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

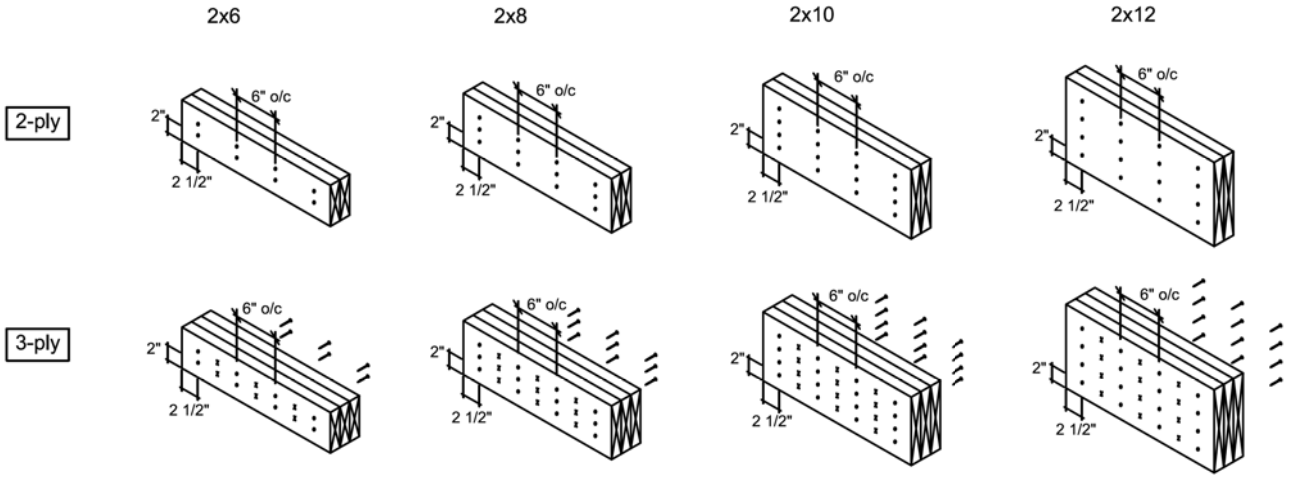
1. The building component used in construction must be the same as indicated on the drawings.
2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
3. Members consisting of multiple plies 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

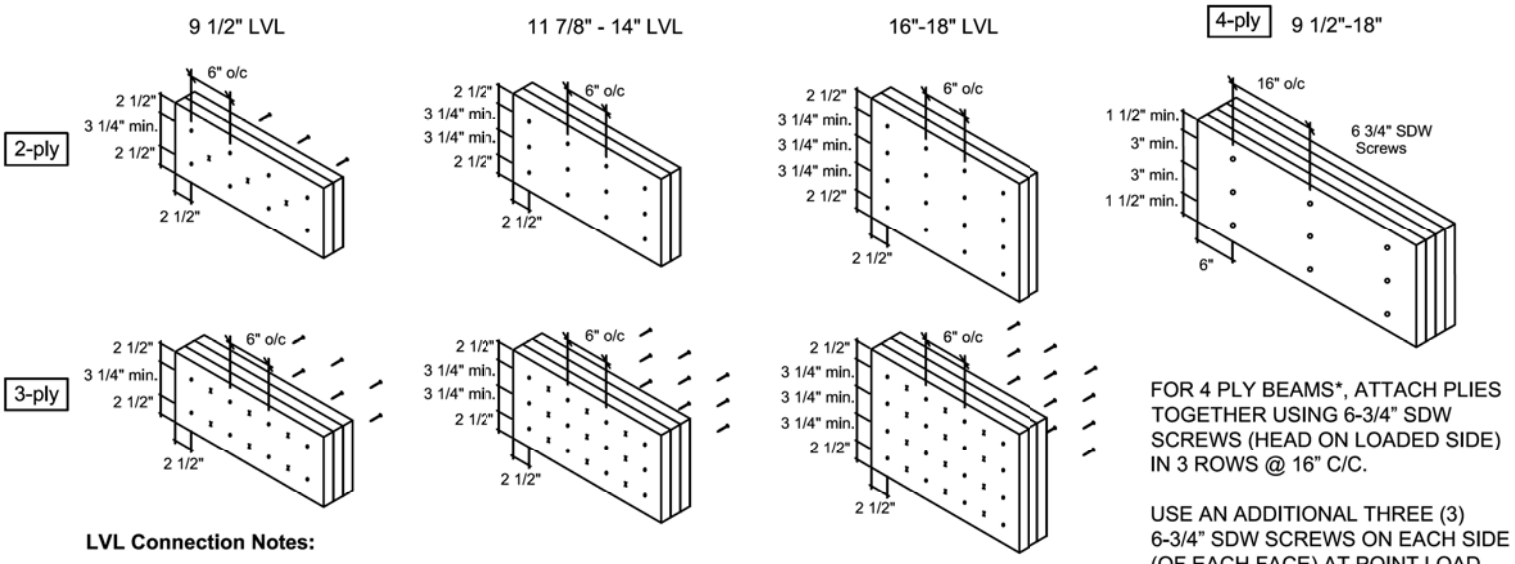
Conventional Connections



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

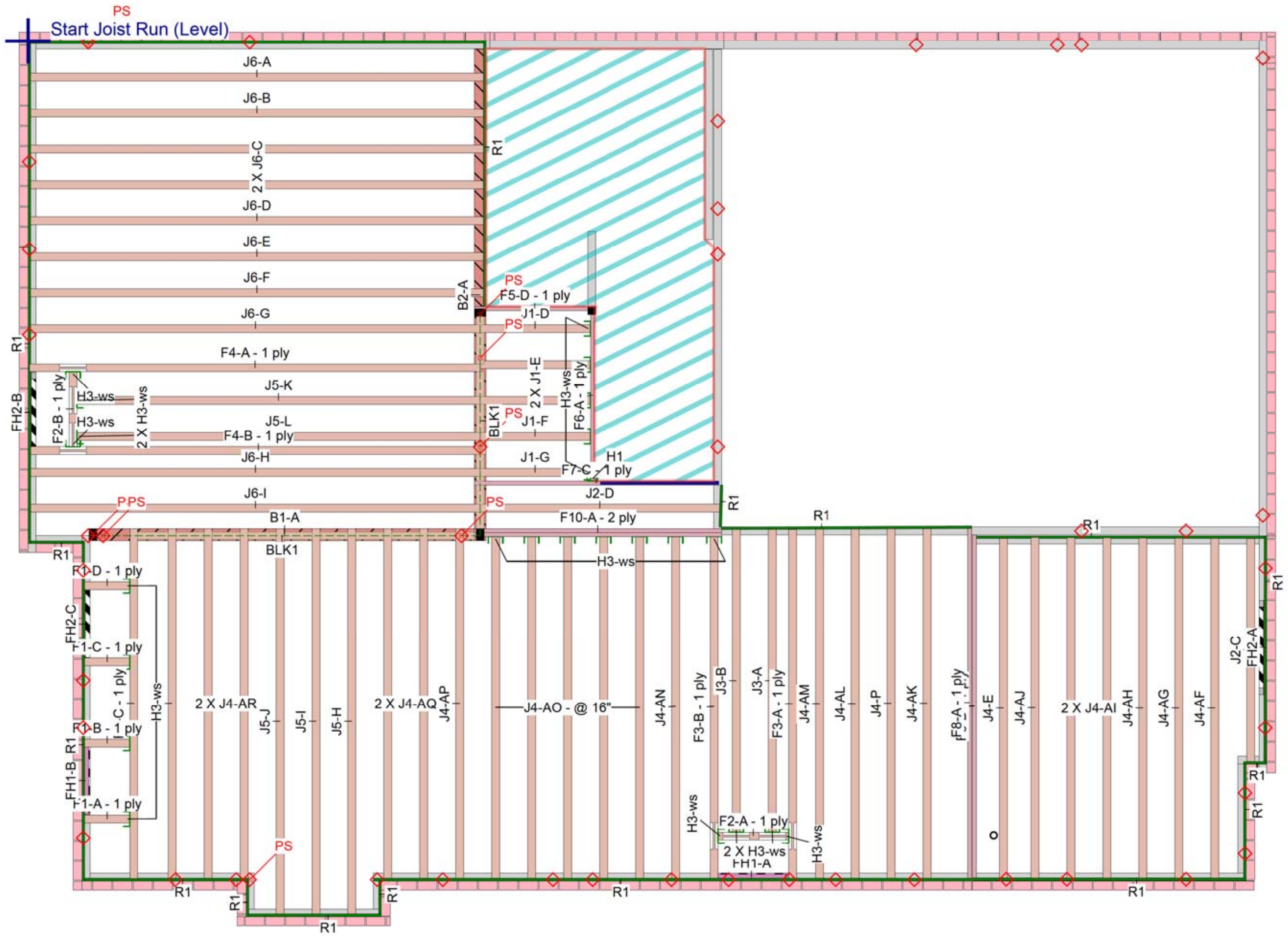
All connections are for uniformly distributed loads.

