

**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**

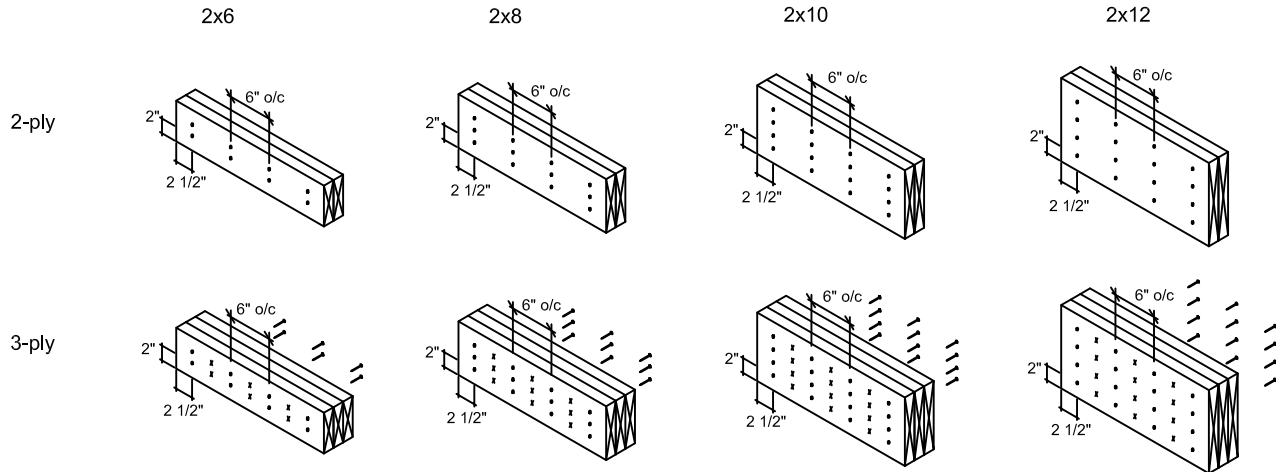
1. The building component used in construction must be the same as indicated on the drawings.
2. The building component must be installed and assembled as per specification shown on the drawing and in accordance with the manufacturer's assembly and installation.
3. Members consisting of multiple plies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



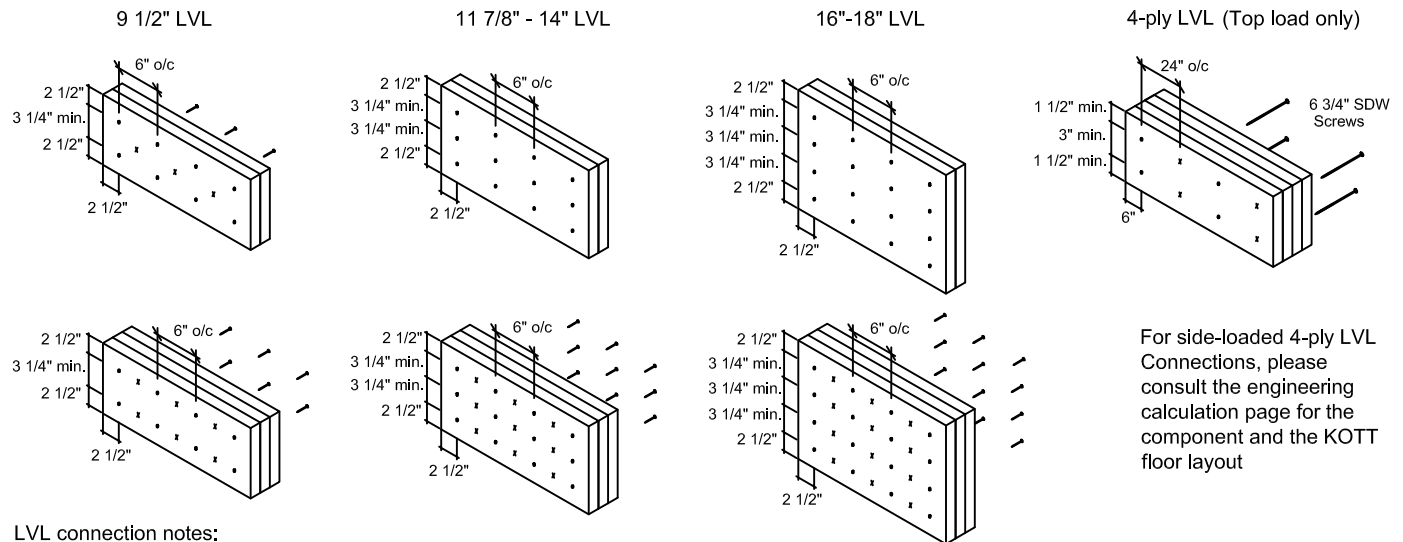
## Conventional Connections



### 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 or screw driven from the opposite side.

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

## Multiple Member Connections

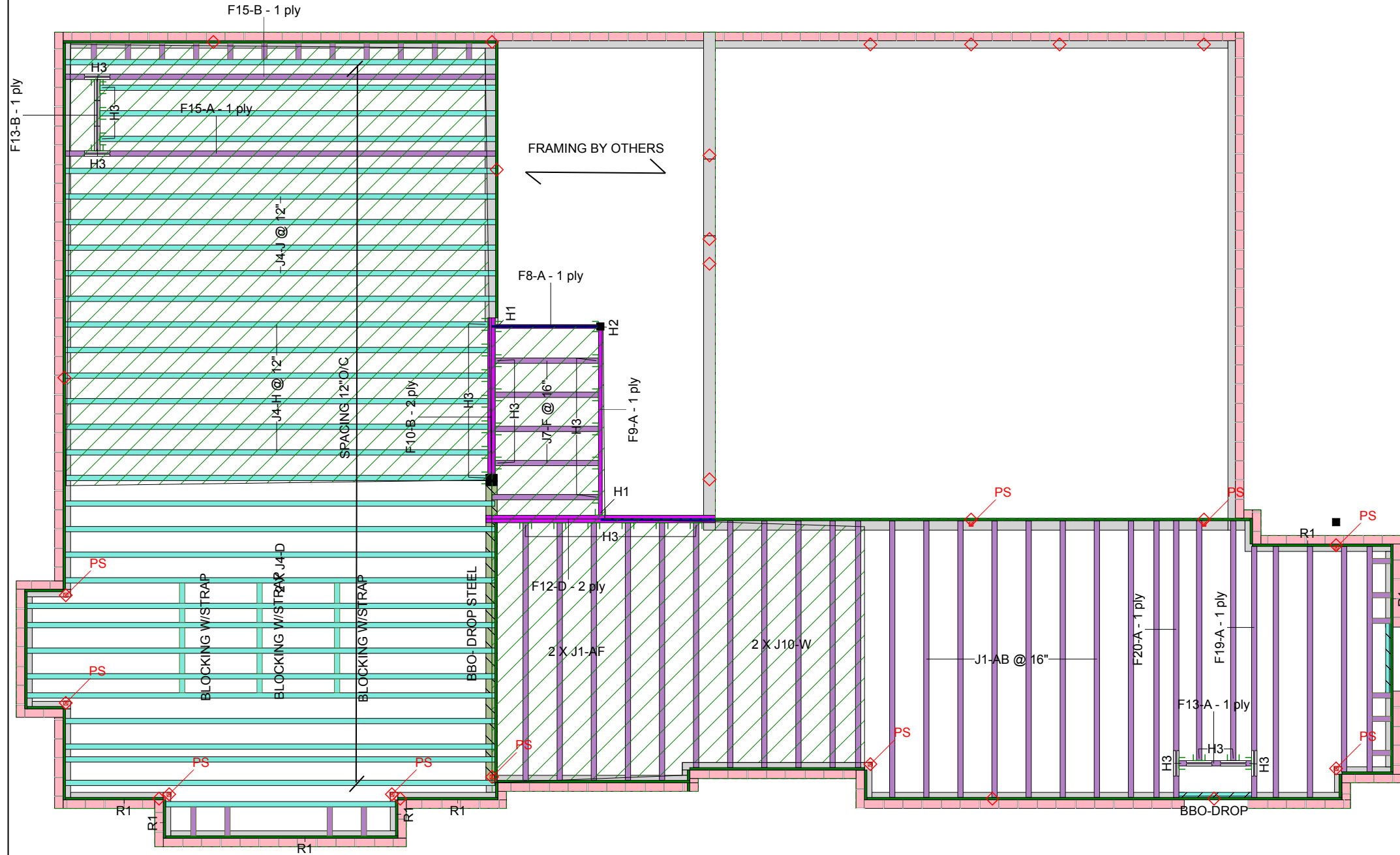
All connections are for uniformly distributed loads.

