Engineering Note Page (ENP-2)

REVISION 2018-10-17

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 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 transfer blocks. Structural elements such as walls, posts, connectors, and transfer 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 floor joists is to be carried out in accordance with the current edition of the manufacturer's literature available at http://www.kottgroup.com.

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

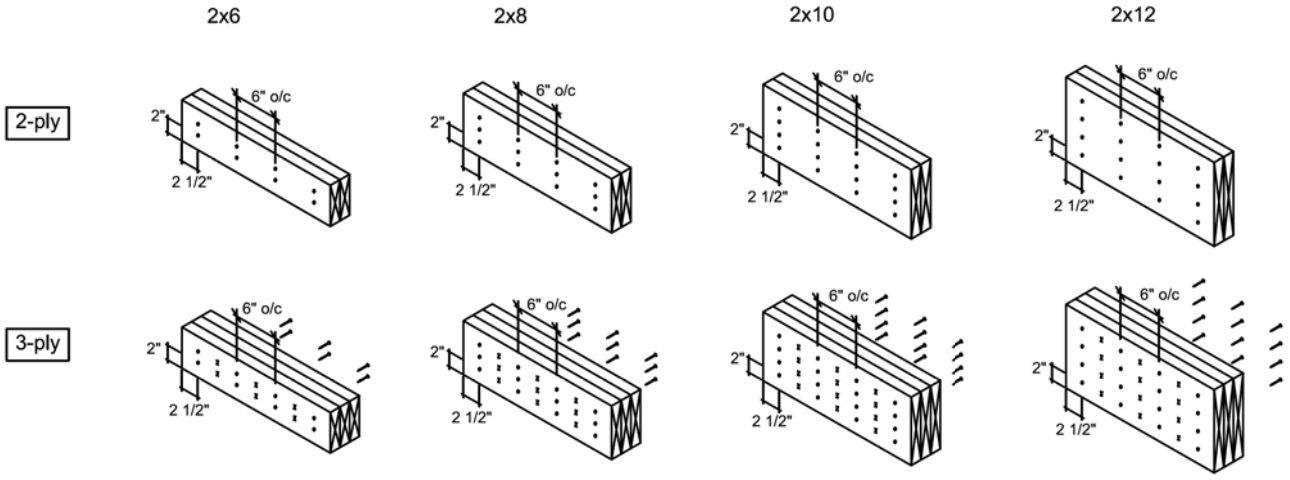
1. The building component used in construction must be the same as indicated on the drawings.
2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
3. Members consisting of multiple plies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

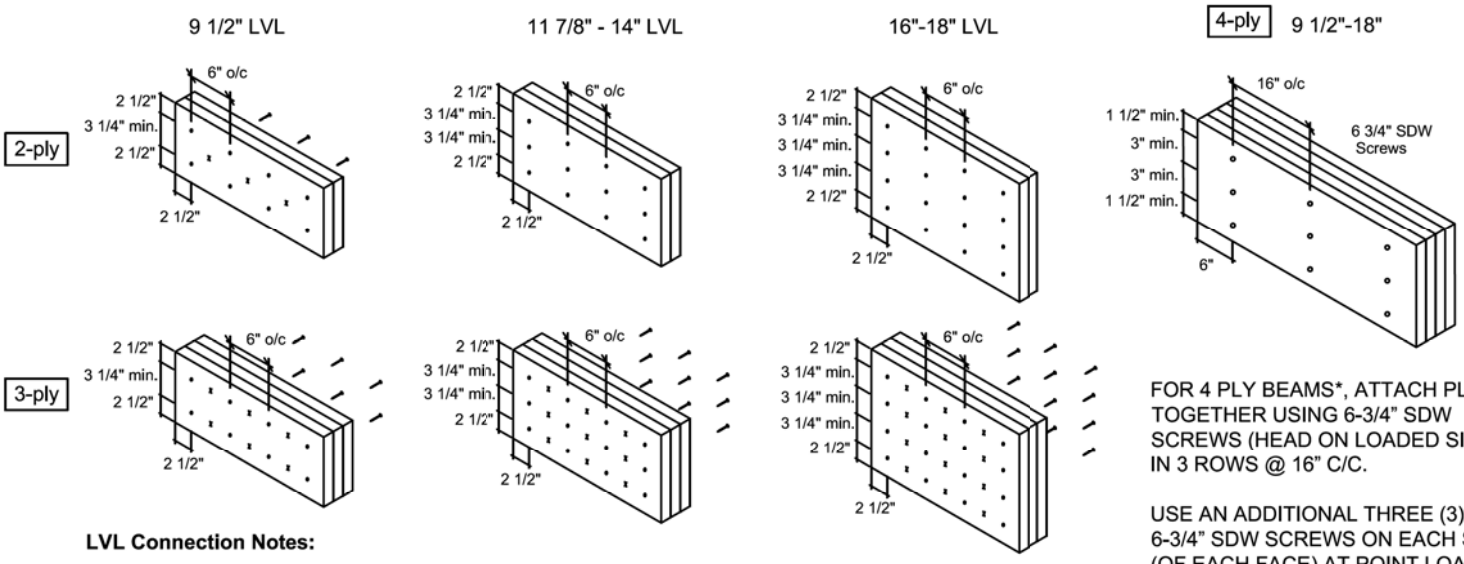
Conventional Connections



Conventional Connection Notes:

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

LVL Connections



LVL Connection Notes:

-LVL ply width is 1-3/4"
-Nails to be 3 1/2" common wire nails.
-Nails to be located 2 1/2" min. from the top and bottom of the member. Start all nails 2 1/2" min. from ends.
-Minimum 3 1/4" spacing between rows.
-Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail driven from the opposite side.
- Head of all specified screws must be on the loaded side.

FOR 4 PLY BEAMS*, ATTACH PLIES TOGETHER USING 6-3/4" SDW SCREWS (HEAD ON LOADED SIDE) IN 3 ROWS @ 16" C/C.

USE AN ADDITIONAL THREE (3) 6-3/4" SDW SCREWS ON EACH SIDE (OF EACH FACE) AT POINT LOAD LOCATIONS @ 1/2 SPACING, WHERE APPLICABLE.

**UNLESS NOTED OTHERWISE ON LAYOUT OR CALCULATION SHEET OF BEAM IN THE FLOOR PACKAGE*

Multiple Member Connections

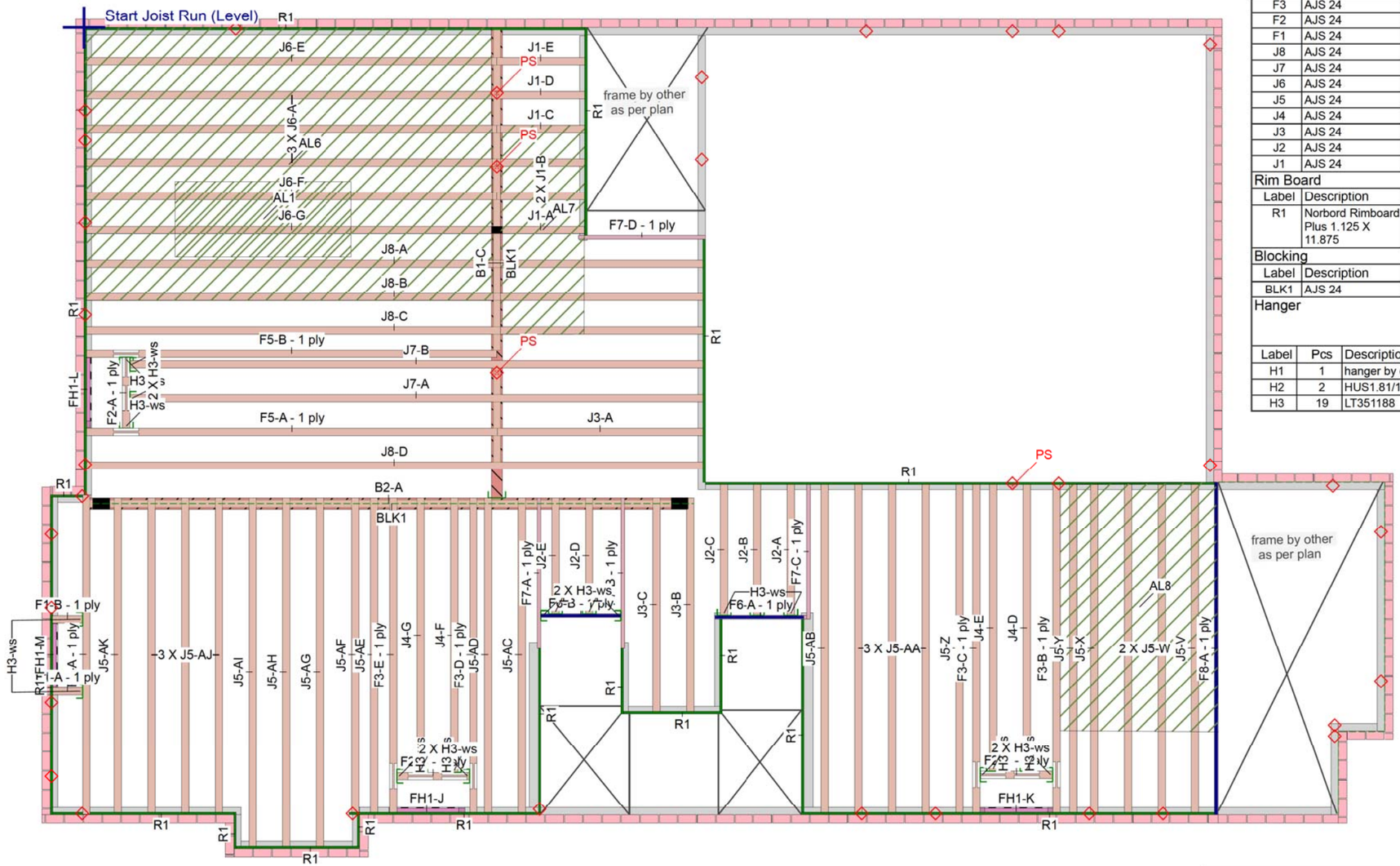
All connections are for uniformly distributed loads.

