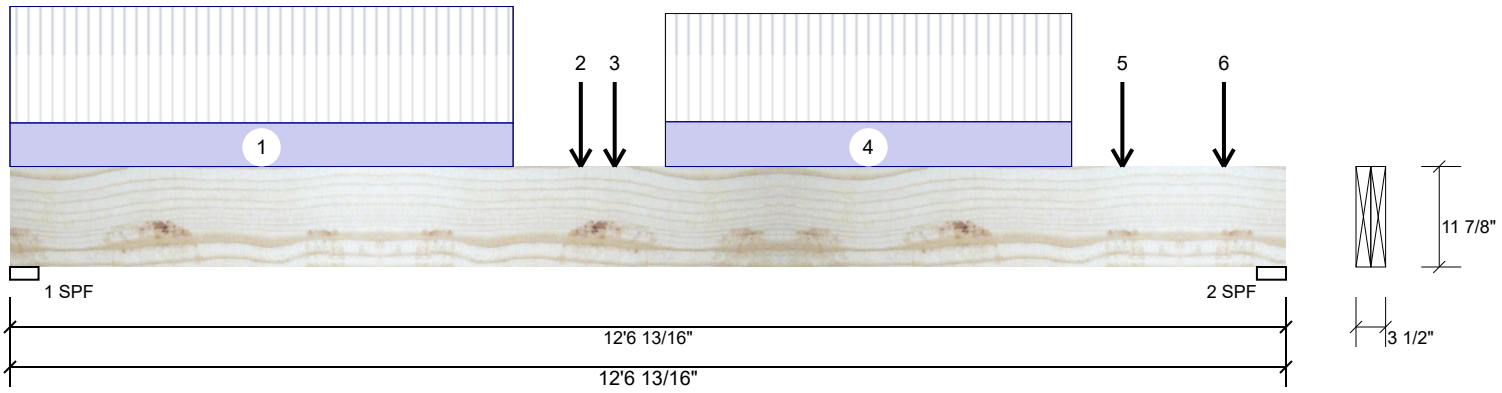
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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	11-11-7		Top	157 lb	335 lb	0 lb	0 lb	J10
	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.

Notes

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Lumber

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

Handling & Installation

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Address:

Date: 5/30/2018
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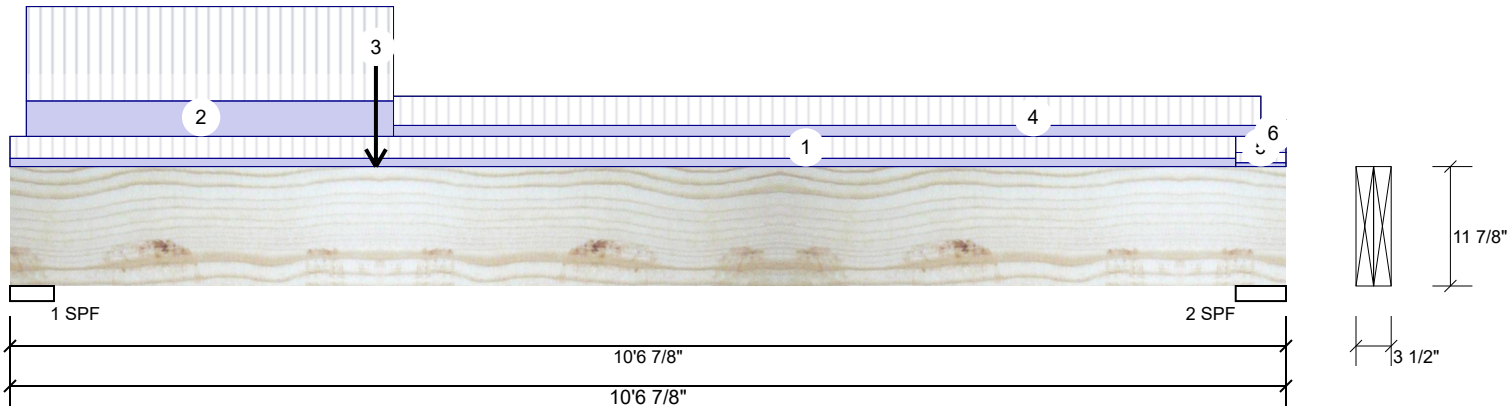
Project #:

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

Design Notes

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

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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
Jun 05, 2018