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



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

F13-B - 1 ply



A circular professional seal for a Licensed Professional Engineer in the Province of Ontario. The seal features the text "LICENSED PROFESSIONAL ENGINEER" at the top and "PROVINCE OF ONTARIO" at the bottom. In the center, the name "I. MATUJEVIC" and the license number "100528832" are printed. A blue ink signature is written over the bottom half of the seal.



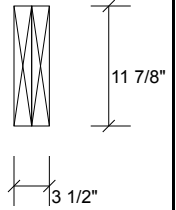
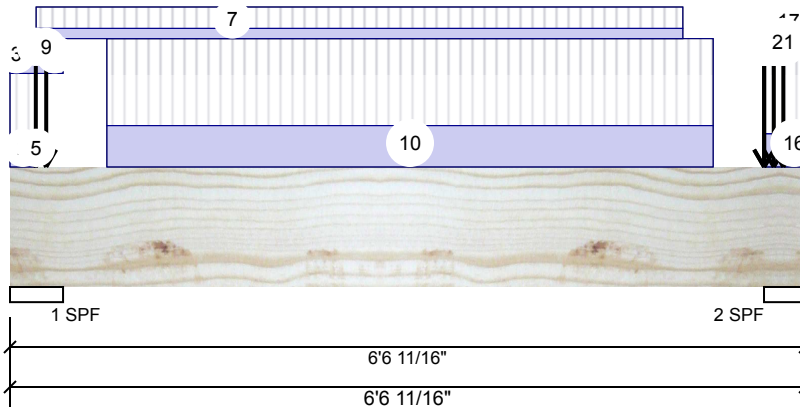


Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 2

**F10-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED** Level: Ground Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	3723	1780	0	0
2	2558	1233	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	69%	2225 / 5585	7809	L	1.25D+1.5L
2 - SPF	4.063"	61%	1542 / 3836	5378	L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3714 ft-lb	3'3 3/4"	34261 ft-lb	0.108 (11%)	1.25D+1.5L	L
Unbraced	3714 ft-lb	3'3 3/4"	32638 ft-lb	0.114 (11%)	1.25D+1.5L	L
Shear	2285 lb	5'3 1/2"	11596 lb	0.197 (20%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/8835)	3'3 7/8"	0.197 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.016 (L/4425)	3'3 7/8"	0.197 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.024 (L/2948)	3'3 7/8"	0.295 (L/240)	0.080 (8%)	D+L	L

### Design Notes

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

**READ ALL NOTES ON THIS PAGE AND ON 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.**



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
2	Part. Uniform	0-0-0 to 0-2-9		Top	107 PLF	248 PLF	0 PLF	0 PLF	J4
3	Part. Uniform	0-0-0 to 0-2-9		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Point	0-2-9		Top	1073 lb	2359 lb	0 lb	0 lb	F10 F10 F12 F12
5	Part. Uniform	0-2-9 to 0-2-9		Top	107 PLF	248 PLF	0 PLF	0 PLF	Pass-Thru Framing Squash Block is Required at all point loads over bearings
6	Part. Uniform	0-2-9 to 0-5-4		Top	80 PLF	0 PLF	0 PLF	0 PLF	Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Continued on page 2...

### Notes

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

### Lumber

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

### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

Forex  
APA: PR-L318

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



This design is valid until 10/18/2021



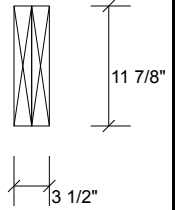
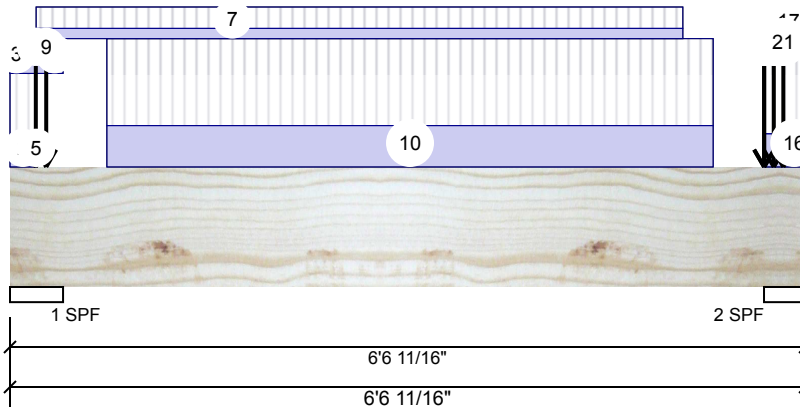


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Page 2 of 2

**F10-B 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
7	Part. Uniform	0-2-9 to 5-6-9		Near Face	39 PLF	81 PLF	0 PLF	0 PLF	
9	Point	0-3-9		Far Face	101 lb	229 lb	0 lb	0 lb	J4
10	Part. Uniform	0-9-9 to 5-9-9		Far Face	157 PLF	330 PLF	0 PLF	0 PLF	
16	Part. Uniform	6-2-10 to 6-6-11		Top	126 PLF	335 PLF	0 PLF	0 PLF	J4
17	Part. Uniform	6-2-10 to 6-6-11		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
18	Point	6-2-10		Top	1 lb	3 lb	0 lb	0 lb	
19	Point	6-2-10		Near Face	41 lb	83 lb	0 lb	0 lb	F8
20	Point	6-3-9		Far Face	96 lb	203 lb	0 lb	0 lb	J4
21	Point	6-4-8		Top	518 lb	1155 lb	0 lb	0 lb	F10 F10
	Self Weight				10 PLF				