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

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
LVL/LSL							
F8	Forex 2.0E-3000Fb LVL	1.75	11.875			2	14-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	10-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	11.875			1	10-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	11.875			1	8-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	11.875			1	6-0-0
I Joist							
F4	AJS 24	3.5	11.875			2	18-0-0
F3	AJS 24	3.5	11.875			3	14-0-0
F2	AJS 24	3.5	11.875			2	4-0-0
F1	AJS 24	3.5	11.875			4	2-0-0
J6	AJS 24	3.5	11.875			10	18-0-0
J5	AJS 24	3.5	11.875			5	16-0-0
J4	AJS 24	3.5	11.875			23	14-0-0
J3	AJS 24	3.5	11.875			2	12-0-0
J2	AJS 24	3.5	11.875			2	10-0-0
J1	AJS 24	3.5	11.875			5	6-0-0
Rim Board							
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			12	12-0-0
Blocking							
BLK1	AJS 24	3.5	11.875	LinFt		Varies	16-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	1	HUS1.81/10			30 10dx1 1/2	10 16d
H3	24	MIT411.88			4 10dx1 1/2	4 10dx1 1/2

JOB INFORMATION

Builder
GREENPARK

Project
ROUNDEL HOMES INC

Shipping
PINETREE 38-1-1
RICHMOND HILL,ON

Sales Rep
RALPH MIRIGELLO

Designer
W C

Plotted
June 08, 2021

Layout Name
PT38-1-1 STANDARD & DECK CONDITION

Job Path

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

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

Symbol	Meaning
WS	Web Stiffener
-ws	In Hanger Label Denotes Web Stiffener
PS	Point Load Support
◇	Load from Above
(grey)	Wall
(hatched)	Wall Opening
(green)	Norbord Rimboard Plus 1.125 X 11.875
(tan)	AJS 24 11.875
(purple)	Forex 2.0E-3000Fb LVL 1.75 X 11.875

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

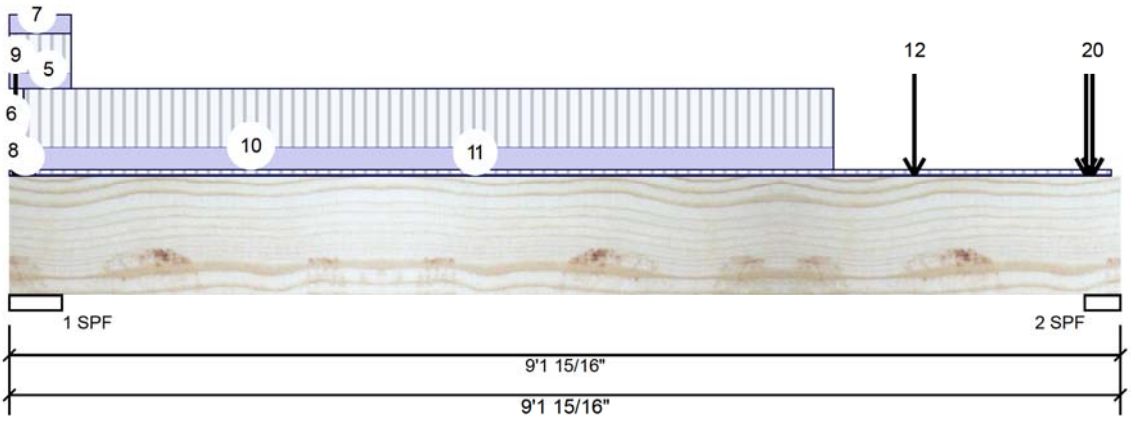
AJS140 I-Joists can be substituted with LP20 I-Joists for 9.5" and 11.875" depths shown on this layout.

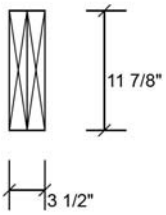
iStructDesign

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F10-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 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	2124	897	0	0
2	Vertical	2494	1044	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.188"	Vert	39%	1121 / 3185	4306	L	1.25D+1.5L
2 - SPF	3.500"	Vert	67%	1305 / 3741	5046	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4938 ft-lb	4'7 7/16"	34261 ft-lb	0.144 (14%)	1.25D+1.5L	L
Unbraced	4938 ft-lb	4'7 7/16"	34261 ft-lb	0.144 (14%)	1.25D+1.5L	L
Shear	2424 lb	7'10 9/16"	11596 lb	0.209 (21%)	1.25D+1.5L	L
Perm Defl in.	0.016 (L/6269)	4'7 11/16"	0.285 (L/360)	0.057 (6%)	D	Uniform
LL Defl inch	0.040 (L/2578)	4'7 11/16"	0.214 (L/480)	0.186 (19%)	L	L
TL Defl inch	0.056 (L/1827)	4'7 11/16"	0.428 (L/240)	0.131 (13%)	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 28, 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. Multiple plies must be fastened together as per manufacturer's details.
5. Top loads must be supported equally by all plies.
6. Top must be continuously laterally braced.
7. Bottom must have sheathing attached or be continuously braced.
8. Lateral slenderness ratio based on full section width.

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 0-2-9	0-5-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-0-1		Top	32 PLF	86 PLF	0 PLF	0 PLF	J4
4	Part. Uniform	0-0-0 to 0-0-1		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Part. Uniform	0-0-0 to 0-6-1		Top	64 PLF	171 PLF	0 PLF	0 PLF	J4

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 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

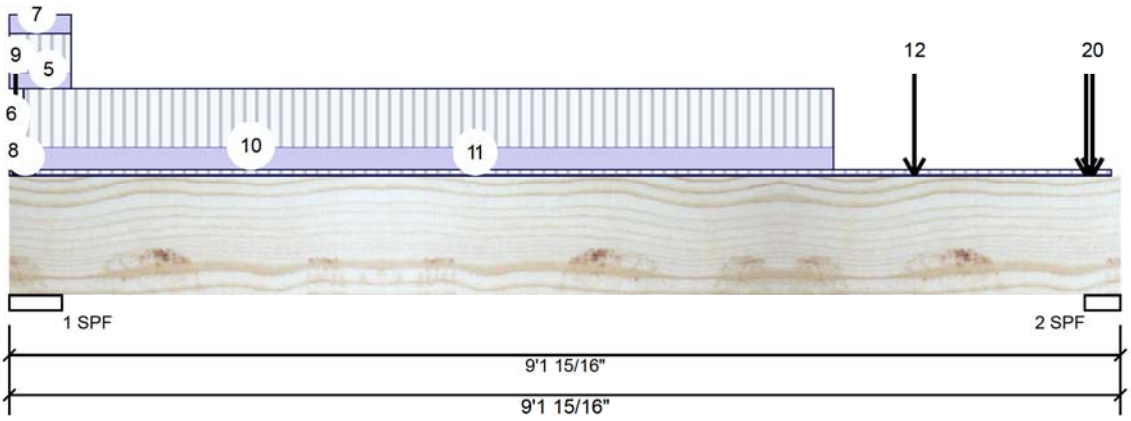
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