For multi-ply connections of I-joists, refer to Manufacturer's Installation Guide

Last revised: February 19, 2021

KOTT Inc.
3228 Moodie Drive
Ottawa, ON
K2H 7V1
613-838-2775

Ground Floor



Ground Floor
LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F8	Forex 2.0E-3000Fb LVL	1.75	11.875			1	14-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	11.875			4	6-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875			2	4-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F5	AJS 24	3.5	11.875			2	18-0-0
F3	AJS 24	3.5	11.875			5	14-0-0
F2	AJS 24	3.5	11.875			3	4-0-0
F1	AJS 24	3.5	11.875			2	2-0-0
J8	AJS 24	3.5	11.875			4	26-0-0
J7	AJS 24	3.5	11.875			2	24-0-0
J6	AJS 24	3.5	11.875			6	18-0-0
J5	AJS 24	3.5	11.875			21	14-0-0
J4	AJS 24	3.5	11.875			4	12-0-0
J3	AJS 24	3.5	11.875			3	10-0-0
J2	AJS 24	3.5	11.875			5	6-0-0
J1	AJS 24	3.5	11.875			6	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			13	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 24	3.5	11.875	LinFt		Varies	32-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	1	hanger by other				
H2	2	HUS1.81/10			30 10dx1 1/2	10 16d
H3	19	LT351188			4 10d	2 10dx1 1/2

JOB INFORMATION

Builder
ROUNDEL HOMES INC

Project

Shipping
RICHMOND HILL, ON

Sales Rep
RALPH MIRIGELLO

Designer
K R

Plotted
June 14, 2021

Layout Name
PT38-2-1

Job Path
C:\Users\kriopel\AppData\Local\iStruct\JOBS

DESIGN CRITERIA

Ground Floor

Design Method	LSD (Canada)
Building Code	NBCC 2015 / OBC 2012

Floor

Loads

Live	40
Dead	15

Decking

Decking	OSB
Thickness	3/4"
Fastener	Nailed & Glued

Vibration

CCMC References
Boise - 12472-R , 12787-R
LP - 12412-R
Forex - 14056-R

Kott Inc.
3228 Moodie Dr, Ottawa
14 Anderson Blvd, Uxbridge Ontario
613-838-2775 /
905-642-4400

Hatch Area represents where additional load has been applied. (e.g. 5 psf for ceramic tile)

AJS140 I-Joists can be substituted with LP20 I-Joists for 9.5" and 11.875" depths shown on this layout.

1. All blocking to be cut from 12' joists
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
6. Beams identified as "B" are dropped and supplied by others
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
8. Load transfer blocks to be installed under all point loads
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
10. Hangers and Fasteners to be installed as per manufacturer
11. Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.

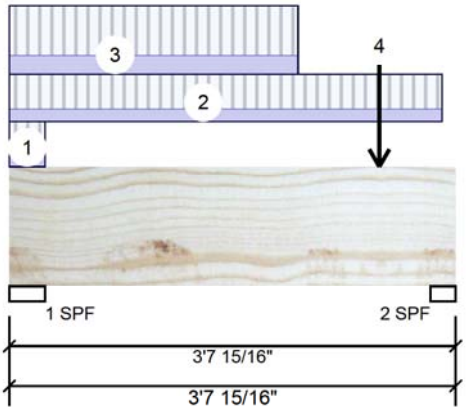
Legend

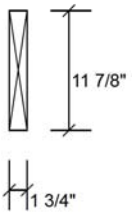
WS	Web Stiffener
-ws	In Hanger Label Denotes Web Stiffener
PS	Point Load Support
◇	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 11.875
	AJS 24 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 11.875

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

F6-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 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	379	151	0	0
2	Vertical	303	122	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	20%	189 / 569	758	L	1.25D+1.5L
2 - SPF	2.500"	Vert	23%	153 / 455	607	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	502 ft-lb	1'10"	17130 ft-lb	0.029 (3%)	1.25D+1.5L	L
Unbraced	502 ft-lb	1'10"	17130 ft-lb	0.029 (3%)	1.25D+1.5L	L
Shear	659 lb	2'5 9/16"	5798 lb	0.114 (11%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/41249)	1'10 3/16"	0.110 (L/360)	0.009 (1%)	D	Uniform
LL Defl inch	0.002 (L/16505)	1'10 3/16"	0.082 (L/480)	0.029 (3%)	L	L
TL Defl inch	0.003 (L/11788)	1'10 3/16"	0.164 (L/240)	0.020 (2%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Girders are designed to be supported on the bottom edge only.
3 Top must be continuously laterally braced.
4 Bottom must have sheathing attached or be continuously braced.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-3-8	1-10-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 3-6-10		Top	30 PLF	80 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 2-4-7		Far Face	43 PLF	115 PLF	0 PLF	0 PLF	
4	Point	3-0-7		Far Face	39 lb	104 lb	0 lb	0 lb	J2
	Self Weight				5 PLF				

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 3/25/2024

Manufacturer Info

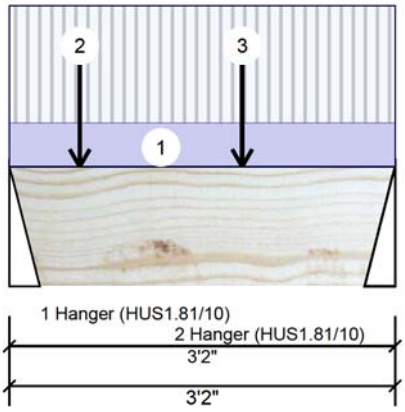
Forex
APA: PR-L318

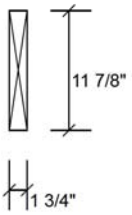
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

F6-B 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 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	245	99	0	0
2	Vertical	210	86	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	13%	124 / 367	491	L	1.25D+1.5L
2 - Hanger	3.000"	Vert	11%	108 / 314	422	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	325 ft-lb	1'10 15/16"	17130 ft-lb	0.019 (2%)	1.25D+1.5L	L
Unbraced	325 ft-lb	1'10 15/16"	17130 ft-lb	0.019 (2%)	1.25D+1.5L	L
Shear	294 lb	1'2 7/8"	5798 lb	0.051 (5%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/62391)	1'9"	0.093 (L/360)	0.006 (1%)	D	Uniform
LL Defl inch	0.001 (L/25147)	1'9 3/16"	0.070 (L/480)	0.019 (2%)	L	L
TL Defl inch	0.002 (L/17923)	1'9 3/16"	0.140 (L/240)	0.013 (1%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Fill all hanger nailing holes.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be continuously laterally braced.
5 Bottom must have sheathing attached or be continuously braced.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 3-2-0		Top	30 PLF	80 PLF	0 PLF	0 PLF	
2	Point	0-6-15		Far Face	32 lb	86 lb	0 lb	0 lb	J2
3	Point	1-10-15		Far Face	43 lb	115 lb	0 lb	0 lb	J2
	Self Weight				5 PLF				

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 3/25/2024

Manufacturer Info

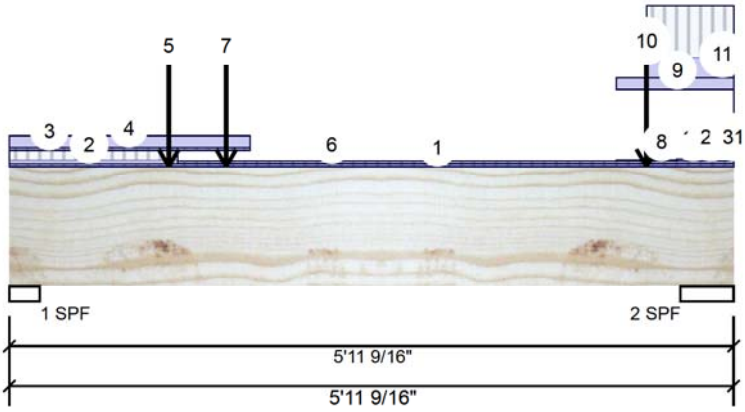
Forex
APA: PR-L318

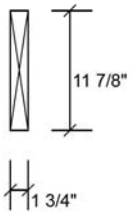
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