January 04, 2019

**Pass-Thru Framing Squash Block 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.**

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

**Notes**

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

**Lumber**

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

chemicals

**Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Forex  
APA: PR-L318

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



This design is valid until 10/18/2021





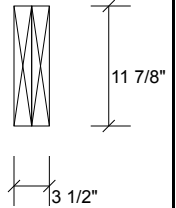
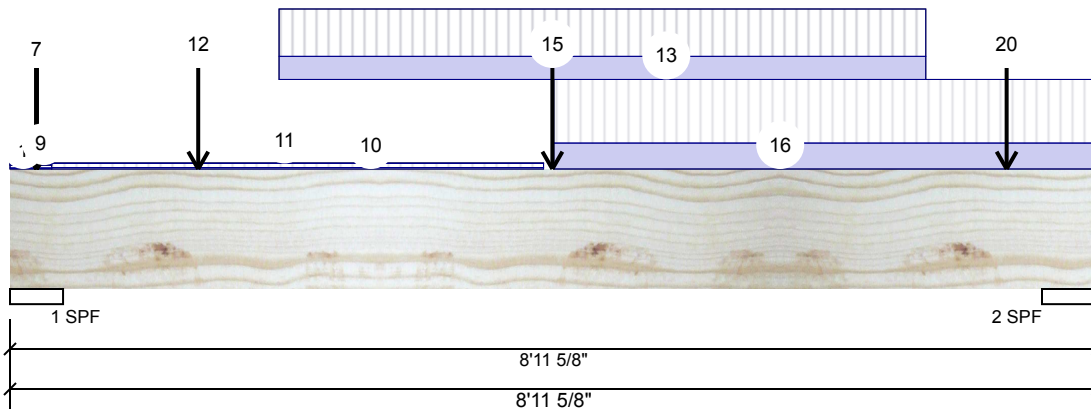


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Project #:

Page 1 of 2

**F12-D Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED** Level: Ground Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1330	706	0	0
2	1958	931	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	25%	883 / 1995	2878	L	1.25D+1.5L
2 - SPF	5.500"	35%	1164 / 2937	4101	L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7293 ft-lb	4'8 7/16"	34261 ft-lb	0.213 (21%)	1.25D+1.5L	L
Unbraced	7293 ft-lb	4'8 7/16"	31134 ft-lb	0.234 (23%)	1.25D+1.5L	L
Shear	3333 lb	7'7"	11596 lb	0.287 (29%)	1.25D+1.5L	L
Perm Defl in.	0.025 (L/3941)	4'6 7/8"	0.273 (L/360)	0.090 (9%)	D	Uniform
LL Defl inch	0.051 (L/1944)	4'7 5/16"	0.273 (L/360)	0.190 (19%)	L	L
TL Defl inch	0.076 (L/1302)	4'7 3/16"	0.410 (L/240)	0.180 (18%)	D+L	L

### Design Notes

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

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January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	(Span)0-7-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-4-2	(Span)0-4-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	0-2-10		Top	3 lb	7 lb	0 lb	0 lb	Pass-Thru Framing Squash Block is required at all point loads over bearings
4	Point	0-2-10		Top	2 lb	0 lb	0 lb	0 lb	Wall Self Weight
5	Point	0-2-10		Top	46 lb	113 lb	0 lb	0 lb	Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements

Continued on page 2...

### Notes

Calculated Structural 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

chemicals

### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

Forex  
APA: PR-L318

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



This design is valid until 10/18/2021



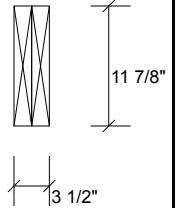
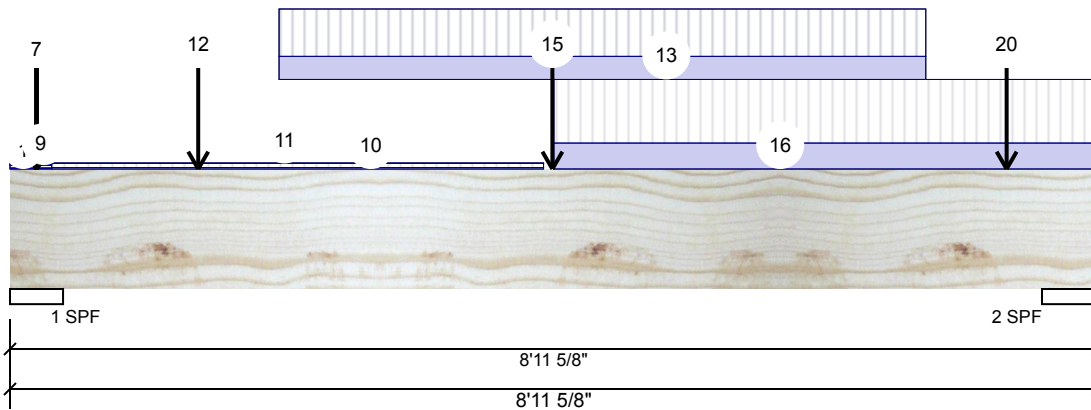


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Project #:

Page 2 of 2

**F12-D 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	Point	0-2-10		Top	12 lb	28 lb	0 lb	0 lb	J4
7	Point	0-2-10		Top	36 lb	0 lb	0 lb	0 lb	Wall Self Weight
8	Part. Uniform	0-2-12 to 0-4-2		Top	2 PLF	0 PLF	0 PLF	0 PLF	
9	Part. Uniform	0-2-12 to 0-4-2		Top	1 PLF	0 PLF	0 PLF	0 PLF	
10	Tie-In	0-4-2 to 4-4-13	(Span)0-10-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
11	Part. Uniform	0-4-2 to 4-4-13		Top	2 PLF	0 PLF	0 PLF	0 PLF	
12	Point	1-6-10		Near Face	124 lb	250 lb	0 lb	0 lb	J1
13	Part. Uniform	2-2-10 to 7-6-10		Near Face	98 PLF	201 PLF	0 PLF	0 PLF	
15	Point	4-5-11		Far Face	154 lb	281 lb	0 lb	0 lb	F9
16	Part. Uniform	4-5-13 to 8-11-10		Top	110 PLF	270 PLF	0 PLF	0 PLF	
20	Point	8-2-10		Near Face	122 lb	250 lb	0 lb	0 lb	J10
	Self Weight				10 PLF				



January 04, 2019

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

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

**Notes**

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

**Lumber**

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

**chemicals****Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Forex  
APA: PR-L318

Kott Lumber Company  
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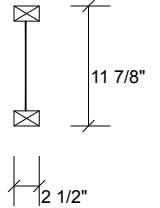
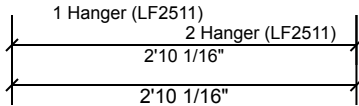
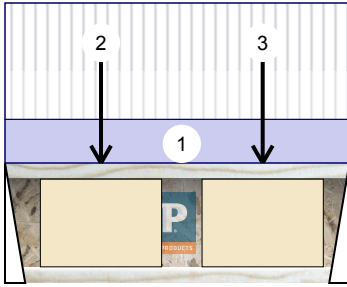
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Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

**F13-A LPI 20Plus 11.875" - PASSED**

Level: Ground Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	236	89	0	0
2	244	92	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	29%	111 / 355	466	L	1.25D+1.5L
2 - Hanger	2.000"	30%	115 / 366	481	L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	307 ft-lb	1'1 11/16"	6250 ft-lb	0.049 (5%)	1.25D+1.5L	L
Shear	475 lb	2'8 13/16"	2345 lb	0.202 (20%)	1.25D+1.5L	L
Perm Defl in. (L/24100)	0.001	1'3 3/4"	0.088 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.003 (L/9050)	1'3 3/4"	0.088 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.005 (L/6580)	1'3 3/4"	0.132 (L/240)	0.040 (4%)	D+L	L

### Design Notes

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-10-1	(Span)1-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-9-8		Far Face	77 lb	205 lb	0 lb	0 lb	J10
3	Point	2-1-8		Far Face	74 lb	197 lb	0 lb	0 lb	J10

**Pass-Thru Framing Squash Block 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.**

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

### Notes

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

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This design is valid until  
10/31/2020