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

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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

Manufacturer Info

Forex
APA: PR-L318

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

EWP Studio
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Client:
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Date: 5/30/2018
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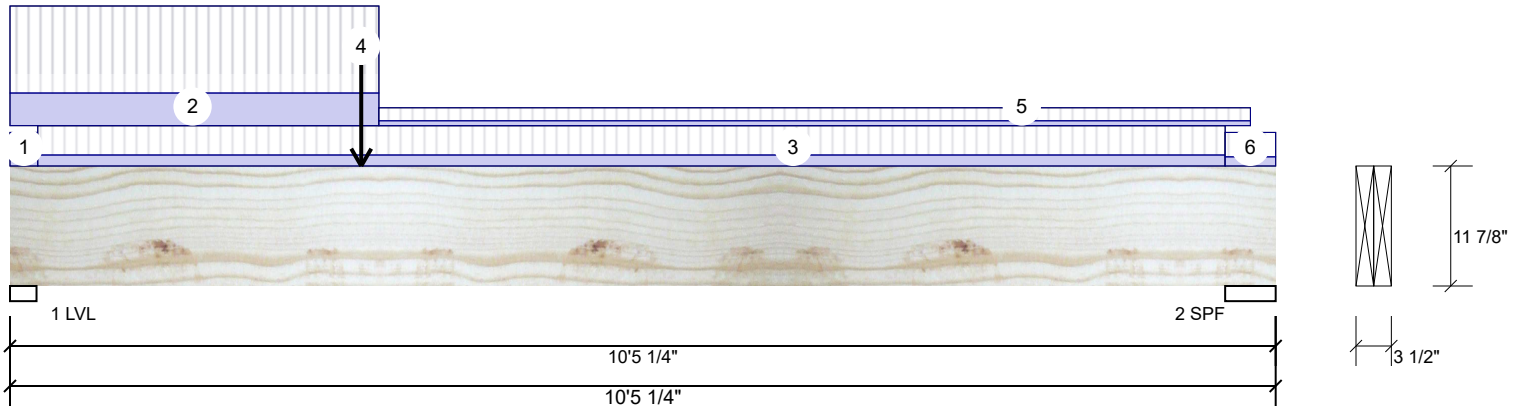
F10-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

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

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

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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
Jun 05, 2018

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

Manufacturer Info

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APA: PR-L318

KOTT

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NASCOR

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Date: 5/30/2018
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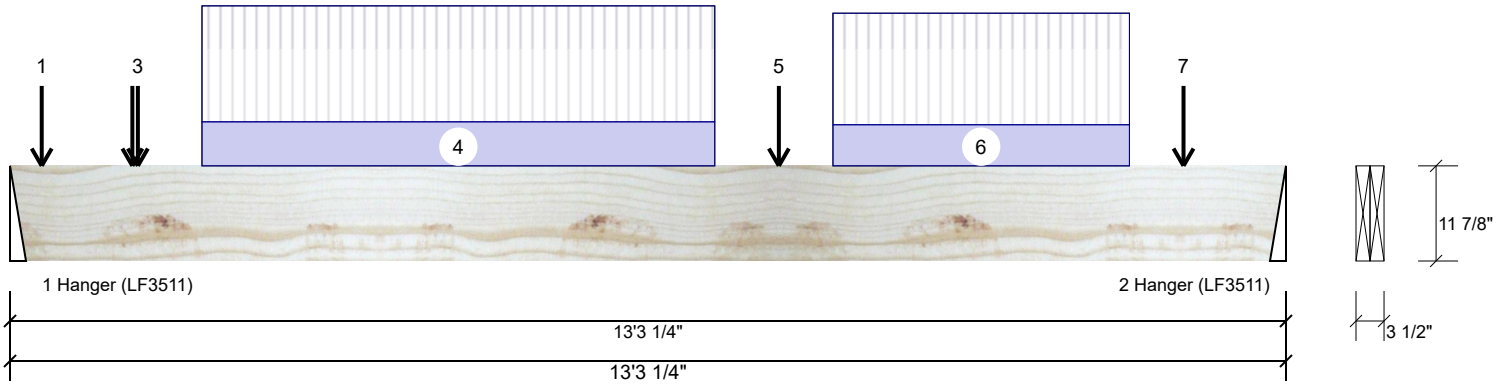
F11-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

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
PROVINCE OF ONTARIO
Jun 05, 2018