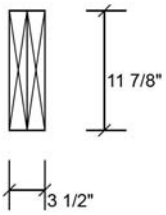
isDesign

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

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

Level: Ground Floor





...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Tapered Start	0-0-0		Top	0 PLF	1 PLF	0 PLF	0 PLF	
	End	0-0-5			0 PLF	1 PLF	0 PLF	0 PLF	
7	Part. Uniform	0-0-0 to 0-6-1		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Tapered Start	0-0-5		Top	0 PLF	1 PLF	0 PLF	0 PLF	
	End	0-0-7			0 PLF	1 PLF	0 PLF	0 PLF	
9	Point	0-0-10		Top	320 lb	813 lb	0 lb	0 lb	F7 F7
	Bearing Length	0-5-8							
10	Part. Uniform	0-1-6 to 6-9-6		Near Face	95 PLF	253 PLF	0 PLF	0 PLF	
11	Tie-In	0-2-9 to 9-1-0	0-5-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
12	Point	7-5-6		Near Face	131 lb	349 lb	0 lb	0 lb	J4
13	Point	8-10-9		Near Face	305 lb	770 lb	0 lb	0 lb	F3
14	Point	8-11-3		Top	6 lb	17 lb	0 lb	0 lb	J2
	Bearing Length	0-5-8							
15	Point	8-11-3		Top	9 lb	23 lb	0 lb	0 lb	J4
	Bearing Length	0-5-8							
16	Point	8-11-3		Top	10 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
17	Point	8-11-3		Top	1 lb	2 lb	0 lb	0 lb	
	Bearing Length	0-5-8							
18	Point	8-11-3		Top	22 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
19	Point	8-11-3		Top	277 lb	705 lb	0 lb	0 lb	F7 F7
	Bearing Length	0-5-8							
20	Point	8-11-3		Top	4 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
	Self Weight				10 PLF				

June 28, 2021

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

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.

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

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

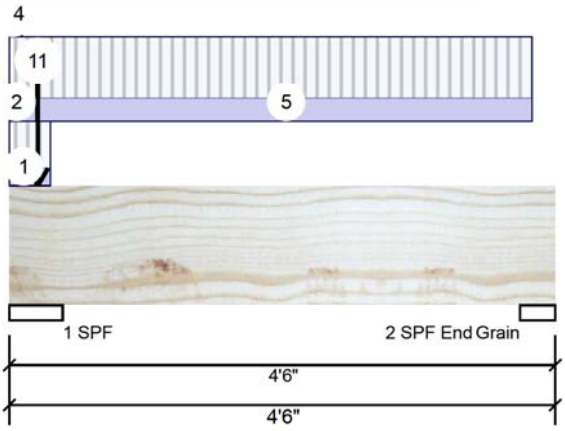
Forex
APA: PR-L318

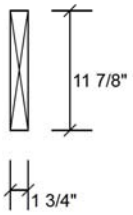
Kott Inc
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F5-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	114	75	0	0
2	Vertical	30	22	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	5%	94 / 171	265	L	1.25D+1.5L
2 - SPF End Grain	3.500"	Vert	2%	27 / 45	72	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	68 ft-lb	2'3 7/8"	17130 ft-lb	0.004 (0%)	1.25D+1.5L	L
Unbraced	68 ft-lb	2'3 7/8"	17130 ft-lb	0.004 (0%)	1.25D+1.5L	L
Shear	38 lb	1'5 1/8"	5798 lb	0.007 (1%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/212517)	2'3 7/8"	0.130 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/146746)	2'3 7/8"	0.097 (L/480)	0.003 (0%)	L	L
TL Defl inch	0.001 (L/86806)	2'3 7/8"	0.195 (L/240)	0.003 (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.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 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 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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-1	0-3-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-10	0-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-0-0 to 0-1-4		Top	1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-0-0 to 0-1-3		Top	2 PLF	0 PLF	0 PLF	0 PLF	

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

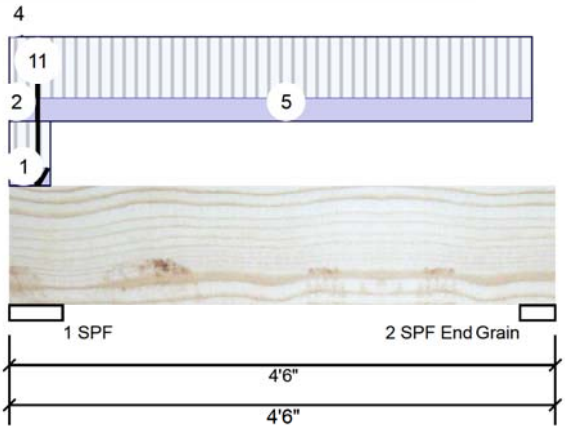
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

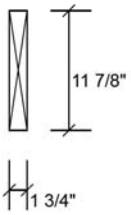
iStruct Design

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

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

Level: Ground Floor





...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Tie-In	0-2-10 to 4-3-11	0-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Point	0-2-13		Top	16 lb	43 lb	0 lb	0 lb	J5
	Bearing Length	0-5-8							
8	Point	0-2-13		Top	12 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
9	Point	0-2-13		Top	12 lb	32 lb	0 lb	0 lb	J5
	Bearing Length	0-5-8							
11	Point	0-2-13		Top	9 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.

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 28, 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 rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info

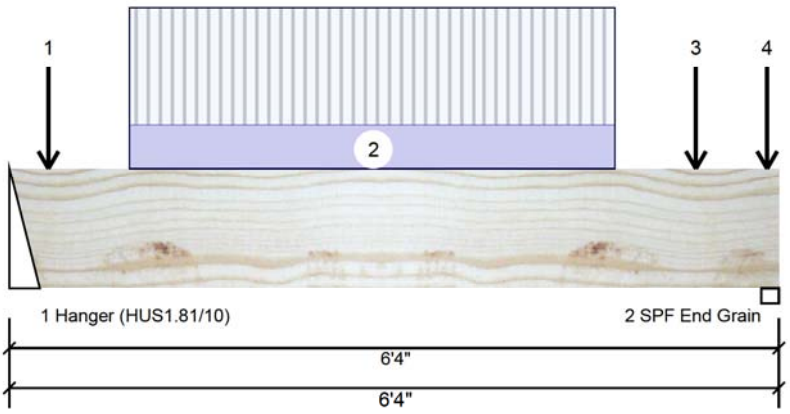
Forex
APA: PR-L318

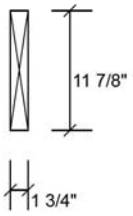
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

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	251	109	0	0
2	Vertical	418	200	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%	136 / 377	512	L	1.25D+1.5L
2 - SPF End Grain	1.750"	Vert	39%	250 / 627	876	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	728 ft-lb	3'2 11/16"	17130 ft-lb	0.043 (4%)	1.25D+1.5L	L
Unbraced	728 ft-lb	3'2 11/16"	17130 ft-lb	0.043 (4%)	1.25D+1.5L	L
Shear	494 lb	5'2 3/8"	5798 lb	0.085 (9%)	1.25D+1.5L	L
Perm Defl in.	0.003 (L/24780)	3'2 3/4"	0.202 (L/360)	0.015 (1%)	D	Uniform
LL Defl inch	0.007 (L/10726)	3'2 11/16"	0.152 (L/480)	0.045 (4%)	L	L
TL Defl inch	0.010 (L/7486)	3'2 11/16"	0.303 (L/240)	0.032 (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 28, 2021

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 1.75.
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 Fill all hanger nailing holes.
4 Girders are designed to be supported on the bottom edge only.
5 Top must be continuously laterally braced.
6 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	Point	0-3-13		Far Face	26 lb	70 lb	0 lb	0 lb	J1
2	Part. Uniform	0-11-13 to 4-11-13		Far Face	30 PLF	81 PLF	0 PLF	0 PLF	
3	Point	5-7-13		Far Face	32 lb	84 lb	0 lb	0 lb	J1
4	Point	6-2-14		Top	100 lb	191 lb	0 lb	0 lb	C1

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 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

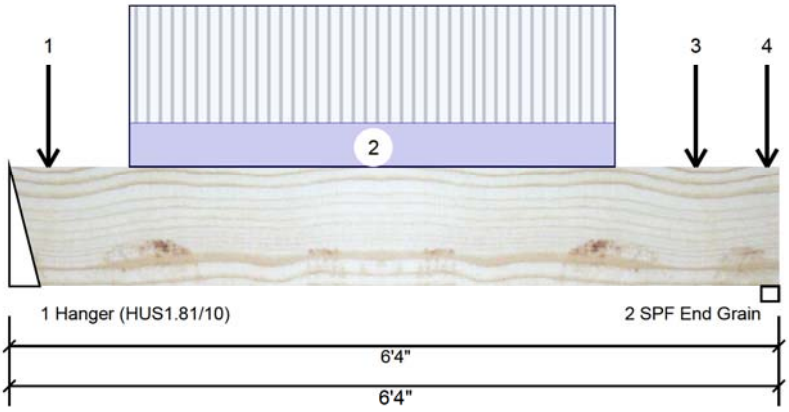
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

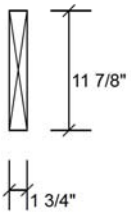
iStructDesign

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

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

Level: Ground Floor





...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	Bearing Length	0-3-8							
	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.