### Manufacturer Info

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

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







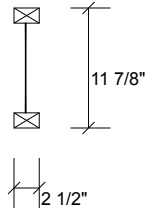
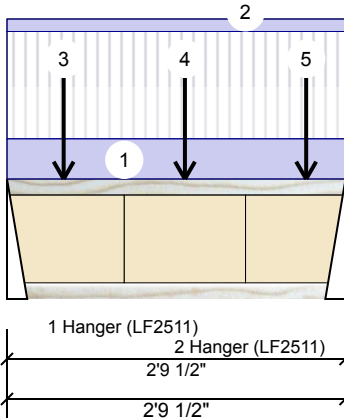
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Page 1 of 1

**F13-B LPI 20Plus 11.875" - PASSED**

Level: Ground Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	404	192	0	0
2	430	205	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - Hanger	2.000"	53% 240 / 606	846 L	1.25D+1.5L
2 - Hanger	2.000"	57% 256 / 645	901 L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	595 ft-lb	1'5 5/8"	6250 ft-lb	0.095 (10%)	1.25D+1.5L	L
Shear	896 lb	2'8 1/4"	2345 lb	0.382 (38%)	1.25D+1.5L	L
Perm Defl in. (L/10568)	0.003	1'5 5/8"	0.086 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.006 (L/5035)	1'5 5/8"	0.086 (L/360)	0.070 (7%)	L	L
TL Defl inch	0.009 (L/3410)	1'5 5/8"	0.129 (L/240)	0.070 (7%)	D+L	L

### Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.003", Long Term = 0.004"
- 3 Fill all hanger nailing holes.
- 4 See manufacture installation guide note E4 for installation details
- 5 Girders are designed to be supported on the bottom edge only.
- 6 Top flange braced at bearings.
- 7 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 2-9-8	(Span)1-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-9-8		Top	3 PLF	0 PLF	0 PLF	0 PLF	
3	Point	0-5-10		Near Face	113 lb	239 lb	0 lb	0 lb	J3
4	Point	1-5-10		Near Face	145 lb	305 lb	0 lb	0 lb	J3
5	Point	2-5-10		Near Face	104 lb	218 lb	0 lb	0 lb	J3

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

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

**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

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### Manufacturer Info

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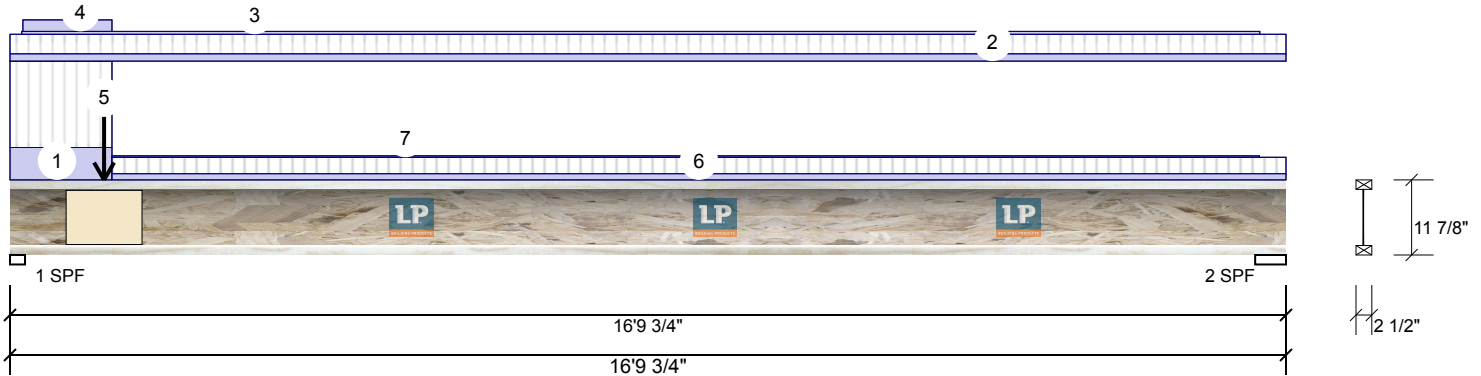
Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

**F15-A LPI 20Plus 11.875" - PASSED**

Level: Ground Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	647	313	0	0
2	242	118	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	83%	391 / 971	1362	L	1.25D+1.5L
2 - SPF	4.875"	28%	148 / 363	511	L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	2308 ft-lb	7'1 5/8"	6250 ft-lb	0.369 (37%)	1.25D+1.5L	L
Shear	1342 lb	1 5/8"	2345 lb	0.572 (57%)	1.25D+1.5L	L
Perm Defl in.	0.093 (L/2110)	7'11 3/8"	0.544 (L/360)	0.170 (17%)	D	Uniform
LL Defl inch	0.189 (L/1035)	7'11 5/16"	0.544 (L/360)	0.350 (35%)	L	L
TL Defl inch	0.282 (L/695)	7'11 5/16"	0.817 (L/240)	0.350 (35%)	D+L	L

### Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.093", Long Term = 0.139"
- 3 See manufacture installation guide note E4 for installation details
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top flange must be laterally braced at a maximum of 6'10" o.c.
- 6 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-4-2	(Span)3-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 16-9-12	(Span)0-8-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-1-14 to 16-5-10		Top	2 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-1 to 1-4-2		Top	8 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-14		Far Face	192 lb	404 lb	0 lb	0 PSF	Pass-Thru Framing Squash Block is required at all point loads over bearings
6	Tie-In	1-4-2 to 16-9-12	(Span)0-6-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-2 to 16-5-9		Top	1 PLF	0 PLF	0 PLF	0 PSF	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.**

#### Notes

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#### Manufacturer Info

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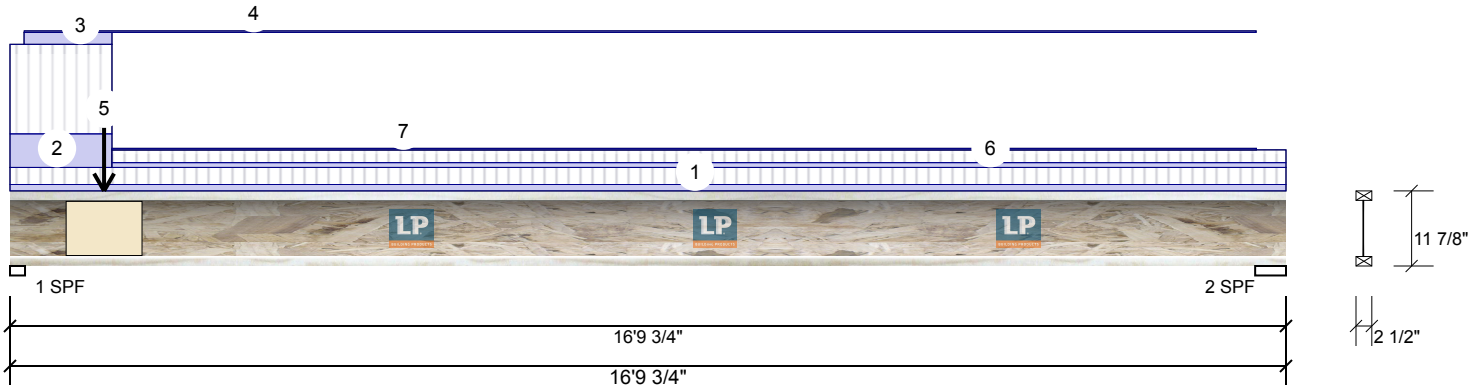
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Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