F7-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 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	527	379	0	0
2	Vertical	796	444	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.000"	Vert	39%	474 / 791	1264	L	1.25D+1.5L
2 - SPF	5.250"	Vert	31%	555 / 1194	1749	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1335 ft-lb	1'9 3/8"	17130 ft-lb	0.078 (8%)	1.25D+1.5L	L
Unbraced	1335 ft-lb	1'9 3/8"	17130 ft-lb	0.078 (8%)	1.25D+1.5L	L
Shear	910 lb	1'2 7/8"	5798 lb	0.157 (16%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/11860)	2'5 3/16"	0.180 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.009 (L/7445)	2'5 7/8"	0.135 (L/480)	0.064 (6%)	L	L
TL Defl inch	0.014 (L/4574)	2'5 9/16"	0.270 (L/240)	0.052 (5%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
2 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be continuously laterally braced.
5 Bottom must be laterally braced at a maximum of 4'7 7/8" o.c.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 5-11-9	0-4-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-9	1-7-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tapered Start	0-0-0		Top	5 PLF	14 PLF	0 PLF	0 PLF	
	End	1-11-11			5 PLF	14 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 1-11-11		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 3/25/2024

Manufacturer Info

Forex
APA: PR-L318

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

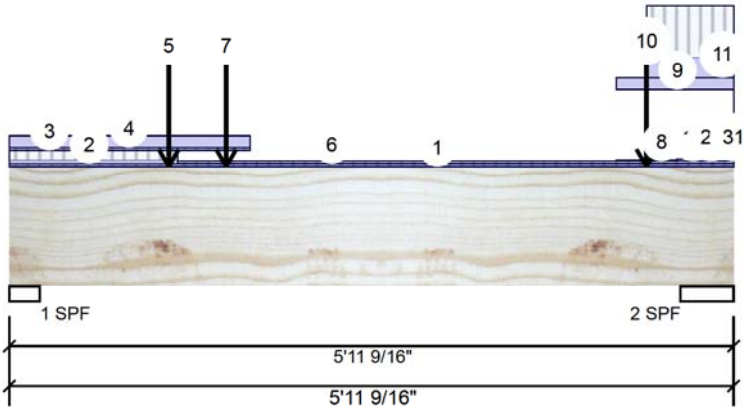
iStructDesign

Client: ROUNDEL HOMES INC
Project: PINETREE 2 ELEV 1
Address: RICHMOND HILL, ON

Date: 6/14/2021
Input by: K R
Job Name: PT38-2-1
Project #:

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

Level: Ground Floor



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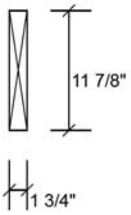
LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

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

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



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Point	1-3-11		Near Face	99 lb	245 lb	0 lb	0 lb	F6
6	Tie-In	1-4-9 to 5-11-9	0-3-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Point	1-9-6		Top	108 lb	197 lb	0 lb	0 lb	B6 B6
	Bearing Length	0-5-8							
8	Tapered Start	5-0-0		Top	2 PLF	5 PLF	0 PLF	0 PLF	
	End	5-5-15			2 PLF	5 PLF	0 PLF	0 PLF	
9	Part. Uniform	5-0-0 to 5-11-9		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Point	5-2-15		Top	159 lb	363 lb	0 lb	0 lb	B6 B6
	Bearing Length	0-5-8							
11	Part. Uniform	5-3-0 to 5-11-9		Top	132 PLF	353 PLF	0 PLF	0 PLF	J4
12	Tapered Start	5-5-15		Top	4 PLF	10 PLF	0 PLF	0 PLF	
	End	5-9-4			4 PLF	10 PLF	0 PLF	0 PLF	
13	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
14	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
15	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
16	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
17	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
18	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
19	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
20	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
21	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 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. LVL not to be treated with fire retardant or corrosive chemicals

Handling & Installation

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

This design is valid until 3/25/2024

Manufacturer Info

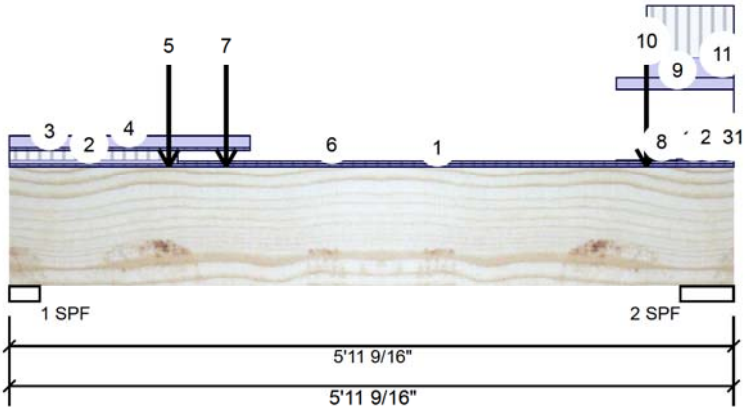
Forex
APA: PR-L318

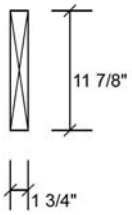
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

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

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
22	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
23	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
24	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
25	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
26	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
27	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
28	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
29	Tapered Start	5-9-6		Top	1 PLF	2 PLF	0 PLF	0 PLF	
	End	5-9-6			1 PLF	2 PLF	0 PLF	0 PLF	
30	Part. Uniform	5-11-9 to 5-11-9		Top	132 PLF	353 PLF	0 PLF	0 PLF	J4
31	Part. Uniform	5-11-9 to 5-11-9		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				5 PLF				

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

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

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

June 30, 2021

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 roation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 3/25/2024

Manufacturer Info

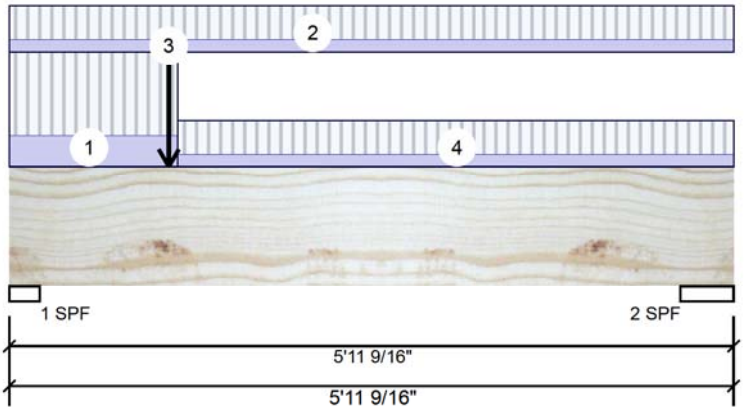
Forex
APA: PR-L318

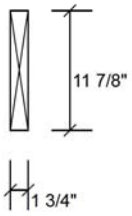
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

F7-B 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 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	370	158	0	0
2	Vertical	213	96	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.000"	Vert	23%	198 / 555	753	L	1.25D+1.5L
2 - SPF	5.250"	Vert	8%	120 / 319	439	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	712 ft-lb	2' 1/16"	17130 ft-lb	0.042 (4%)	1.25D+1.5L	L
Unbraced	712 ft-lb	2' 1/16"	17130 ft-lb	0.042 (4%)	1.25D+1.5L	L
Shear	524 lb	1'2 7/8"	5798 lb	0.090 (9%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/26509)	2'7 5/16"	0.180 (L/360)	0.014 (1%)	D	Uniform
LL Defl inch	0.006 (L/11627)	2'7 1/16"	0.135 (L/480)	0.041 (4%)	L	L
TL Defl inch	0.008 (L/8082)	2'7 1/8"	0.270 (L/240)	0.030 (3%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Girders are designed to be supported on the bottom edge only.
3 Top must be continuously laterally braced.
4 Bottom must be laterally braced at a maximum of 4'7 7/8" o.c.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-9	1-7-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 5-11-9	0-8-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-3-11		Far Face	86 lb	210 lb	0 lb	0 lb	F6
4	Tie-In	1-4-9 to 5-11-9	0-7-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 3/25/2024