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 28, 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 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

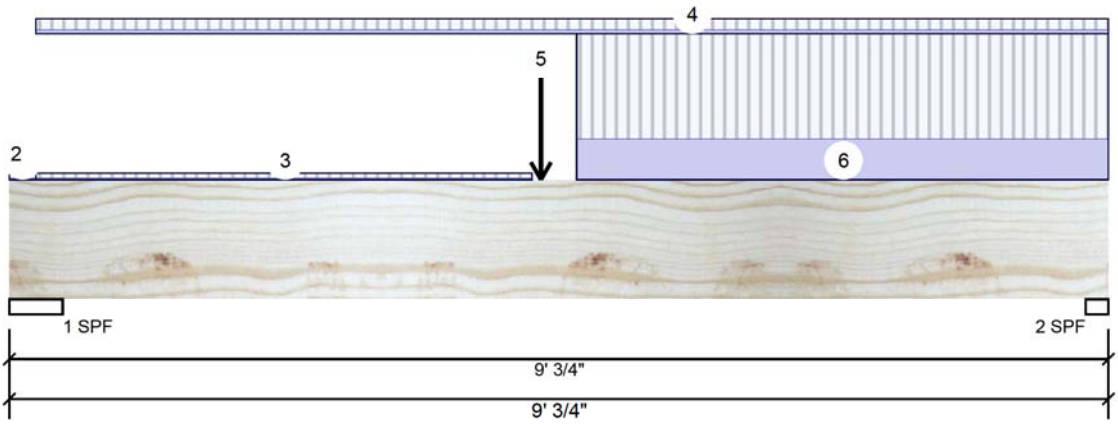
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

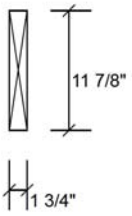
iStruct Design

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

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	439	197	0	0
2	Vertical	806	339	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	Vert	16%	247 / 658	905	L	1.25D+1.5L
2 - SPF	2.250"	Vert	67%	423 / 1209	1632	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3126 ft-lb	4'11 13/16"	17130 ft-lb	0.182 (18%)	1.25D+1.5L	L
Unbraced	3126 ft-lb	4'11 13/16"	17130 ft-lb	0.182 (18%)	1.25D+1.5L	L
Shear	1167 lb	7'10 5/8"	5798 lb	0.201 (20%)	1.25D+1.5L	L
Perm Defl in.	0.021 (L/5005)	4'9 3/4"	0.285 (L/360)	0.072 (7%)	D	Uniform
LL Defl inch	0.048 (L/2153)	4'10 1/8"	0.214 (L/480)	0.223 (22%)	L	L
TL Defl inch	0.068 (L/1505)	4'10"	0.428 (L/240)	0.159 (16%)	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 28, 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 4'8 3/16" 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
1	Tie-In	0-0-0 to 0-2-10	0-2-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-10	0-5-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-10 to 4-3-11	0-2-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	0-2-10 to 9-0-12	0-5-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Point	4-4-9		Far Face	109 lb	251 lb	0 lb	0 lb	F6
6	Part. Uniform	4-8-1 to 9-0-12		Top	70 PLF	180 PLF	0 PLF	0 PLF	
	Self Weight				5 PLF				

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

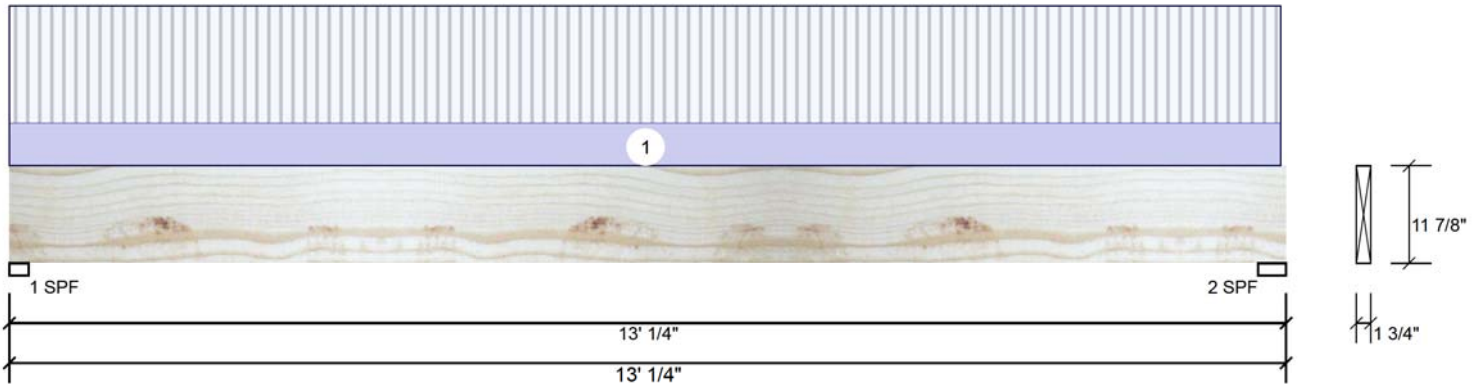
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

iStructDesign

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

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	204	107	0	0
2	Vertical	205	108	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	Vert	17%	134 / 306	441	L	1.25D+1.5L
2 - SPF	3.438"	Vert	12%	135 / 308	443	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1365 ft-lb	6'5 5/8"	17130 ft-lb	0.080 (8%)	1.25D+1.5L	L
Unbraced	1365 ft-lb	6'5 5/8"	17130 ft-lb	0.080 (8%)	1.25D+1.5L	L
Shear	366 lb	1'2 1/4"	5798 lb	0.063 (6%)	1.25D+1.5L	L
Perm Defl in.	0.022 (L/7064)	6'5 5/8"	0.422 (L/360)	0.051 (5%)	D	Uniform
LL Defl inch	0.041 (L/3714)	6'5 5/8"	0.317 (L/480)	0.129 (13%)	L	L
TL Defl inch	0.062 (L/2434)	6'5 5/8"	0.633 (L/240)	0.099 (10%)	D+L	L

June 28, 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 bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-11-10	0-9-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				5 PLF				

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.

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.

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 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

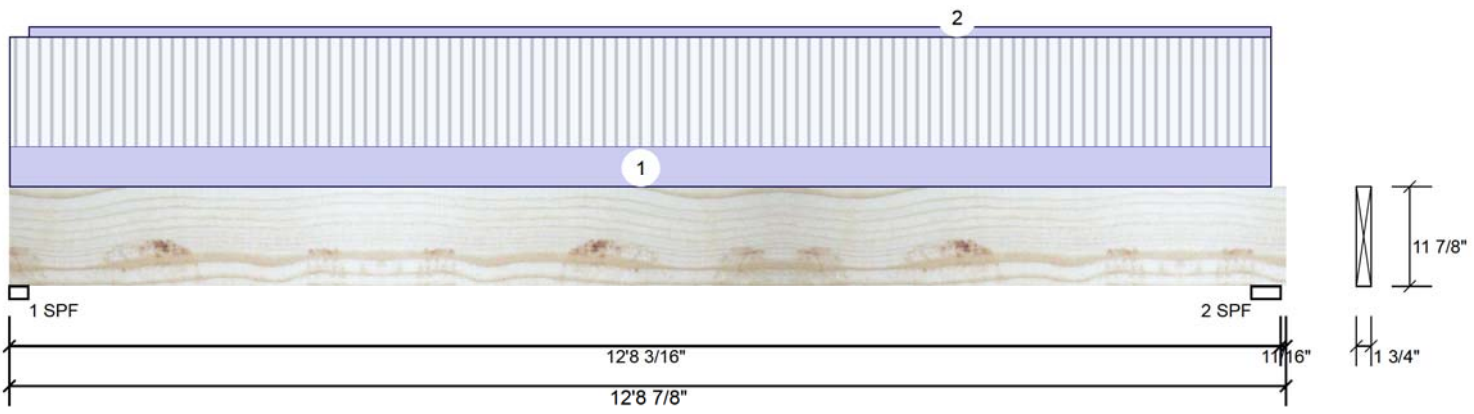
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