**F15-B LPI 20Plus 11.875" - PASSED**

Level: Ground Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	634	302	0	0
2	202	95	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	2.375"	81%	378 / 951	1329 L 1.25D+1.5L
2 - SPF	4.875"	23%	119 / 302	421 L 1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1986 ft-lb	6'8 3/4"	6250 ft-lb	0.318 (32%)	1.25D+1.5L	L
Shear	1310 lb	1 5/8"	2345 lb	0.559 (56%)	1.25D+1.5L	L
Perm Defl in.	0.078 (L/2505)	7'10 1/4"	0.544 (L/360)	0.140 (14%)	D	Uniform
LL Defl inch	0.164 (L/1193)	7'10 1/4"	0.544 (L/360)	0.300 (30%)	L	L
TL Defl inch	0.243 (L/808)	7'10 1/4"	0.817 (L/240)	0.300 (30%)	D+L	L

### Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.078", Long Term = 0.117"
- 3 See manufacture installation guide note E4 for installation details
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top flange must be laterally braced at a maximum of 7'4" o.c.
- 6 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 16-9-12	(Span)0-6-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-4-2	(Span)3-0-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-4 to 1-4-2		Top	8 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-2-4 to 16-5-0		Top	1 PLF	0 PLF	0 PLF	0 PLF	
5	Point	1-2-14		Near Face	205 lb	430 lb	0 lb	0 PSF	Pass-Thru Framing Squash Block is required at all point loads over bearings
6	Tie-In	1-4-2 to 16-9-12	(Span)0-5-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	1-4-2 to 16-5-1		Top	1 PLF	0 PLF	0 PLF	0 PSF	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.**

### Notes

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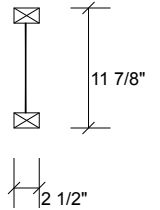
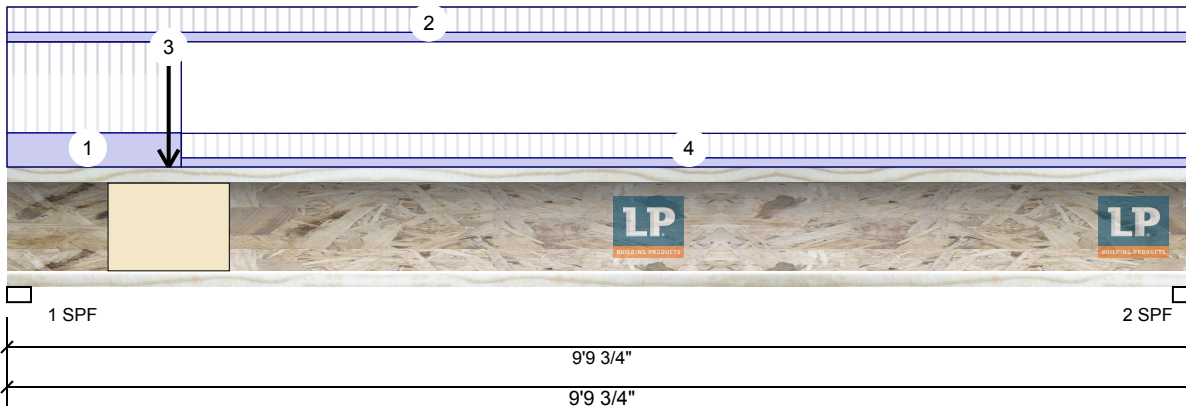
Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

**F19-A LPI 20Plus 11.875" - PASSED**

Level: Ground Floor


**Member Information**

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

**Unfactored Reactions UNPATTERNED lb (Uplift)**

Brg	Live	Dead	Snow	Wind
1	437	164	0	0
2	198	74	0	0

**Bearings and Factored Reactions**

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	53%	205 / 656	861	L	1.25D+1.5L
2 - SPF	2.375"	24%	93 / 297	390	L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1108 ft-lb	3'10 7/16"	6250 ft-lb	0.177 (18%)	1.25D+1.5L	L
Shear	840 lb	1 5/8"	2345 lb	0.358 (36%)	1.25D+1.5L	L
Perm Defl in.	0.015 (L/7673)	4'6 1/2"	0.318 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.040 (L/2882)	4'6 9/16"	0.318 (L/360)	0.120 (12%)	L	L
TL Defl inch	0.055 (L/2095)	4'6 9/16"	0.477 (L/240)	0.110 (11%)	D+L	L

**Design Notes**

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.015", Long Term = 0.022"
- 3 See manufacture installation guide note E4 for installation details
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top flange must be laterally braced at a maximum of 9'3" o.c.
- 6 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-5-4	(Span)3-0-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 9-9-12	(Span)0-10-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-4-0		Far Face	92 lb	244 lb	0 lb	0 lb	F13
4	Tie-In	1-5-4 to 9-9-12	(Span)0-9-13	Top	15 PSF	40 PSF	0 PSF	0 PSF	

**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 Framing Squash Block is required at all point loads over bearings**

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

**Notes**

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

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**Manufacturer Info**

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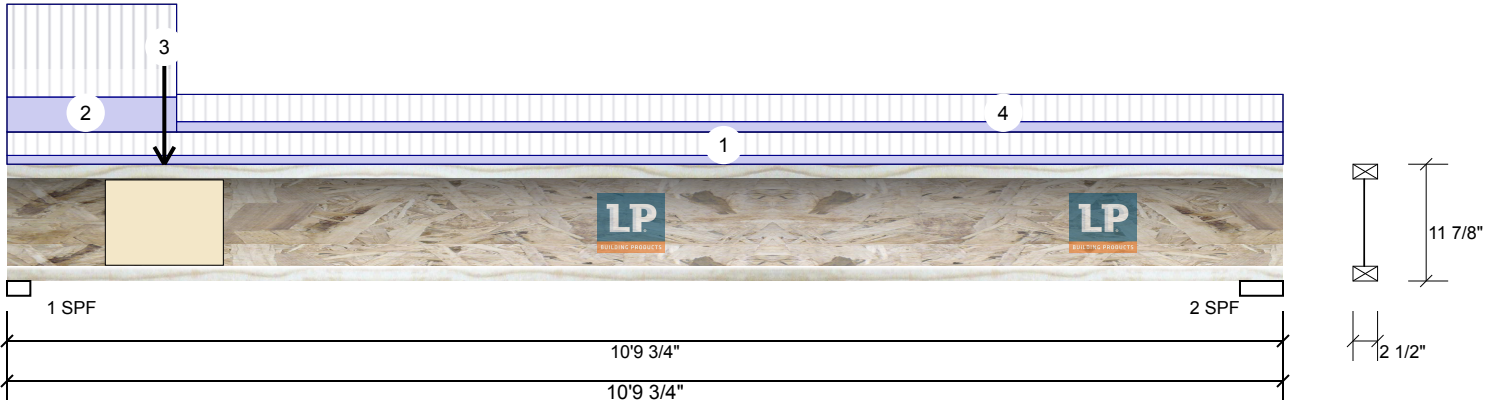
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Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

**F20-A LPI 20Plus 11.875" - PASSED**

Level: Ground Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	445	167	0	0
2	214	80	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.375"	54%	209 / 667	876	L	1.25D+1.5L
2 - SPF	4.375"	23%	100 / 321	421	L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1226 ft-lb	4'4 13/16"	6250 ft-lb	0.196 (20%)	1.25D+1.5L	L
Shear	855 lb	1 5/8"	2345 lb	0.365 (36%)	1.25D+1.5L	L
Perm Defl in.	0.019 (L/6615)	5'	0.346 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.050 (L/2484)	5'	0.346 (L/360)	0.140 (14%)	L	L
TL Defl inch	0.069 (L/1806)	5'	0.519 (L/240)	0.130 (13%)	D+L	L

### Design Notes

- 1 Provide restraint at supports to ensure lateral stability.
- 2 Dead Load Deflection: Instant = 0.019", Long Term = 0.028"
- 3 See manufacture installation guide note E4 for installation details
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top flange must be laterally braced at a maximum of 8'11" o.c.
- 6 Bottom flange braced at bearings.