Manufacturer Info

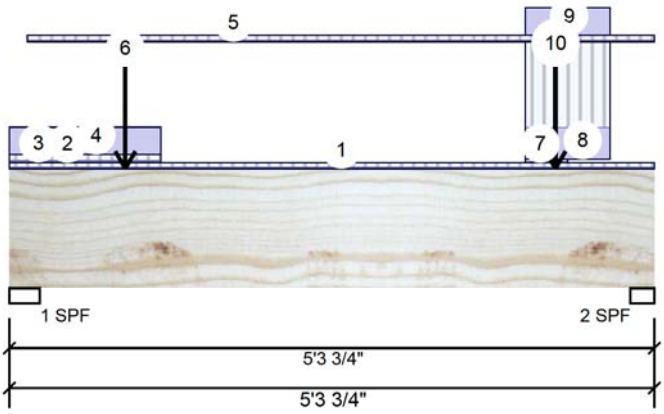
Forex
APA: PR-L318

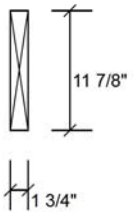
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

F7-C 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 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	402	296	0	0
2	Vertical	632	330	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.000"	Vert	30%	370 / 602	973	L	1.25D+1.5L
2 - SPF	2.375"	Vert	53%	412 / 948	1360	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	883 ft-lb	3'7 15/16"	17130 ft-lb	0.052 (5%)	1.25D+1.5L	L
Unbraced	883 ft-lb	3'7 15/16"	17130 ft-lb	0.052 (5%)	1.25D+1.5L	L
Shear	570 lb	1'2 7/8"	5798 lb	0.098 (10%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/17111)	2'9"	0.166 (L/360)	0.021 (2%)	D	Uniform
LL Defl inch	0.006 (L/9672)	2'10 9/16"	0.125 (L/480)	0.050 (5%)	L	L
TL Defl inch	0.010 (L/6182)	2'10"	0.249 (L/240)	0.039 (4%)	D+L	L

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

PASS-THRU SQUASH BLOCK FRAMING 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 3.
2. Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 2.375.
3. Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
4. Girders are designed to be supported on the bottom edge only.
5. Top must be continuously laterally braced.
6. Bottom must be laterally braced at a maximum of 5'3 3/4" o.c.

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 5-3-12	0-3-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 1-0-0		Top	1 PLF	0 PLF	0 PLF	0 PLF	
3	Tapered Start	0-0-0		Top	6 PLF	17 PLF	0 PLF	0 PLF	
	End	1-2-15			6 PLF	17 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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Lumber

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

Handling & Installation

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

This design is valid until 3/25/2024

Manufacturer Info

Forex
APA: PR-L318

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
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Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
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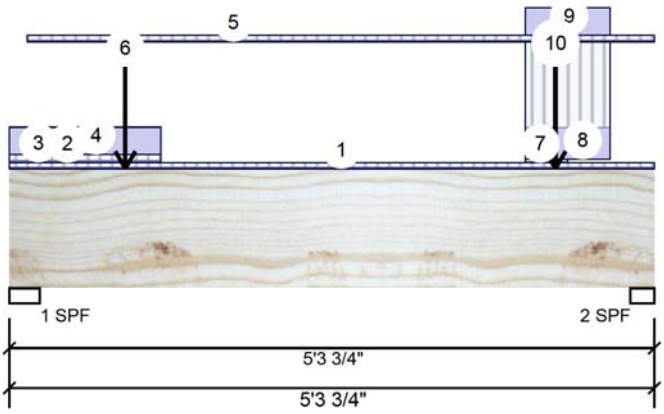
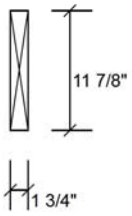
F7-C Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor





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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-0-0 to 1-2-15		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Tie-In	0-1-12 to 5-3-12	0-4-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	0-11-7		Top	143 lb	278 lb	0 lb	0 lb	B7 B7
	Bearing Length	0-5-8							
7	Tapered Start	4-3-0		Top	3 PLF	7 PLF	0 PLF	0 PLF	
	End	4-7-3			3 PLF	7 PLF	0 PLF	0 PLF	
8	Part. Uniform	4-3-0 to 4-11-6		Top	94 PLF	250 PLF	0 PLF	0 PLF	J4
9	Part. Uniform	4-3-0 to 4-11-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Point	4-6-0		Top	175 lb	418 lb	0 lb	0 lb	B7 B7
	Bearing Length	0-5-8							
	Self Weight				5 PLF				

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

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

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June 30, 2021

Notes

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613-838-2775 905-642-4400

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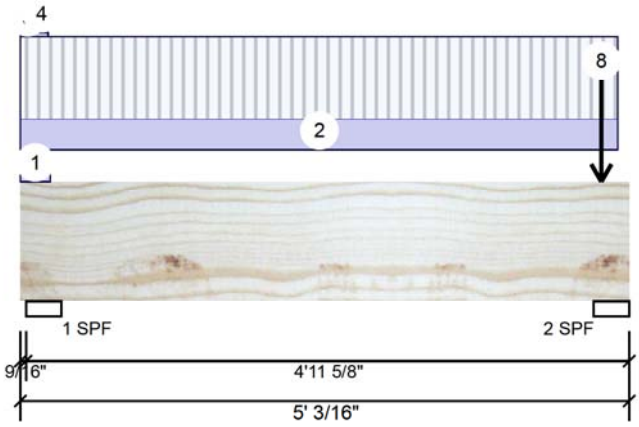
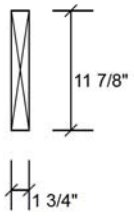
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

F7-D 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 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	53	33	0	0
2	Vertical	79	73	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	3%	41 / 80	121	LL	1.25D+1.5L
2 - SPF	3.500"	Vert	6%	91 / 118	209	_L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	124 ft-lb	2'5 7/8"	17130 ft-lb	0.007 (1%)	1.25D+1.5L	_L
Unbraced	124 ft-lb	2'5 7/8"	17130 ft-lb	0.007 (1%)	1.25D+1.5L	_L
Shear	64 lb	3'8 13/16"	5798 lb	0.011 (1%)	1.25D+1.5L	_L
Perm Defl in.	0.000 (L/124890)	2'5 7/8"	0.153 (L/360)	0.003 (0%)	D	Uniform
LL Defl inch	0.001 (L/75404)	2'5 7/8"	0.115 (L/480)	0.006 (1%)	L	_L
TL Defl inch	0.001 (L/47017)	2'5 7/8"	0.230 (L/240)	0.005 (1%)	D+L	_L
LL Cant	-0.000 (2L/80718)	Lt Cant	0.200 (2L/480)	0.000 (0%)	L	_L
TL Cant	-0.000 (2L/50596)	Lt Cant	0.300 (2L/240)	0.000 (0%)	D+L	_L

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

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

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LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 3.5.
2 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
3 Girders are designed to be supported on the bottom edge only.
4 Top must be continuously laterally braced.
5 Bottom must be laterally braced at a maximum of 5' 3/16" o.c.

Notes

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Lumber

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

Handling & Installation

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

This design is valid until 3/25/2024

Manufacturer Info

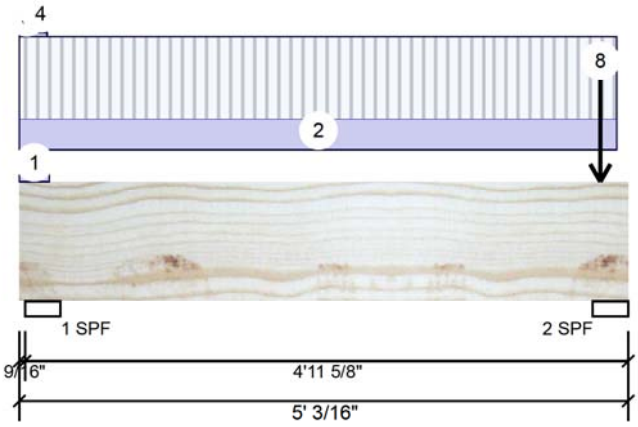
Forex
APA: PR-L318

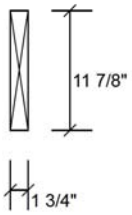
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

F7-D Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor





ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-15	0-1-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 4-11-1	0-6-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 0-2-12		Top	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 0-2-11		Top	3 PLF	0 PLF	0 PLF	0 PLF	
5	Point	4-9-7		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
6	Point	4-9-7		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
7	Point	4-9-7		Top	12 lb	28 lb	0 lb	0 lb	J11
	Bearing Length	0-5-8							
8	Point	4-9-7		Top	18 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				5 PLF				