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

Manufacturer Info

Forex
APA: PR-L318

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

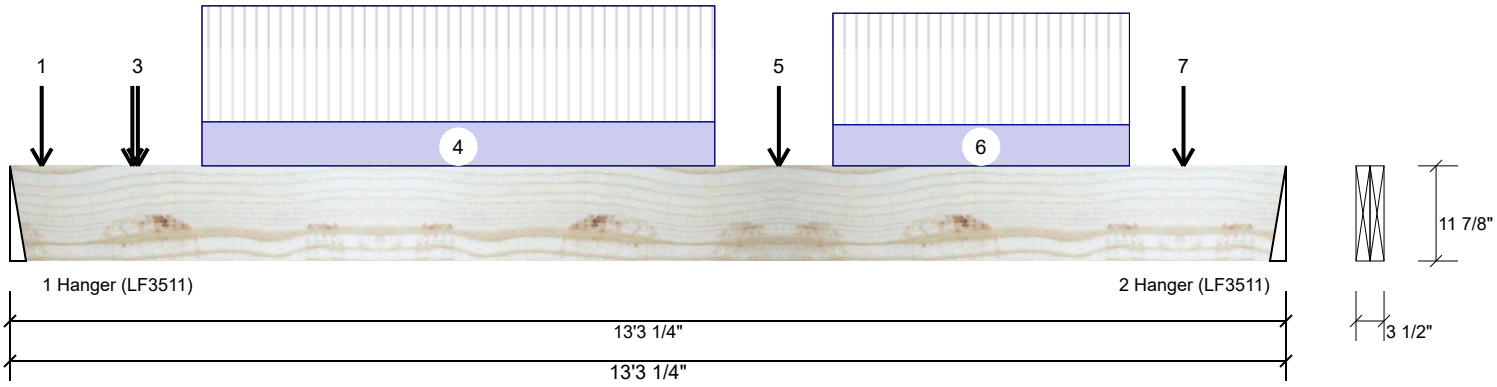
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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				

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

Manufacturer Info

Forex
APA: PR-L318

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

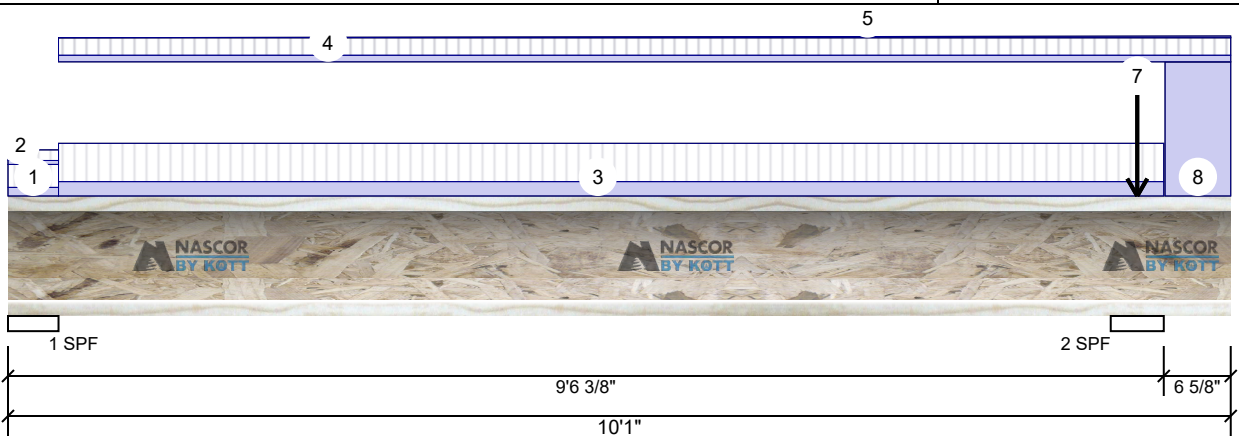
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