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-9-12	(Span)0-9-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-5-4	(Span)3-0-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-4-0		Near Face	89 lb	236 lb	0 lb	0 lb	F13
4	Tie-In	1-5-4 to 10-9-12	(Span)0-10-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	

**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 Framing Squash Block is required at all point loads over bearings**

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

### Notes

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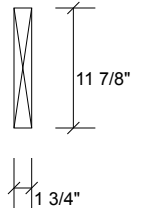
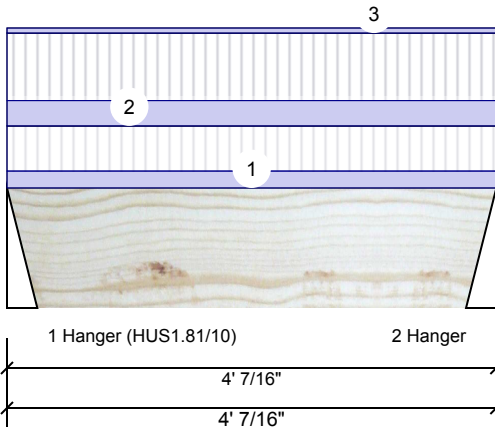
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Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

**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 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

**Unfactored Reactions UNPATTERNED lb (Uplift)**

Brg	Live	Dead	Snow	Wind
1	135	66	0	0
2	135	66	0	0

**Bearings and Factored Reactions**

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	7%	83 / 202	285	L	1.25D+1.5L
2 - Hanger	3.000"	7%	83 / 202	285	L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	236 ft-lb	2' 3/16"	17130 ft-lb	0.014 (1%)	1.25D+1.5L	L
Unbraced	236 ft-lb	2' 3/16"	12143 ft-lb	0.019 (2%)	1.25D+1.5L	L
Shear	119 lb	1'2 1/8"	5798 lb	0.020 (2%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.001 (L/37489)	2' 1/4"	0.122 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.002 (L/25138)	2' 1/4"	0.183 (L/240)	0.010 (1%)	D+L	L

**Design Notes**

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-0-7	(Span)1-4-1	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 4-0-7		Top	15 PLF	40 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 4-0-7		Top	3 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.**

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

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

**Notes**

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

**Lumber**

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

**chemicals****Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Forex  
APA: PR-L318

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



This design is valid until 10/18/2021





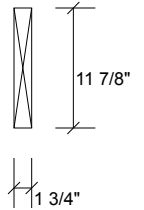
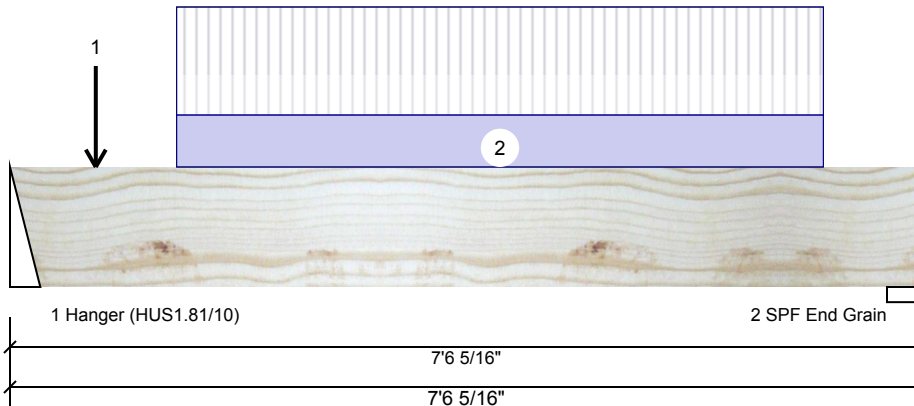
Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

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

Level: Ground Floor



## Member Information

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

## Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	281	154	0	0
2	241	134	0	0

## Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	16%	192 / 422	614	L	1.25D+1.5L
2 - SPF End Grain	3.500"	12%	168 / 361	529	L	1.25D+1.5L

## Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1087 ft-lb	3'8 13/16"	17130 ft-lb	0.063 (6%)	1.25D+1.5L	L
Unbraced	1087 ft-lb	3'8 13/16"	6326 ft-lb	0.172 (17%)	1.25D+1.5L	L
Shear	676 lb	1'2 1/8"	5798 lb	0.117 (12%)	1.25D+1.5L	L
Perm Defl in. (L/13076)	0.007	3'8 7/8"	0.237 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.012 (L/7091)	3'8 7/8"	0.237 (L/360)	0.050 (5%)	L	L
TL Defl inch	0.019 (L/4598)	3'8 7/8"	0.355 (L/240)	0.050 (5%)	D+L	L

## Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wir...
1	Point	0-8-8		Far Face	44 lb	90 lb	0 lb	J7
2	Part. Uniform	1-4-8 to 6-8-8		Far Face	39 PLF	81 PLF	0 PLF	0 PLF
	Self Weight				5 PLF			



January 04, 2019

**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 Framing Squash Block is required at all point loads over bearings**