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

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June 30, 2021

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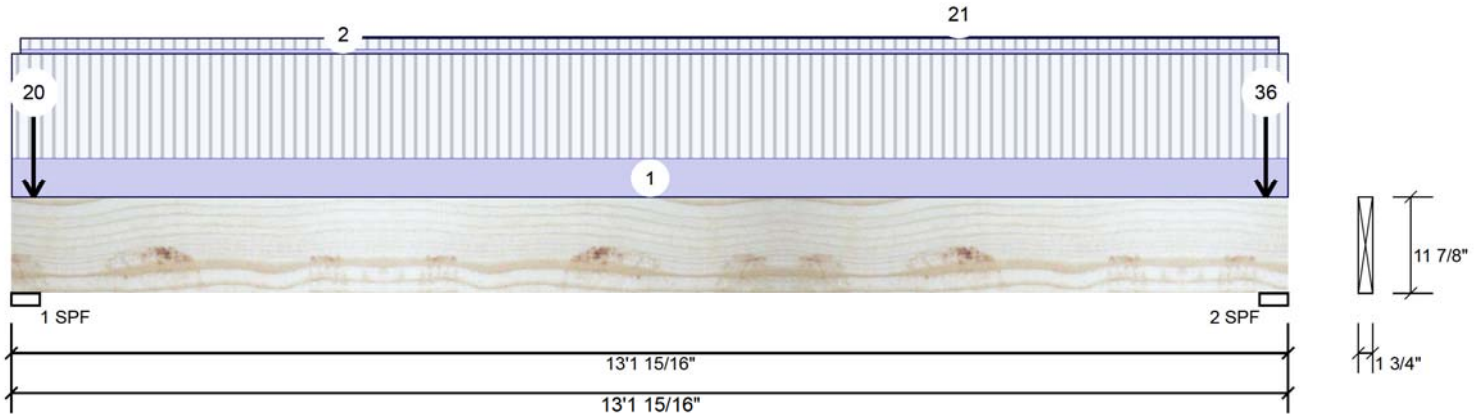
F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	1194	567	68	0
2	Vertical	1194	570	66	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.500"	Vert	68%	708 / 1859	2567	L	1.25D+1.5L +S
2 - SPF	3.500"	Vert	68%	712 / 1858	2570	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7196 ft-lb	6'7"	17130 ft-lb	0.420 (42%)	1.25D+1.5L	L
Unbraced	7196 ft-lb	6'7"	17130 ft-lb	0.420 (42%)	1.25D+1.5L	L
Shear	1897 lb	11'10 9/16"	5798 lb	0.327 (33%)	1.25D+1.5L	L
Perm Defl in.	0.096 (L/1594)	6'7"	0.424 (L/360)	0.226 (23%)	D	Uniform
LL Defl inch	0.232 (L/656)	6'7"	0.318 (L/480)	0.731 (73%)	L+0.5S	L
TL Defl inch	0.328 (L/465)	6'7"	0.635 (L/240)	0.516 (52%)	D+L+0.5S	L

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LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

Design Notes

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5 Top must be continuously laterally braced.
6 Bottom must be laterally braced at a maximum of 13'1 15/16" o.c.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-1 to 13-1-15		Top	60 PLF	160 PLF	0 PLF	0 PLF	
2	Tie-In	0-1-2 to 13-0-13	0-5-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-2-12		Top	3 lb	0 lb	8 lb	0 lb	
	Bearing Length	0-5-8							
4	Point	0-2-12		Top	3 lb	0 lb	0 lb	0 lb	Wall Self Weight

Continued on page 2...

Notes

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Lumber

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613-838-2775 905-642-4400

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
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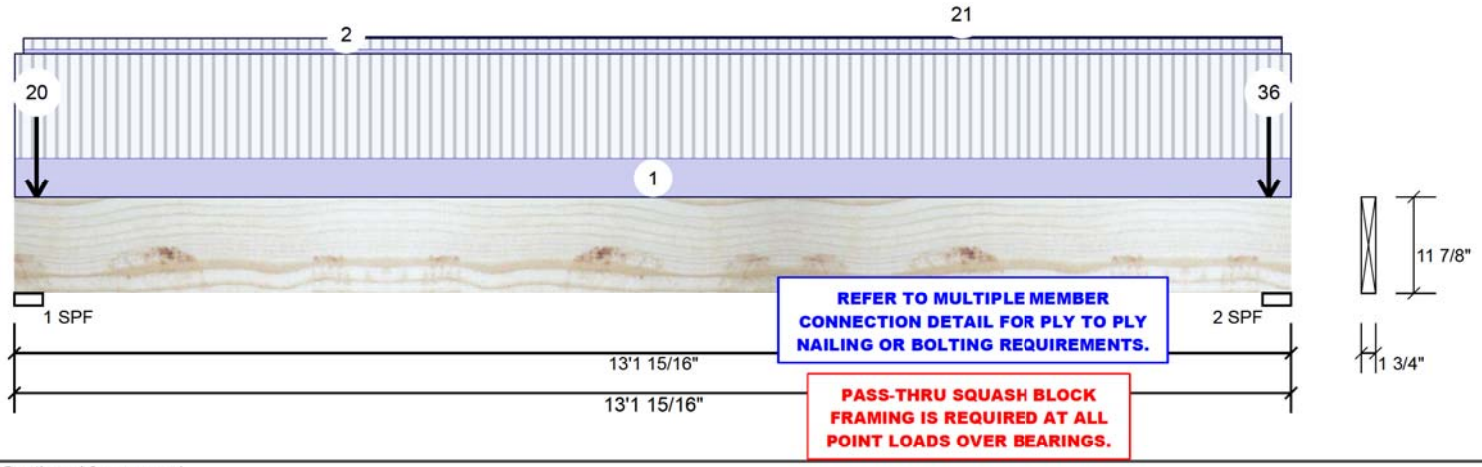
F8-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" - PASSED

Level: Ground Floor



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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	Bearing Length	0-5-8							
5	Point	0-2-12		Top	3 lb	0 lb	8 lb	0 lb	
	Bearing Length	0-5-8							
6	Point	0-2-12		Top	3 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
7	Point	0-2-12		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
8	Point	0-2-12		Top	3 lb	0 lb	8 lb	0 lb	
	Bearing Length	0-5-8							
9	Point	0-2-12		Top	3 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
10	Point	0-2-12		Top	3 lb	0 lb	8 lb	0 lb	
	Bearing Length	0-5-8							
11	Point	0-2-12		Top	3 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
12	Point	0-2-12		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
13	Point	0-2-12		Top	1 lb	0 lb	1 lb	0 lb	
	Bearing Length	0-5-8							
14	Point	0-2-12		Top	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
15	Point	0-2-12		Top	1 lb	0 lb	1 lb	0 lb	
	Bearing Length	0-5-8							
16	Point	0-2-12		Top	7 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
17	Point	0-2-12		Top	7 lb	0 lb	17 lb	0 lb	
	Bearing Length	0-5-8							
18	Point	0-2-12		Top	7 lb	0 lb	17 lb	0 lb	
	Bearing Length	0-5-8							
19	Point	0-2-12		Top	12 lb	31 lb	0 lb	0 lb	J5

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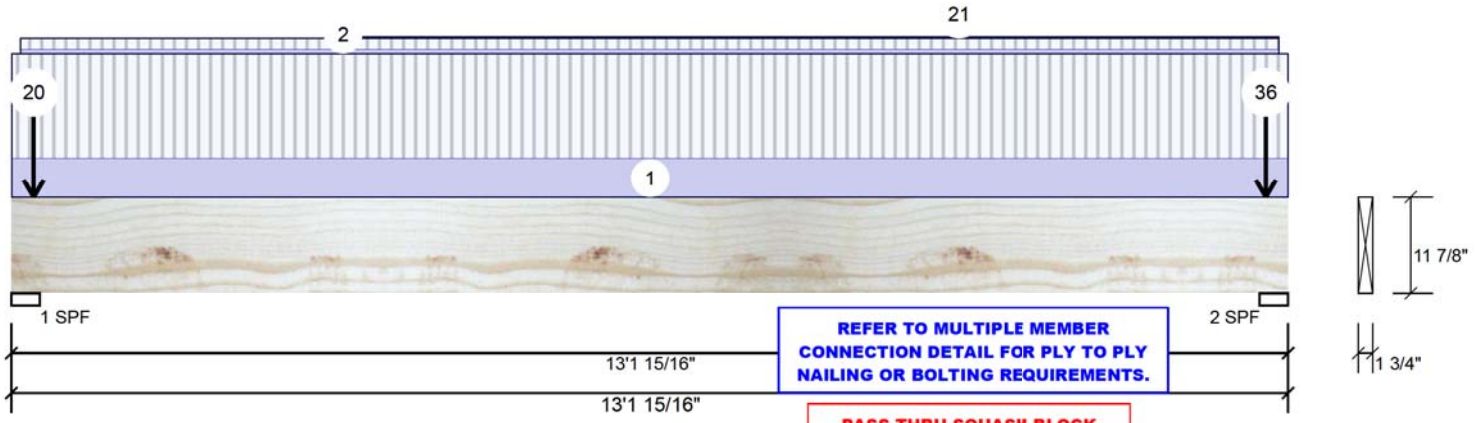