iStructDesign

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F8-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	136	93	0	0
2	Vertical	134	93	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.250"	Vert	13%	117 / 204	321	L_	1.25D+1.5L
2 - SPF	3.500"	Vert	8%	117 / 202	319	L_	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	977 ft-lb	6'4"	17130 ft-lb	0.057 (6%)	1.25D+1.5L	L_
Unbraced	977 ft-lb	6'4"	17130 ft-lb	0.057 (6%)	1.25D+1.5L	L_
Shear	267 lb	1'2 1/8"	5798 lb	0.046 (5%)	1.25D+1.5L	L_
Perm Defl in.	0.018 (L/8374)	6'4"	0.414 (L/360)	0.043 (4%)	D	Uniform
LL Defl inch	0.026 (L/5776)	6'4"	0.310 (L/480)	0.083 (8%)	L	LL
TL Defl inch	0.044 (L/3418)	6'4"	0.621 (L/240)	0.070 (7%)	D+L	LL
LL Cant	-0.000 (2L/3962)	Rt Cant	0.200 (2L/480)	0.002 (0%)	L	LL
TL Cant	-0.001 (2L/2345)	Rt Cant	0.300 (2L/240)	0.002 (0%)	D+L	LL

I.MATIJEVIC
100528832
LICENSED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO
June 28, 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.

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 bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-1 to 12-7-1	0-6-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-2-5 to 12-7-1		Top	2 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				5 PLF				

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.

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

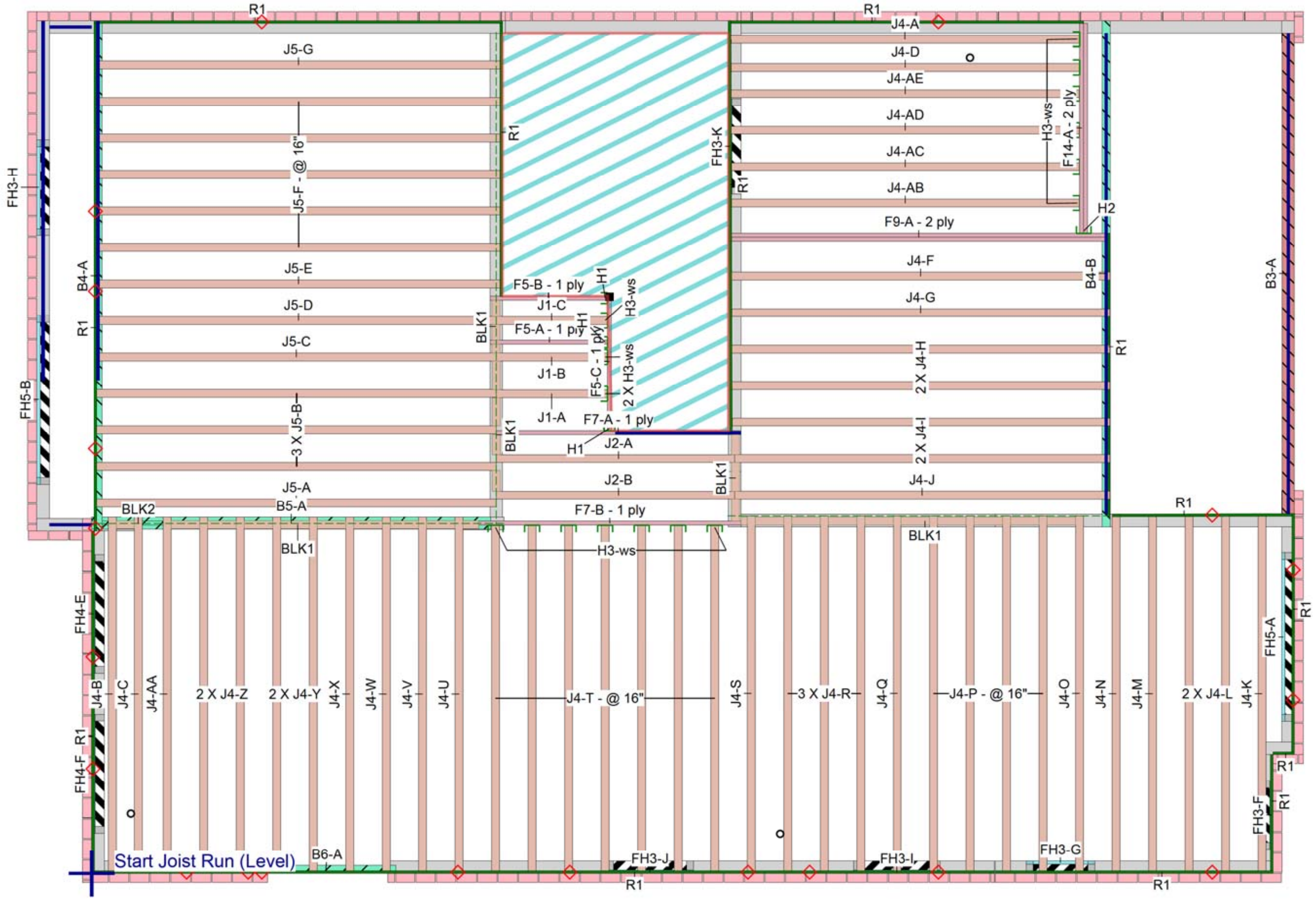
This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

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
F9	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	14-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	11.875			2	10-0-0
F14	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			3	6-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J5	AJS 24	3.5	11.875			13	16-0-0
J4	AJS 24	3.5	11.875			46	14-0-0
J2	AJS 24	3.5	11.875			2	10-0-0
J1	AJS 24	3.5	11.875			3	6-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			14	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 24	3.5	11.875	LinFt		Varies	27-0-0

Hanger

Label	Pcs	Description	Skew	Slope	Beam/Girder fasteners	Supported Member fasteners
H1	3	HUS1.81/10			30 10dx1 1/2	10 16d
H2	1	LF3511			12 10d	2 #8x1 1/4WS
H3	16	MIT411.88			4 10dx1 1/2	4 10dx1 1/2

JOB INFORMATION

Builder
GREENPARK

Project
ROUNDEL HOMES INC

Shipping
PINETREE 38-1-1
RICHMOND HILL,ON

Sales Rep
RALPH MIRIGELLO

Designer
W C

Plotted
June 08, 2021

Layout Name
PT38-1-1 STANDARD & DECK CONDITION

Job Path

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	21

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

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

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

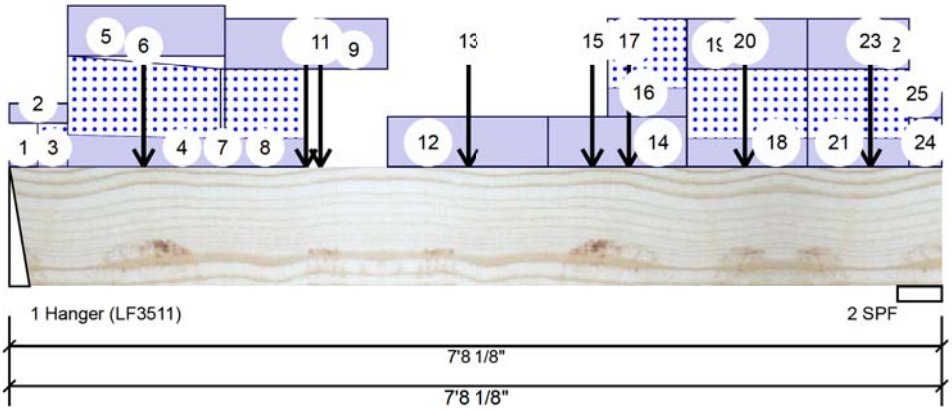
AJS140 I-Joists can be substituted with LP20 I-Joists for 9.5" and 11.875" depths shown on this layout.