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

## Notes

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

## Lumber

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

chemicals

## Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

## Manufacturer Info

Forex  
APA: PR-L318

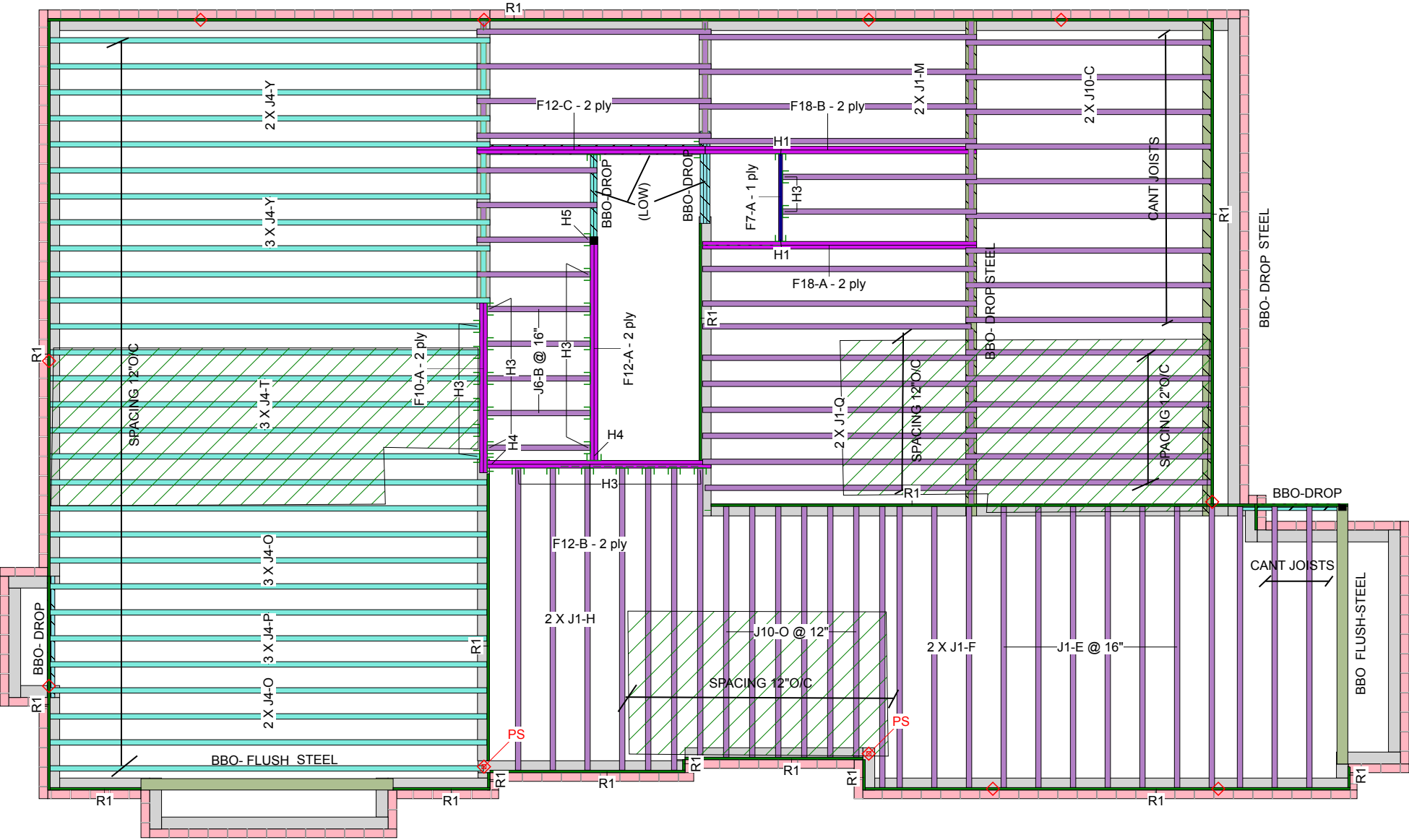
Kott Lumber Company  
14 Anderson Blvd, Ontario  
Canada  
L4A 7X4  
905-642-4400



This design is valid until 10/18/2021



Second Floor



Architectural Drawing Info

JARDIN DESIGN GROUP  
64 JARDIN DR, SUITE 3A  
VAUGHAN, ON L4K 3P3  
Project # 17-55  
Model: LOT-15,AMELIA 12  
Date: DEC 21,2018

JOISTS SPACING 16"O/C  
UNLESS  
NOTED OTHERWISE

This certification is to confirm that:

1. The loads used in the calculation of the attached approved components conform to the floor assembly shown on this layout.
2. The floor joists comply with the KOTT span table for the loads and spacing shown on this layout. The floor system must be assembled in accordance to the KOTT Specifier Guide. Multi-ply members must be attached together as per the included multiple member connection detail. All other components and structural elements supporting the floor system such as beams, walls, columns and foundation walls and footings including anchorage of components and bracing for lateral stability are the responsibility of others.



January 04, 2019

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

Second Floor

LVL/LSL

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
F18	Forex 2.0E-3000Fb LVL	1.75	11.875	2	2	4	12-0-0
F12	Forex 2.0E-3000Fb LVL	1.75	11.875	3	2	6	10-0-0
F10	Forex 2.0E-3000Fb LVL	1.75	11.875	1	2	2	8-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	11.875			1	4-0-0

I Joist

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
J1	LPI 20Plus	2.5	11.875			34	12-0-0
J10	LPI 20Plus	2.5	11.875			25	10-0-0
J8	LPI 20Plus	2.5	11.875			2	8-0-0
J7	LPI 20Plus	2.5	11.875			4	6-0-0
J6	LPI 20Plus	2.5	11.875			5	4-0-0
J4	NJ60H	2.5	11.875			29	18-0-0

Rim Board

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 11.875	1.125	11.875			16	12

Hanger

		Beam/Girder			Supported Member	
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	2	HUS1.81/10			30 16d	10 16d
H3	26	LF2511			12 10d	1 #8x1 1/4WS
H4	2	HGUS410			46 16d	16 16d
H5	1	HUC312			16 16d	6 10dx1 1/2
H6	2	Unknown Hanger				

NOTES:

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

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

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

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

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

Legend

PS	Point Load Support
◇	Load from Above
	Wall
	Norbord Rimboard Plus 1.125 X 11.875
	LPI 20Plus 11.875
	NJ60H 11.875
	Forex 2.0E-3000Fb LVL 1.75 X 11.875
	1.5 X 7.5 (Dropped)
	1.5 X 9.5 (Dropped)
	1.75 X 9.5 (Dropped)
	5 X 10.25 (Dropped)
	5 X 10.25
	5.25 X 10.25



Layout Name  
LOT 15 (AMELIA 12 EL- 2)

Design Method  
LSD

Description  
GREEN YORK HOMES  
GRANELLI HOMES PROJECT  
BRAMPTON, ON

Created  
May 31, 2018

Builder

Sales Rep

Designer  
S B

Shipping  
Project

Builder's Project

**Kott Lumber Company**

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

Second Floor

Design Method LSD  
Building Code NBCC 2010 / OBC 2012

Floor

Loads  
Live 40  
Dead 15

Deflection Joist

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

Deflection Girder

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

Decking

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





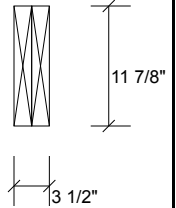
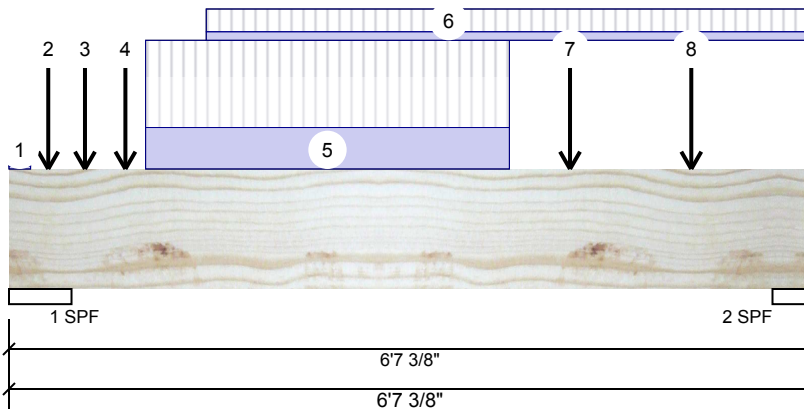
Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 2

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

Level: Second Floor


**Member Information**

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

**Unfactored Reactions UNPATTERNED lb (Uplift)**

Brg	Live	Dead	Snow	Wind
1	2149	981	0	0
2	1155	518	0	0

**Bearings and Factored Reactions**

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.188"	33%	1227 / 3223	4450	L	1.25D+1.5L
2 - SPF	3.813"	29%	648 / 1732	2380	L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3687 ft-lb	3'4 7/8"	34261 ft-lb	0.108 (11%)	1.25D+1.5L	L
Unbraced	3687 ft-lb	3'4 7/8"	32638 ft-lb	0.113 (11%)	1.25D+1.5L	L
Shear	2653 lb	1'5 5/16"	11596 lb	0.229 (23%)	1.25D+1.5L	L
Perm Defl in.	0.008 (L/9333)	3'4 13/16"	0.197 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.016 (L/4353)	3'4 15/16"	0.197 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.024 (L/2968)	3'4 7/8"	0.295 (L/240)	0.080 (8%)	D+L	L

**Design Notes**

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-2	(Span)1-4-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-3-14		Near Face	367 lb	841 lb	0 lb	0 lb	F12
3	Point	0-7-8		Far Face	145 lb	326 lb	0 lb	0 lb	J4
4	Point	0-11-8		Near Face	29 lb	78 lb	0 lb	0 lb	J6
5	Part. Uniform	1-1-8 to 4-1-8		Far Face	155 PLF	326 PLF	0 PLF	0 PLF	
6	Part. Uniform	1-7-8 to 6-7-6		Near Face	32 PLF	85 PLF	0 PLF	0 PLF	

Continued on page 2...