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	Bearing Length	0-5-8							
20	Point	0-2-12		Top	14 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
21	Part. Uniform	3-3-9 to 13-0-13		Top	2 PLF	0 PLF	0 PLF	0 PLF	
22	Point	12-11-3		Top	13 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
23	Point	12-11-3		Top	12 lb	31 lb	0 lb	0 lb	J5
	Bearing Length	0-5-8							
24	Point	12-11-3		Top	13 lb	0 lb	33 lb	0 lb	
	Bearing Length	0-5-8							
26	Point	12-11-3		Top	1 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
27	Point	12-11-3		Top	1 lb	0 lb	3 lb	0 lb	
	Bearing Length	0-5-8							
28	Point	12-11-3		Top	14 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
30	Point	12-11-3		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
31	Point	12-11-3		Top	6 lb	0 lb	15 lb	0 lb	
	Bearing Length	0-5-8							
32	Point	12-11-3		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
34	Point	12-11-3		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
35	Point	12-11-3		Top	6 lb	0 lb	15 lb	0 lb	
	Bearing Length	0-5-8							
36	Point	12-11-3		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				5 PLF				

LICENSED PROFESSIONAL ENGINEER I.MATIJEVIC 100528832 PROVINCE OF ONTARIO
June 30, 2021

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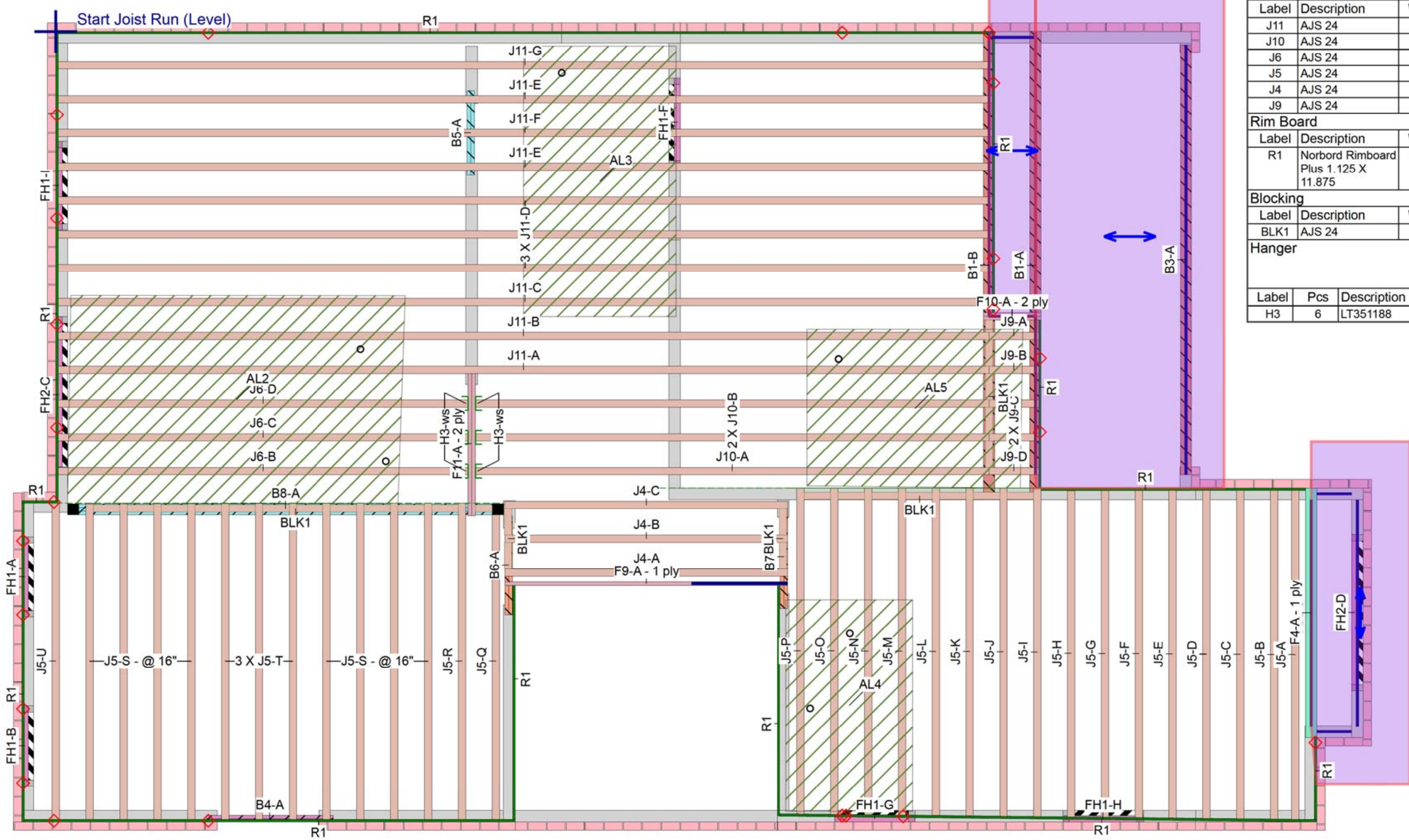
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Second Floor



Second Floor

LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
B7	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	6-0-0
B6	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	11.875			1	12-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	6-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	4-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J11	AJS 24	3.5	11.875			10	38-0-0
J10	AJS 24	3.5	11.875			3	22-0-0
J6	AJS 24	3.5	11.875			3	18-0-0
J5	AJS 24	3.5	11.875			30	14-0-0
J4	AJS 24	3.5	11.875			3	12-0-0
J9	AJS 24	3.5	11.875			5	2-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			22	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 24	3.5	11.875	LinFt		Varies	29-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H3	6	LT351188			4 10d	2 10dx1 1/2

JOB INFORMATION

Builder
ROUNDEL HOMES INC

Project

Shipping
RICHMOND HILL, ON

Sales Rep
RALPH MIRIGELLO

Designer
K R

Plotted
June 14, 2021

Layout Name
PT38-2-1

Job Path
C:\Users\kriopel\AppData\Local\iStruct\JOBS

DESIGN CRITERIA

Second Floor

Design Method	LSD (Canada)
Building Code	NBCC 2015 / OBC 2012

Floor

Loads

Live	40
Dead	15

Decking

Decking	OSB
Thickness	5/8"
Fastener	Nailed & Glued

Vibration

Ceiling:	Gypsum 1/2"

Roof

Loads

Live	0
Dead	10.3
Snow	25.6

Decking

Decking	SPF Plywood

CCMC References

Boise - 12472-R , 12787-R
LP - 12412-R
Forex - 14056-R

Kott Inc.
3228 Moodie Dr, Ottawa
14 Anderson Blvd, Uxbridge Ontario
613-838-2775 / 905-642-4400

KOTT

Hatch Area represents where additional load has been applied. (e.g. 5 psf for ceramic tile)

AJS140 I-Joists can be substituted with LP20 I-Joists for 9.5" and 11.875" depths shown on this layout.

1. All blocking to be cut from 12' joists
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water closet flange locations are approximate only, consult architectural drawing for exact locations
6. Beams identified as "B" are dropped and supplied by others
7. Install 2x4 blocking @ 24" o/c under parallel non-loadbearing walls
8. Load transfer blocks to be installed under all point loads
9. Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
10. Hangers and Fasteners to be installed as per manufacturer
11. Framing shown on this layout may deviate from architectural drawings. Arch / Eng to review and approve the deviation prior to construction.

Legend

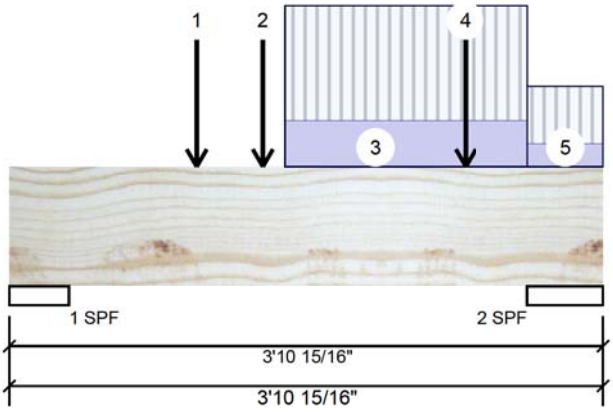
WS	Web Stiffener
-ws	In Hanger Label Denotes Web Stiffener
PS	Point Load Support
◇	Load from Above
	Wall
	Wall Opening
	Norbord Rimboard Plus 1.125 X 11.875
	AJS 24 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 9.5

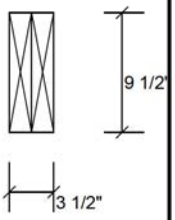
This layout is to be used as an installation guide only. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

B6-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
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Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	197	108	0	0
2	Vertical	363	159	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.695"	Vert	4%	135 / 296	430	L	1.25D+1.5L
2 - SPF	6.000"	Vert	6%	199 / 545	744	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	506 ft-lb	1'8"	22724 ft-lb	0.022 (2%)	1.25D+1.5L	L
Unbraced	506 ft-lb	1'8"	22724 ft-lb	0.022 (2%)	1.25D+1.5L	L
Shear	441 lb	2'7 7/16"	9277 lb	0.048 (5%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/48636)	1'8 3/16"	0.105 (L/360)	0.007 (1%)	D	Uniform
LL Defl inch	0.002 (L/22997)	1'8 5/8"	0.079 (L/480)	0.021 (2%)	L	L
TL Defl inch	0.002 (L/15615)	1'8 7/16"	0.157 (L/240)	0.015 (2%)	D+L	L

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

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

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

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 4.5.
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8 Lateral slenderness ratio based on full section width.