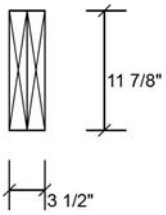
This layout is to be used as an installation guide only. It is meant to be used in conjunction with the architectural and structural drawings, not to replace them

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F14-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	819	829	383	0
2	Vertical	923	953	423	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	Vert	51%	1037 / 1612	2648	L	1.25D+1.5L +S
2 - SPF	4.375"	Vert	32%	1192 / 1807	2999	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5250 ft-lb	3'9 1/4"	34261 ft-lb	0.153 (15%)	1.25D+1.5L +S	L
Unbraced	5250 ft-lb	3'9 1/4"	34261 ft-lb	0.153 (15%)	1.25D+1.5L +S	L
Shear	2669 lb	6'3 7/8"	11596 lb	0.230 (23%)	1.25D+1.5L +S	L
Perm Defl in.	0.021 (L/4233)	3'9 1/4"	0.242 (L/360)	0.085 (9%)	D	Uniform
LL Defl inch	0.025 (L/3486)	3'9 1/4"	0.182 (L/480)	0.138 (14%)	L+0.5S	L
TL Defl inch	0.046 (L/1912)	3'9 1/4"	0.363 (L/240)	0.126 (13%)	D+L+0.5S	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 28, 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. Multiple plies must be fastened together as per manufacturer's details.
5. Top loads must be supported equally by all plies.
6. Top must be continuously laterally braced.
7. Bottom must have sheathing attached or be continuously braced.
8. Lateral slenderness ratio based on full section width.

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 0-2-13	0-3-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 0-5-12		Top	31 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-2-13		Top	20 PLF	0 PLF	50 PLF	0 PLF	

Continued on page 2...

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

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

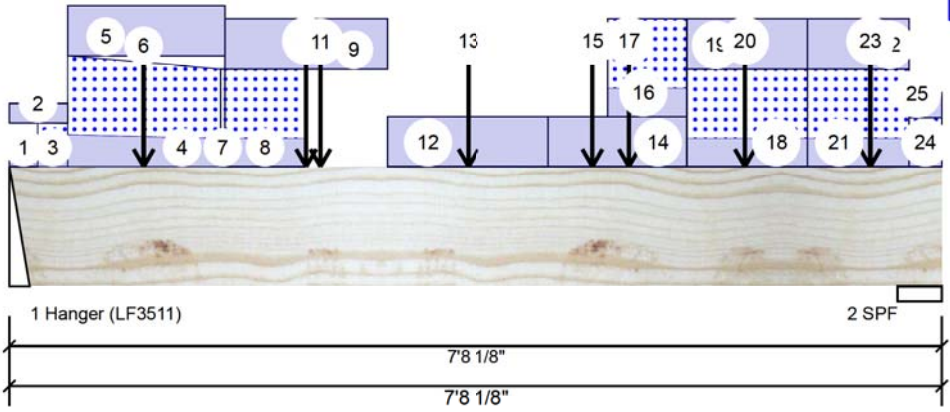
Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F14-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED

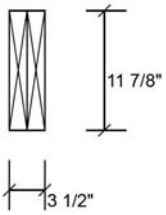
Level: Second Floor

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.



June 28, 2021



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
	End	0-5-12			20 PLF	0 PLF	49 PLF	0 PLF	
4	Tapered Start	0-5-12		Top	51 PLF	0 PLF	126 PLF	0 PLF	
	End	1-8-13			45 PLF	0 PLF	111 PLF	0 PLF	
5	Part. Uniform	0-5-12 to 1-9-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	1-1-4		Far Face	122 lb	324 lb	0 lb	0 lb	J4
7	Part. Uniform	1-8-13 to 1-9-4		Top	45 PLF	0 PLF	111 PLF	0 PLF	
8	Part. Uniform	1-9-4 to 2-5-2		Top	45 PLF	0 PLF	111 PLF	0 PLF	
9	Part. Uniform	1-9-4 to 3-1-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Point	2-5-4		Far Face	147 lb	335 lb	0 lb	0 lb	J4
11	Point	2-6-10		Top	66 lb	0 lb	139 lb	0 lb	Header Column
	Bearing Length	0-5-8							
12	Part. Uniform	3-1-4 to 4-5-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
13	Point	3-9-4		Far Face	158 lb	335 lb	0 lb	0 lb	J4
14	Part. Uniform	4-5-4 to 5-6-15		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
15	Point	4-9-10		Top	66 lb	0 lb	139 lb	0 lb	Header Column
	Bearing Length	0-5-8							
16	Part. Uniform	4-11-2 to 5-6-15		Top	45 PLF	0 PLF	111 PLF	0 PLF	
17	Point	5-1-4		Far Face	135 lb	287 lb	0 lb	0 lb	J4
18	Part. Uniform	5-6-15 to 6-6-14		Top	45 PLF	0 PLF	111 PLF	0 PLF	
19	Part. Uniform	5-6-15 to 6-6-14		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
20	Point	6-0-11		Far Face	121 lb	249 lb	0 lb	0 lb	J4
21	Part. Uniform	6-6-14 to 7-4-14		Top	45 PLF	0 PLF	111 PLF	0 PLF	
22	Part. Uniform	6-6-14 to 7-4-14		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
23	Point	7-1-1		Far Face	100 lb	209 lb	0 lb	0 lb	J4
24	Part. Uniform	7-4-14 to 7-8-2		Top	22 PLF	0 PLF	56 PLF	0 PLF	
25	Part. Uniform	7-4-14 to 7-8-2		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 PLF				

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.

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 5/24/2024

Manufacturer Info

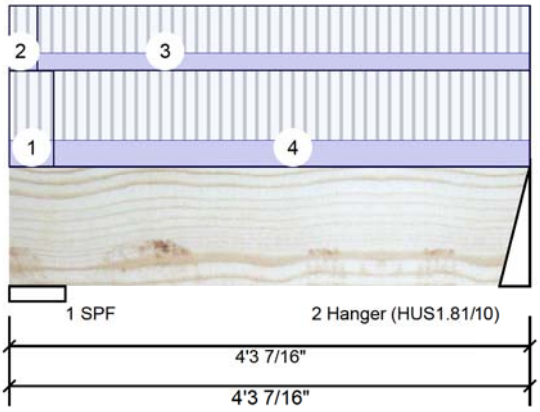
Forex
APA: PR-L318

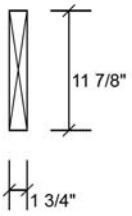
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F5-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	60	33	0	0
2	Vertical	54	30	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	2%	42 / 90	131	L	1.25D+1.5L
2 - Hanger	3.000"	Vert	3%	38 / 82	119	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	100 ft-lb	2'3"	17130 ft-lb	0.006 (1%)	1.25D+1.5L	L
Unbraced	100 ft-lb	2'3"	17130 ft-lb	0.006 (1%)	1.25D+1.5L	L
Shear	53 lb	1'5 3/8"	5798 lb	0.009 (1%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/165445)	2'3"	0.124 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/91572)	2'3"	0.093 (L/480)	0.005 (1%)	L	L
TL Defl inch	0.001 (L/58946)	2'3"	0.185 (L/240)	0.004 (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.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 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 be laterally braced at 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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-6	0-4-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-12	0-3-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-12 to 4-3-7	0-3-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Tie-In	0-4-6 to 4-3-7	0-4-13	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 5/24/2024