F13-A NJH 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	153	56	0	0
2	165	162	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.000"	8%	70 / 229	300	L_	1.25D+1.5L
2 - SPF	5.250"	12%	203 / 248	450	LL	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-29 ft-lb	9'6 3/8"	7007 ft-lb	0.004 (0%)	1.4D	Uniform
Unbraced	-29 ft-lb	9'6 3/8"	7003 ft-lb	0.004 (0%)	1.4D	Uniform
Pos Moment	628 ft-lb	4'8 5/8"	10780 ft-lb	0.058 (6%)	1.25D+1.5L	L_
Unbraced	628 ft-lb	4'8 5/8"	2277 ft-lb	0.276 (28%)	1.25D+1.5L	L_
Shear	295 lb	9'1 7/8"	3620 lb	0.082 (8%)	1.25D+1.5L	LL
Perm Defl in.	0.004 (L/29158)	4'8 5/8"	0.293 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.010 (L/10504)	4'9 1/16"	0.293 (L/360)	0.030 (3%)	L	L_
TL Defl inch	0.014 (L/7722)	4'8 15/16"	0.440 (L/240)	0.030 (3%)	D+L	L_
LL Cant	-0.001 (2L/9033)	Rt Cant	0.200 (2L/480)	0.007 (1%)	L	L_
TL Cant	-0.002 (2L/7570)	Rt Cant	0.300 (2L/360)	0.006 (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 Girders are designed to be supported on the bottom edge only.
2 Multiple plies must be fastened together as per manufacturer's details.
3 Top loads must be supported equally by all plies.
4 Top flange unbraced.
5 Bottom flange braced at 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. 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

Manufacturer Info

Nascor by Kott

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

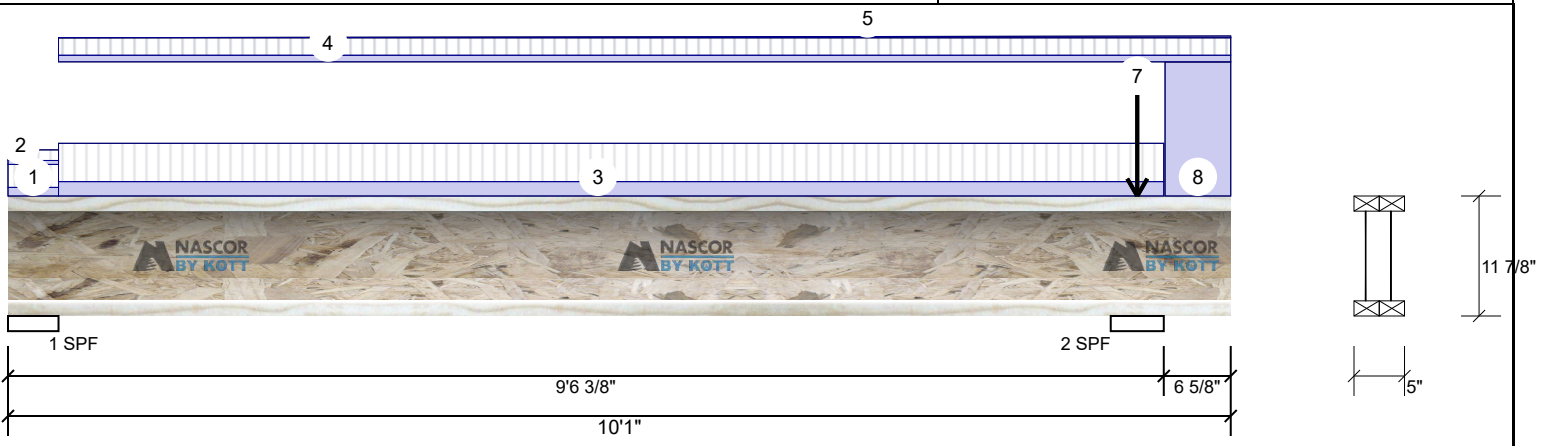
EWP Studio
Simpson Strong-Tie®
Component Solutions™

Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

F13-A NJH 11.875" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-0	(Span)0-8-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-5-0	(Span)0-3-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-5-0 to 9-6-6	(Span)1-1-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	0-5-0 to 10-1-0	(Span)0-6-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tapered Start	0-5-0		Top	0 PLF	0 PLF	0 PLF	0 PLF	
	End	10-1-0			1 PLF	0 PLF	0 PLF	0 PLF	
6	Point	9-3-12		Top	14 lb	0 lb	0 lb	0 lb	Wall Self Weight
7	Point	9-3-12		Top	37 lb	0 lb	0 lb	0 lb	Wall Self Weight
8	Part. Uniform	9-6-8 to 10-1-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight

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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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