June 30, 2021

Notes

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Lumber

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Handling & Installation

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

This design is valid until 3/25/2024

Manufacturer Info

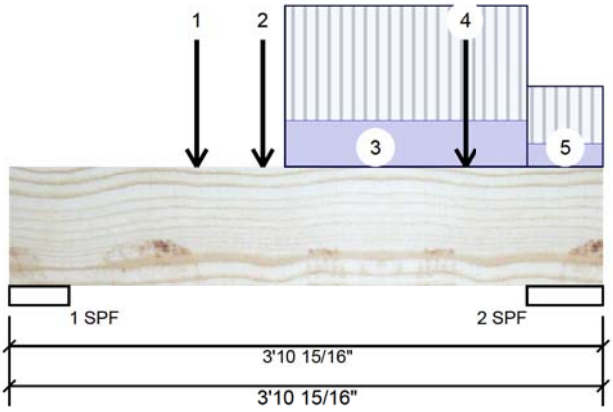
Forex
APA: PR-L318

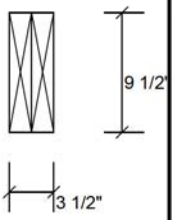
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:		Job Name:	PT38-2-1
	RICHMOND HILL, ON	Project #:	

B6-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor





ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	1-2-12		Top	45 lb	48 lb	0 lb	0 lb	F9
	Bearing Length	0-1-12							
2	Point	1-7-15		Top	74 lb	197 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
3	Tapered Start	1-9-11		Top	4 PLF	10 PLF	0 PLF	0 PLF	
	End	3-5-0			4 PLF	10 PLF	0 PLF	0 PLF	
4	Point	2-11-15		Top	111 lb	297 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
5	Tapered Start	3-5-0		Top	2 PLF	5 PLF	0 PLF	0 PLF	
	End	3-10-15			2 PLF	5 PLF	0 PLF	0 PLF	
	Self Weight				8 PLF				

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June 30, 2021

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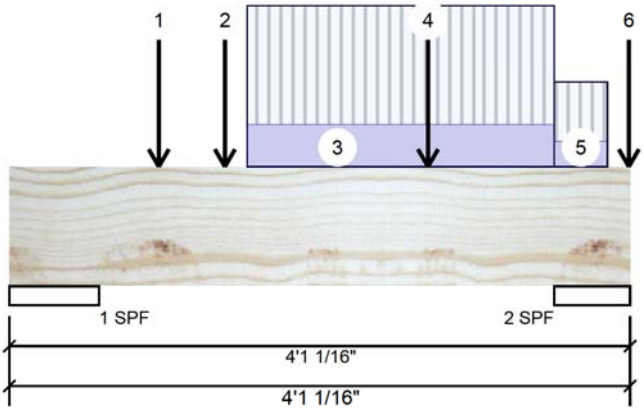
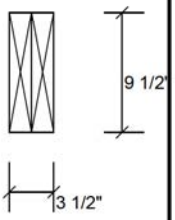
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

B7-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	278	143	0	0
2	Vertical	418	175	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	7.063"	Vert	4%	179 / 417	595	L	1.25D+1.5L
2 - SPF	6.000"	Vert	7%	219 / 627	847	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	525 ft-lb	2'9"	22724 ft-lb	0.023 (2%)	1.25D+1.5L	L
Unbraced	525 ft-lb	2'9"	22724 ft-lb	0.023 (2%)	1.25D+1.5L	L
Shear	573 lb	2'9 9/16"	9277 lb	0.062 (6%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/48369)	2'1 11/16"	0.104 (L/360)	0.007 (1%)	D	Uniform
LL Defl inch	0.002 (L/21044)	2'2 1/2"	0.078 (L/480)	0.023 (2%)	L	L
TL Defl inch	0.003 (L/14668)	2'2 1/4"	0.156 (L/240)	0.016 (2%)	D+L	L

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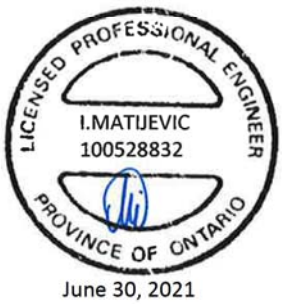

June 30, 2021

Notes

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Lumber

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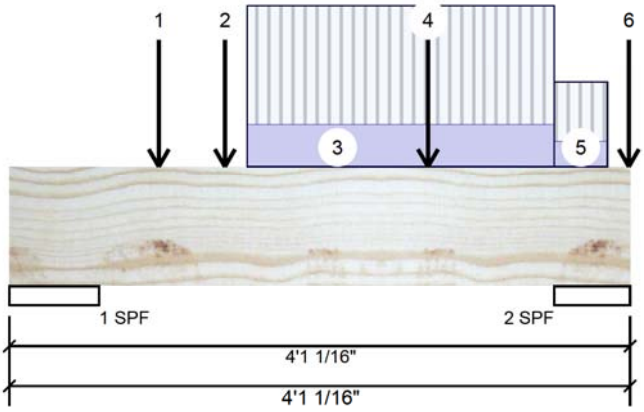
Forex
APA: PR-L318

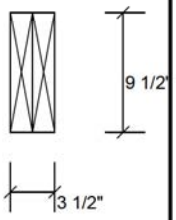
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

B7-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor





ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-11-12		Top	45 lb	48 lb	0 lb	0 lb	F9
	Bearing Length	0-1-12							
2	Point	1-5-0		Top	74 lb	197 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
3	Tapered Start	1-6-12		Top	5 PLF	14 PLF	0 PLF	0 PLF	
	End	3-7-2			5 PLF	14 PLF	0 PLF	0 PLF	
4	Point	2-9-0		Top	111 lb	297 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
5	Tapered Start	3-7-2		Top	3 PLF	7 PLF	0 PLF	0 PLF	
	End	3-11-5			3 PLF	7 PLF	0 PLF	0 PLF	
6	Point	4-1-0		Top	46 lb	123 lb	0 lb	0 lb	J4
	Bearing Length	0-3-8							
	Self Weight				8 PLF				

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June 30, 2021

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613-838-2775 905-642-4400

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Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
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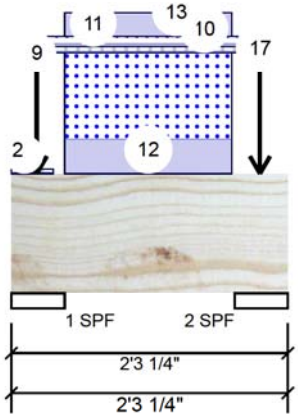
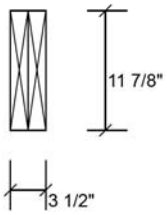
F10-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

Level: Second Floor





Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	21	322	549	0
2	Vertical	16	196	226	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	11%	403 / 845	1248	L	1.25D+1.5S +L
2 - SPF	5.250"	Vert	5%	245 / 354	599	L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	222 ft-lb	1'1 5/8"	34261 ft-lb	0.006 (1%)	1.25D+1.5S +L	L
Unbraced	222 ft-lb	1'1 5/8"	34261 ft-lb	0.006 (1%)	1.25D+1.5S +L	L
Shear	216 lb	1'5 1/8"	11596 lb	0.019 (2%)	1.25D+1.5S +L	L
Perm Defl in.	0.000 (L/88883)	1'1 9/16"	0.051 (L/360)	0.004 (0%)	D	Uniform
LL Defl inch	0.000 (L/60659)	1'1 9/16"	0.038 (L/480)	0.008 (1%)	S+0.5L	L
TL Defl inch	0.001 (L/36054)	1'1 9/16"	0.076 (L/240)	0.007 (1%)	D+S+0.5L	L

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LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

Design Notes

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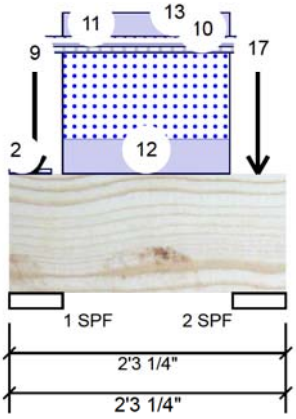

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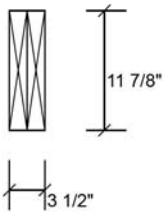