Manufacturer Info

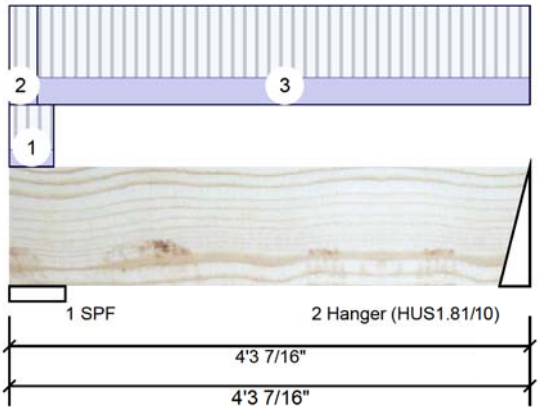
Forex
APA: PR-L318

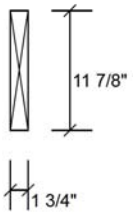
Kott Inc
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F5-B 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	41	26	0	0
2	Vertical	33	22	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	2%	32 / 61	93	L	1.25D+1.5L
2 - Hanger	3.000"	Vert	2%	28 / 50	78	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	66 ft-lb	2'3"	17130 ft-lb	0.004 (0%)	1.25D+1.5L	L
Unbraced	66 ft-lb	2'3"	17130 ft-lb	0.004 (0%)	1.25D+1.5L	L
Shear	37 lb	3' 9/16"	5798 lb	0.006 (1%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/223938)	2'3"	0.124 (L/360)	0.002 (0%)	D	Uniform
LL Defl inch	0.000 (L/149025)	2'3"	0.093 (L/480)	0.003 (0%)	L	L
TL Defl inch	0.000 (L/89479)	2'3"	0.185 (L/240)	0.003 (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.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 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 be laterally braced at 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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-6	0-3-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-2-12	0-4-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-12 to 4-3-7	0-4-15	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 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

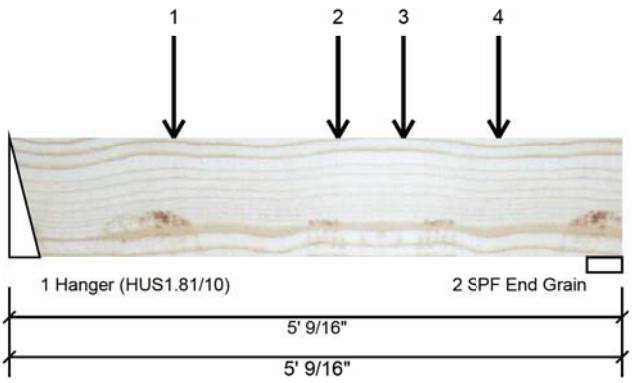
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

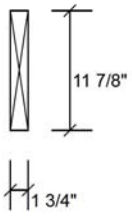
iStruct Design

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F5-C 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	147	71	0	0
2	Vertical	158	77	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	Vert	8%	88 / 221	309	L	1.25D+1.5L
2 - SPF End Grain	3.500"	Vert	7%	97 / 237	334	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	458 ft-lb	2'8 3/8"	17130 ft-lb	0.027 (3%)	1.25D+1.5L	L
Unbraced	458 ft-lb	2'8 3/8"	17130 ft-lb	0.027 (3%)	1.25D+1.5L	L
Shear	332 lb	3'9 3/16"	5798 lb	0.057 (6%)	1.25D+1.5L	L
Perm Defl in.	0.001 (L/40873)	2'8 3/8"	0.154 (L/360)	0.009 (1%)	D	Uniform
LL Defl inch	0.003 (L/19269)	2'8 3/8"	0.116 (L/480)	0.025 (2%)	L	L
TL Defl inch	0.004 (L/13095)	2'8 3/8"	0.232 (L/240)	0.018 (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 28, 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	Point	1-4-3		Far Face	42 lb	111 lb	0 lb	0 lb	J1
2	Point	2-8-6		Far Face	28 lb	75 lb	0 lb	0 lb	J1
3	Point	3-2-13		Far Face	30 lb	54 lb	0 lb	0 lb	F5
4	Point	4-0-6		Far Face	24 lb	65 lb	0 lb	0 lb	J1
	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 5/24/2024

Manufacturer Info

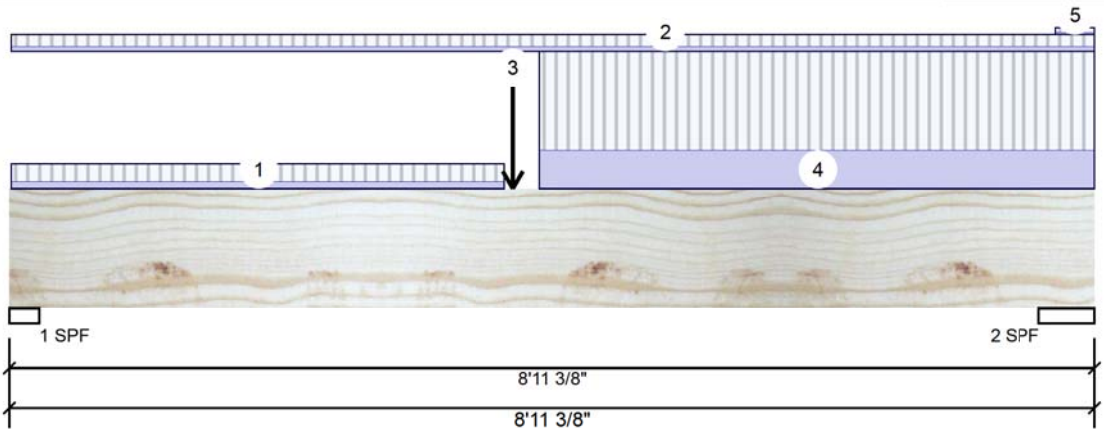
Forex
APA: PR-L318

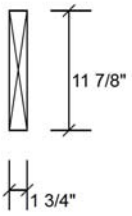
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F7-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	412	185	0	0
2	Vertical	736	311	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.940"	Vert	27%	232 / 619	850	L	1.25D+1.5L
2 - SPF	5.500"	Vert	25%	388 / 1103	1492	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2578 ft-lb	4'8 11/16"	17130 ft-lb	0.150 (15%)	1.25D+1.5L	L
Unbraced	2578 ft-lb	4'8 11/16"	17130 ft-lb	0.150 (15%)	1.25D+1.5L	L
Shear	983 lb	7'6"	5798 lb	0.170 (17%)	1.25D+1.5L	L
Perm Defl in.	0.017 (L/6036)	4'6 3/16"	0.279 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.038 (L/2638)	4'6 5/8"	0.209 (L/480)	0.182 (18%)	L	L
TL Defl inch	0.055 (L/1836)	4'6 1/2"	0.418 (L/240)	0.131 (13%)	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 28, 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 4'9 9/16" 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
1	Tie-In	0-0-3 to 4-0-14	0-8-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-3 to 8-11-6	0-5-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	4-1-12		Far Face	71 lb	147 lb	0 lb	0 lb	F5
4	Part. Uniform	4-4-6 to 8-11-6		Top	60 PLF	156 PLF	0 PLF	0 PLF	
5	Tie-In	8-7-8 to 8-11-6	0-2-5	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 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

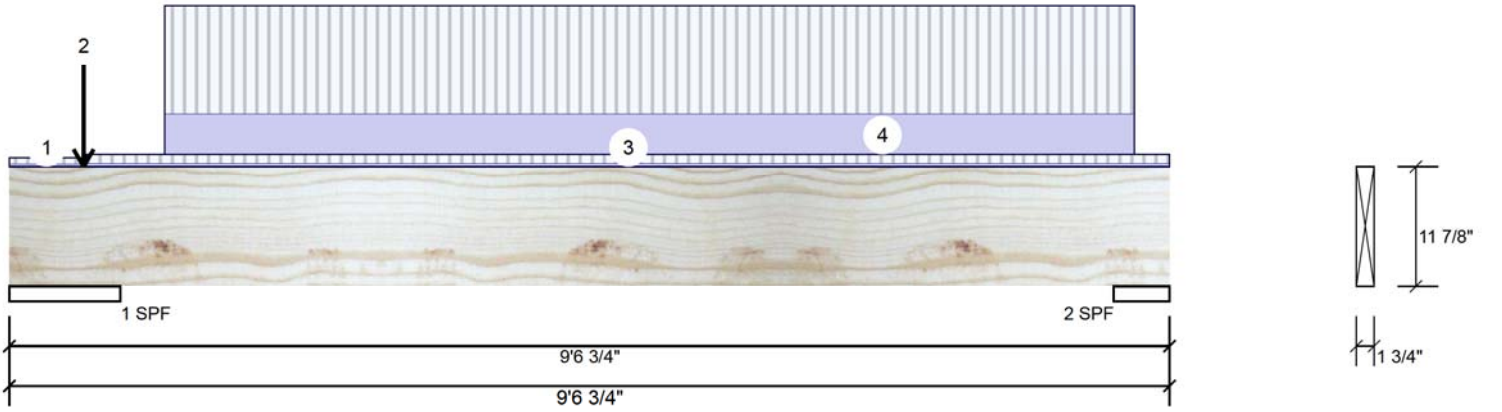
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