Manufacturer Info

Nascor by Kott

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

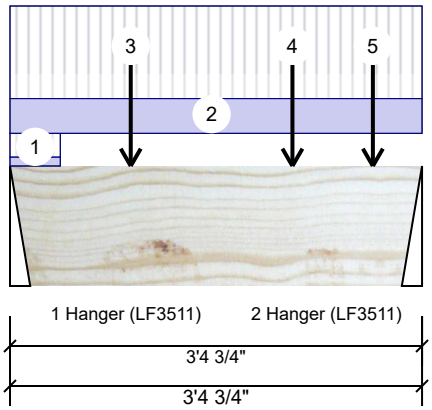
EWP Studio
Simpson Strong-Tie®
Component Solutions™

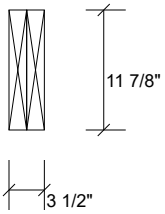
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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.

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

Manufacturer Info

Forex
APA: PR-L318

KOTT

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

NASCOR

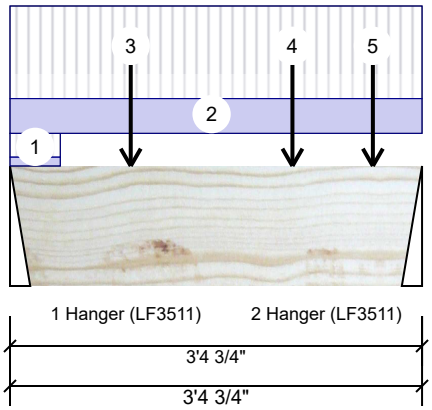
EWP Studio
Simpson Strong-Tie®
Component Solutions™

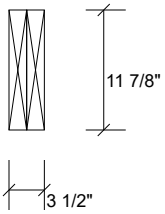
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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				

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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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
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APA: PR-L318

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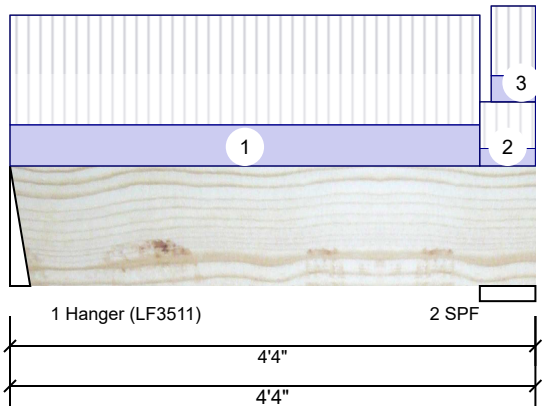
EWP Studio
Simpson Strong-Tie®
Component Solutions™

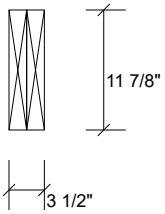
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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.

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

Manufacturer Info

Forex
APA: PR-L318

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Client:
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Address:

Date: 5/30/2018
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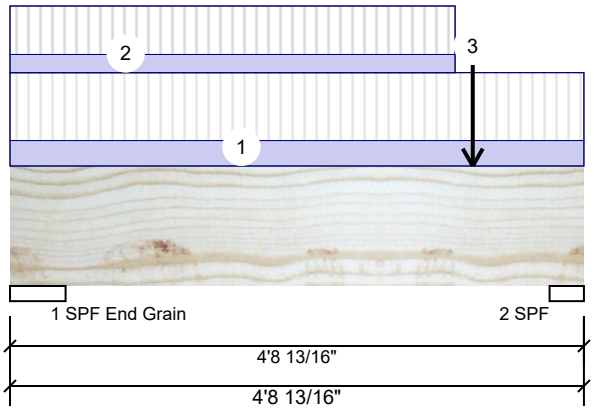
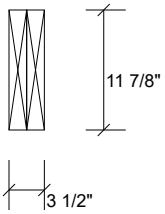
Project #:

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.