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1	Tie-In	0-0-0 to 0-4-2	0-3-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-10	0-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-2-8		Top	135 lb	0 lb	317 lb	0 lb	RB1 RB1
	Bearing Length	0-5-8							
4	Point	0-2-8		Top	1 lb	0 lb	3 lb	0 lb	
	Bearing Length	0-5-8							
6	Point	0-2-8		Top	4 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
8	Point	0-2-8		Top	10 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
9	Point	0-2-8		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
10	Tie-In	0-2-10 to 2-2-2	0-4-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
11	Part. Uniform	0-2-10 to 2-0-10		Top	10 PLF	0 PLF	26 PLF	0 PLF	
12	Part. Uniform	0-5-4 to 1-9-12		Top	119 PLF	0 PLF	295 PLF	0 PLF	
13	Part. Uniform	0-5-4 to 1-9-12		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
14	Point	2-0-8		Top	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
15	Point	2-0-8		Top	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
16	Point	2-0-8		Top	1 lb	0 lb	2 lb	0 lb	
	Bearing Length	0-5-8							
17	Point	2-0-8		Top	10 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				10 PLF				

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Manufacturer Info

Forex
APR: PR-L318

Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

iStructDesign

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
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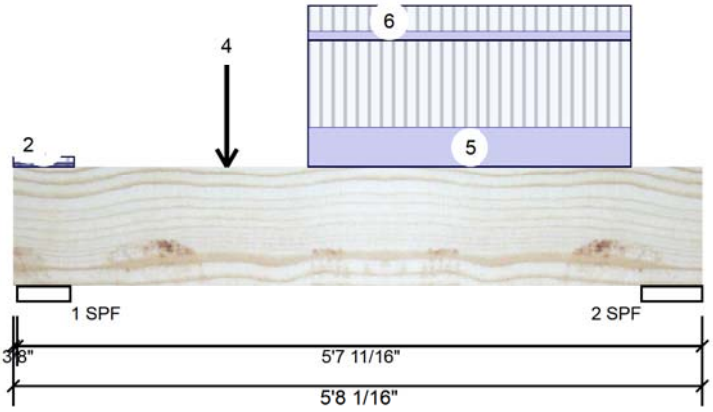

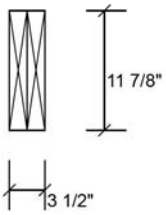

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Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	704	328	0	0
2	Vertical	931	426	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	13%	410 / 1056	1466	LL	1.25D+1.5L
2 - SPF	6.000"	Vert	15%	532 / 1396	1928	_L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2455 ft-lb	2'9 15/16"	34261 ft-lb	0.072 (7%)	1.25D+1.5L	_L
Unbraced	2455 ft-lb	2'9 15/16"	34261 ft-lb	0.072 (7%)	1.25D+1.5L	_L
Shear	2139 lb	1'5 1/2"	11596 lb	0.184 (18%)	1.25D+1.5L	LL
Perm Defl in.	0.004 (L/15147)	2'9 3/8"	0.166 (L/360)	0.024 (2%)	D	Uniform
LL Defl inch	0.009 (L/6866)	2'9 7/16"	0.125 (L/480)	0.070 (7%)	L	_L
TL Defl inch	0.013 (L/4725)	2'9 3/8"	0.249 (L/240)	0.051 (5%)	D+L	_L
LL Cant	-0.000 (2L/7095)	Lt Cant	0.200 (2L/480)	0.001 (0%)	L	_L
TL Cant	-0.000 (2L/4879)	Lt Cant	0.300 (2L/240)	0.000 (0%)	D+L	_L

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

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

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

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
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 must be continuously laterally braced.
6 Bottom must have sheathing attached or be continuously braced.
7 Lateral slenderness ratio based on full section width.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

Notes

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Lumber

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

Handling & Installation

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

This design is valid until 3/25/2024

Manufacturer Info

Forex
APA: PR-L318

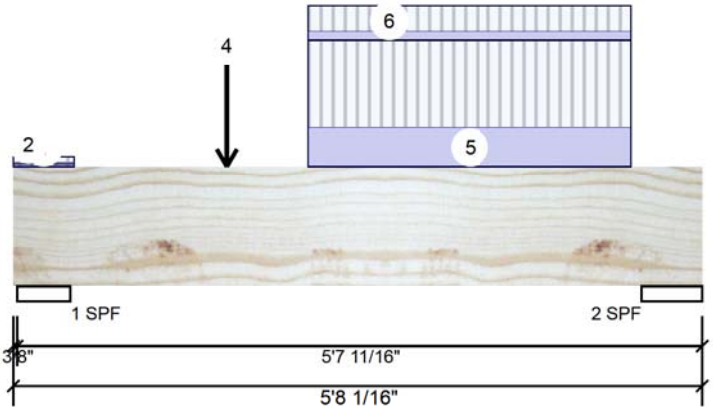
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

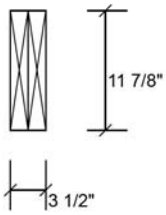
CSDT DRAW DESIGN BUILD

Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:		Job Name:	PT38-2-1
	RICHMOND HILL, ON	Project #:	

F11-A Forex 2.0E-3000Fb LVL 1.750" X 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 0-6-0	0-2-5	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-6-0	0-5-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-9-0		Far Face	188 lb	413 lb	0 lb	0 lb	J6
4	Point	1-9-0		Near Face	37 lb	107 lb	0 lb	0 lb	J10
5	Part. Uniform	2-5-0 to 5-1-0		Far Face	144 PLF	319 PLF	0 PLF	0 PLF	
6	Part. Uniform	2-5-0 to 5-1-0		Near Face	32 PLF	94 PLF	0 PLF	0 PLF	
	Self Weight				10 PLF				

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

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June 30, 2021

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Lumber

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Handling & Installation

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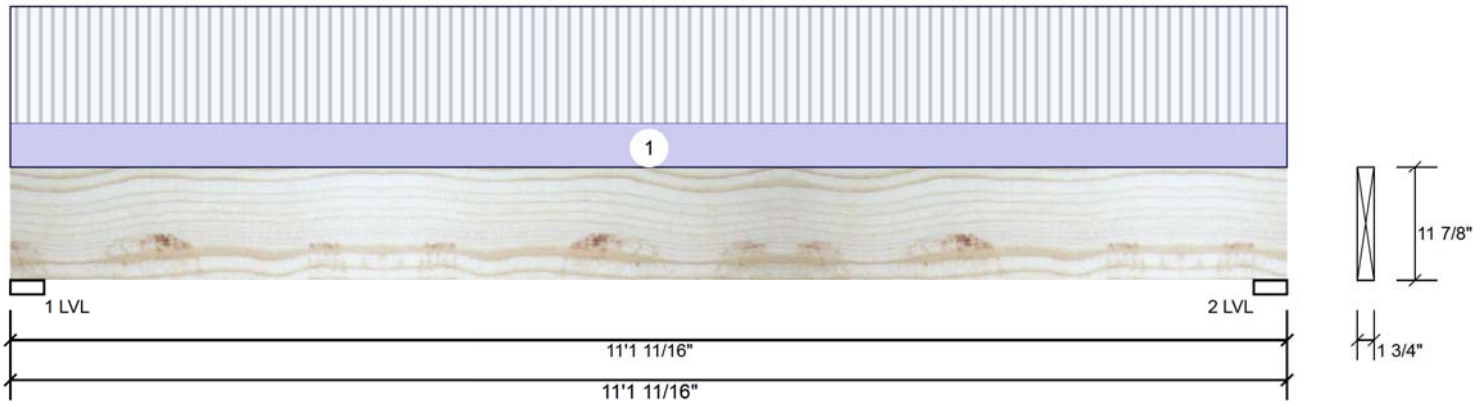
Client:	ROUNDEL HOMES INC	Date:	6/14/2021
Project:	PINETREE 2 ELEV 1	Input by:	K R
Address:	RICHMOND HILL, ON	Job Name:	PT38-2-1
		Project #:	

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

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	1	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	480	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal - II	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Direction	Live	Dead	Snow	Wind
1	Vertical	48	45	0	0
2	Vertical	48	45	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - LVL	3.500"	Vert	3%	56 / 73	128	L	1.25D+1.5L
2 - LVL	3.500"	Vert	3%	56 / 73	128	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	329 ft-lb	5'6 13/16"	17130 ft-lb	0.019 (2%)	1.25D+1.5L	L
Unbraced	329 ft-lb	5'6 13/16"	17130 ft-lb	0.019 (2%)	1.25D+1.5L	L
Shear	105 lb	1'3 3/8"	5798 lb	0.018 (2%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/23554)	5'6 7/8"	0.356 (L/360)	0.015 (2%)	D	Uniform
LL Defl inch	0.006 (L/21748)	5'6 7/8"	0.267 (L/480)	0.022 (2%)	L	L
TL Defl inch	0.011 (L/11308)	5'6 7/8"	0.534 (L/240)	0.021 (2%)	D+L	L

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

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

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 30, 2021

Design Notes

1 Provide support to prevent lateral movement and rotation at the end bearings. Lateral support may also be required at the interior bearings by the building code.
2 Girders are designed to be supported on the bottom edge only.
3 Top must be continuously laterally braced.
4 Bottom must be laterally braced at a maximum of 11'1 11/16" o.c.

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
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	Self Weight				5 PLF				

Notes

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