iStructDesign

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F7-B 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	1197	471	0	0
2	Vertical	1154	453	0	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	10.938"	Vert	20%	589 / 1795	2384	L	1.25D+1.5L
2 - SPF	5.500"	Vert	39%	566 / 1730	2296	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	4617 ft-lb	5' 1/4"	17130 ft-lb	0.270 (27%)	1.25D+1.5L	L
Unbraced	4617 ft-lb	5' 1/4"	17130 ft-lb	0.270 (27%)	1.25D+1.5L	L
Shear	2162 lb	1'10 13/16"	5798 lb	0.373 (37%)	1.25D+1.5L	L
Perm Defl in.	0.028 (L/3542)	5' 1/8"	0.277 (L/360)	0.102 (10%)	D	Uniform
LL Defl inch	0.072 (L/1386)	5' 1/8"	0.208 (L/480)	0.346 (35%)	L	L
TL Defl inch	0.100 (L/996)	5' 1/8"	0.416 (L/240)	0.241 (24%)	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 28, 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 0-7-10	0-4-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-7-5		Near Face	62 lb	165 lb	0 lb	0 lb	J4
3	Tie-In	0-7-10 to 9-6-12	0-6-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Part. Uniform	1-3-5 to 9-3-5		Near Face	93 PLF	249 PLF	0 PLF	0 PLF	
	Self Weight				5 PLF				

Notes

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

Lumber

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

Handling & Installation

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

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

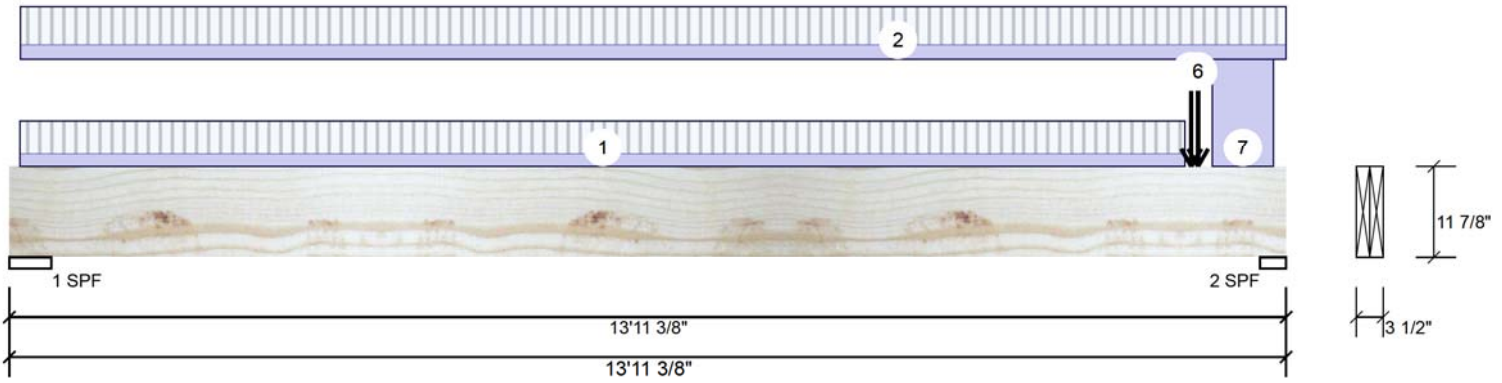
Kott Inc.
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 905-642-4400

iStructDesign

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

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 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	415	256	22	0
2	Vertical	1114	1075	380	0

Bearings and Factored Reactions

Bearing	Length	Dir.	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	Vert	8%	319 / 644	964	L	1.25D+1.5L +S
2 - SPF	3.438"	Vert	46%	1344 / 2051	3395	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3698 ft-lb	8'4 3/16"	34261 ft-lb	0.108 (11%)	1.25D+1.5L +S	L
Unbraced	3698 ft-lb	8'4 3/16"	34261 ft-lb	0.108 (11%)	1.25D+1.5L +S	L
Shear	3225 lb	12'8 1/16"	11596 lb	0.278 (28%)	1.25D+1.5L +S	L
Perm Defl in.	0.037 (L/4293)	7'5 13/16"	0.444 (L/360)	0.084 (8%)	D	Uniform
LL Defl inch	0.058 (L/2772)	7'4 5/16"	0.333 (L/480)	0.173 (17%)	L+0.5S	L
TL Defl inch	0.095 (L/1684)	7'4 7/8"	0.666 (L/240)	0.142 (14%)	D+L+0.5S	L

Design Notes

1 Performed Secondary Bearing Check (CSA 086-14 6.5.7.3). Assumed point load size: beam width X 3.4375.
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 Multiple plies must be fastened together as per manufacturer's details.
5 Top loads must be supported equally by all plies.
6 Top must be continuously laterally braced.
7 Bottom must be laterally braced at a maximum of 12'11 7/8" o.c.
8 Lateral slenderness ratio based on full section width.

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.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 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 rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info

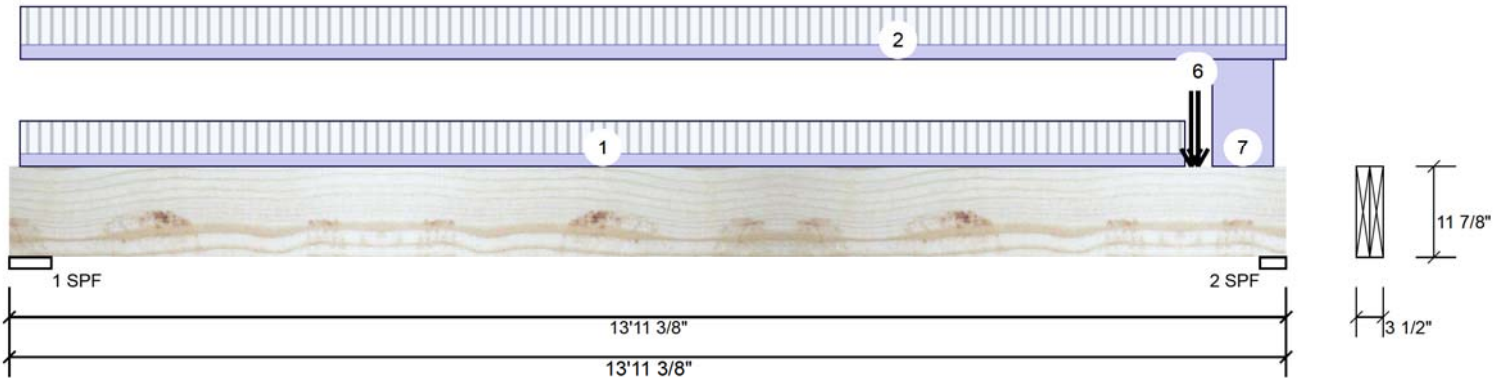
Forex
APA: PR-L318

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

Client:	GREENPARK	Date:	6/28/2021
Project:	ROUNDEL HOMES INC	Input by:	W C
Address:	PINETREE 38-1-1 RICHMOND HILL,ON	Job Name:	PT38-1-1 STANDARD & DECK CONDITION
		Project #:	ROUNDEL HOMES INC

F9-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	0-1-6 to 12-10-2	0-7-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-7 to 13-11-6	0-8-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	12-10-15		Top	8 lb	0 lb	19 lb	0 lb	
	Bearing Length	0-5-8							
4	Point	12-10-15		Top	23 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
5	Point	12-10-15		Top	18 lb	0 lb	0 lb	0 lb	Wall Self Weight
	Bearing Length	0-5-8							
6	Point	12-11-14		Far Face	829 lb	819 lb	383 lb	0 lb	F14
7	Part. Uniform	13-1-11 to 13-9-11		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				10 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.

LICENSED PROFESSIONAL ENGINEER
I.MATIJEVIC
100528832
PROVINCE OF ONTARIO
June 28, 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 rotation
6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 5/24/2024

Manufacturer Info

Forex
APA: PR-L318

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