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

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

Design Notes

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

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

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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

Manufacturer Info

Forex
APA: PR-L318

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

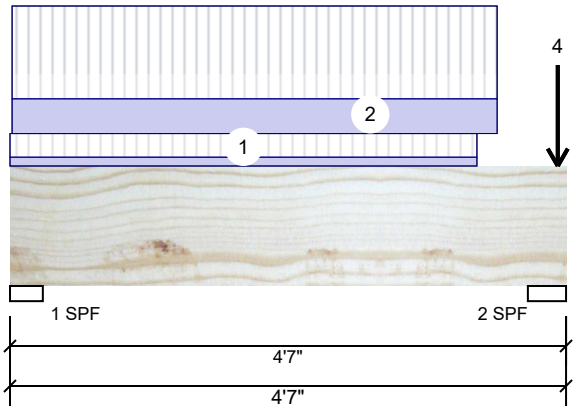
EWP Studio
Simpson Strong-Tie® Component Solutions™

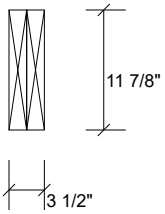
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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.

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

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

Design Notes

1 Girders are designed to be supported on the bottom edge only.
2 Multiple plies must be fastened together as per manufacturer's details.
3 Top 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

Manufacturer Info

Forex
APA: PR-L318

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

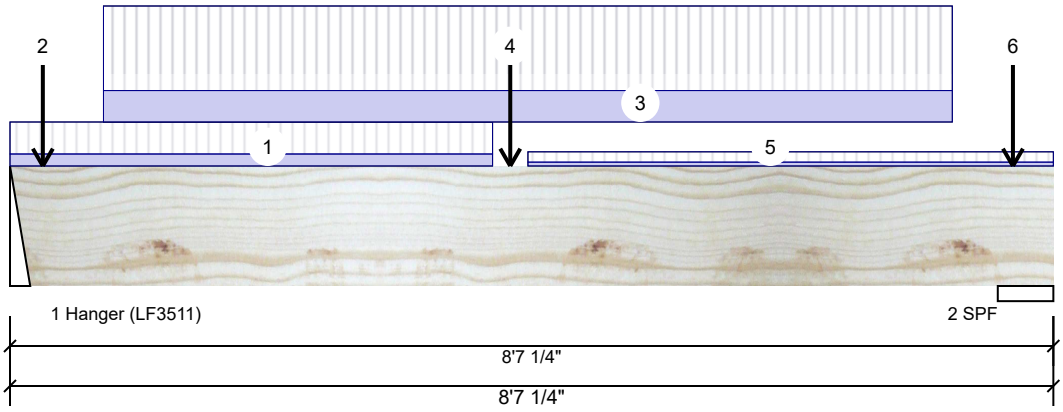
EWP Studio
Simpson Strong-Tie®
Component Solutions™

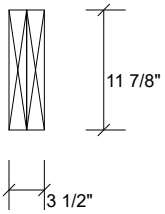
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
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.

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

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

Manufacturer Info

Forex
APA: PR-L318

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

EWP Studio
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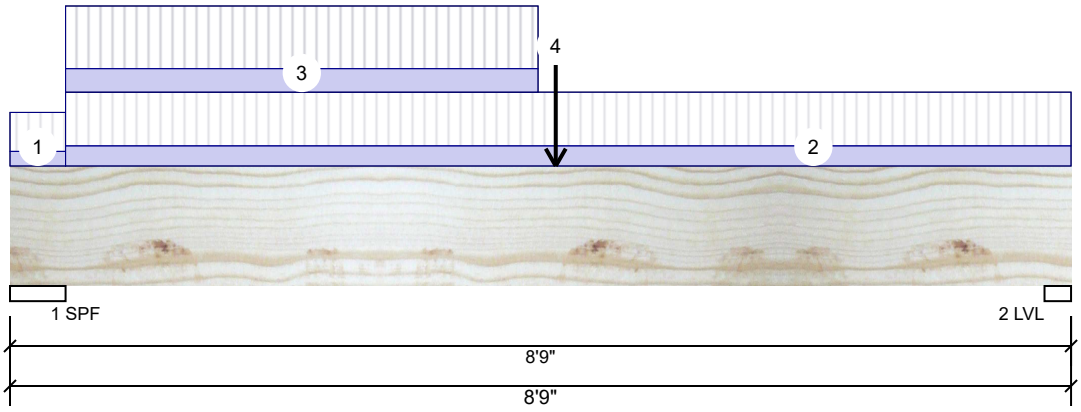
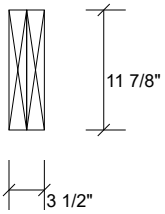
Client:
Project:
Address:

Date: 5/30/2018
Designer: S B
Job Name: BELLE 1 EL -1
Project #:

F9-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	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

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

Design Notes

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

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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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

Manufacturer Info

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