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

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

**Notes**

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

**Lumber**

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

**Handling & Installation**

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Forex  
APA: PR-L318

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



This design is valid until 10/18/2021



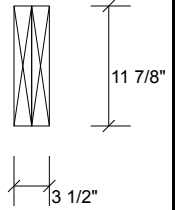
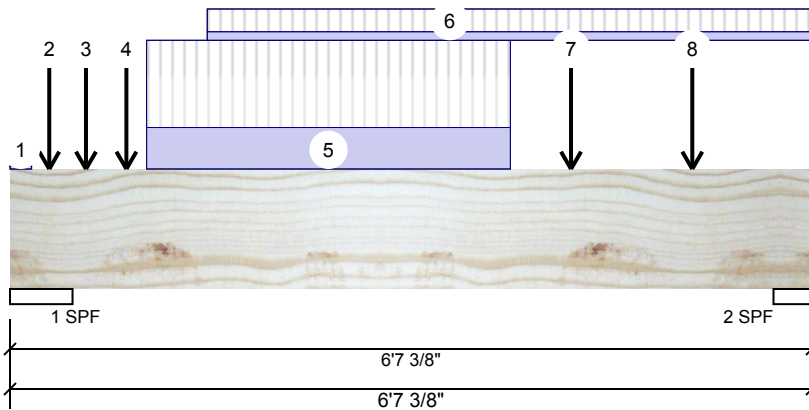


Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 2 of 2

**F10-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED** Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	4-7-8		Far Face	147 lb	326 lb	0 lb	0 lb	J4
8	Point	5-7-8		Far Face	122 lb	326 lb	0 lb	0 lb	J4
	Self Weight				10 PLF				



January 04, 2019

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

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

**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

**Manufacturer Info**

Forex  
APA: PR-L318

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



This design is valid until 10/18/2021





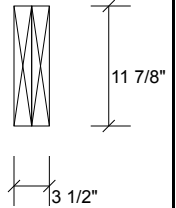
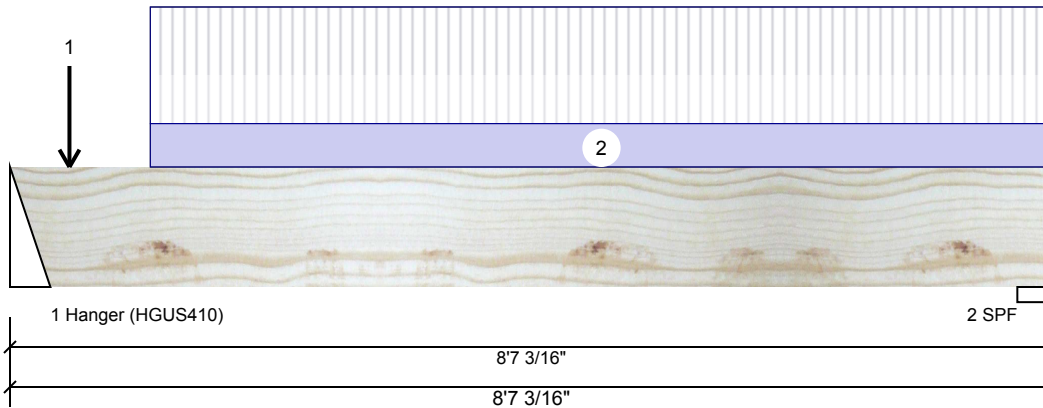


Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

**F12-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED** Level: Second Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	352	172	0	0
2	366	177	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	7%	215 / 528	743	L	1.25D+1.5L
2 - SPF	3.500"	10%	221 / 549	770	L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1467 ft-lb	4'4 1/8"	34261 ft-lb	0.043 (4%)	1.25D+1.5L	L
Unbraced	1467 ft-lb	4'4 1/8"	31209 ft-lb	0.047 (5%)	1.25D+1.5L	L
Shear	878 lb	1'3 1/8"	11596 lb	0.076 (8%)	1.25D+1.5L	L
Perm Defl in. (L/19415)	0.005	4'3 15/16"	0.270 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch	0.010 (L/9404)	4'3 15/16"	0.270 (L/360)	0.040 (4%)	L	L
TL Defl inch	0.015 (L/6335)	4'3 15/16"	0.405 (L/240)	0.040 (4%)	D+L	L

### Design Notes

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-5-14		Far Face	29 lb	78 lb	0 lb	0 lb	J6
2	Part. Uniform	1-1-14 to 8-7-3		Far Face	32 PLF	86 PLF	0 PLF	0 PLF	
	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.**

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

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

### Notes

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

### Lumber

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

### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

Forex  
APA: PR-L318

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



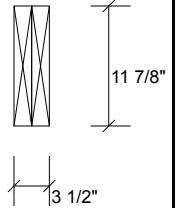
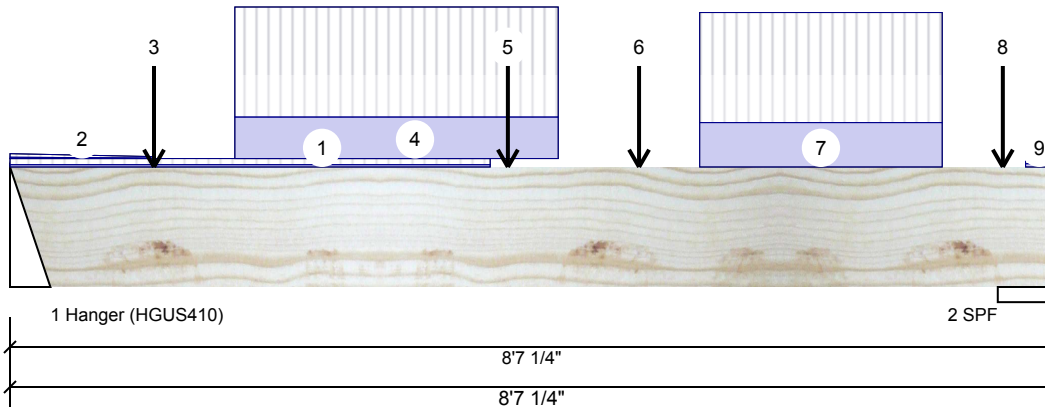


Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 2

**F12-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED** Level: Second Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1051	459	0	0
2	992	445	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	21%	574 / 1577	2150	L	1.25D+1.5L
2 - SPF	5.500"	17%	557 / 1489	2045	L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	5129 ft-lb	4'1 1/4"	34261 ft-lb	0.150 (15%)	1.25D+1.5L	L
Unbraced	5129 ft-lb	4'1 1/4"	31329 ft-lb	0.164 (16%)	1.25D+1.5L	L
Shear	2306 lb	1'3 1/8"	11596 lb	0.199 (20%)	1.25D+1.5L	L
Perm Defl in.	0.015 (L/6301)	4'1 1/2"	0.265 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.034 (L/2772)	4'1 1/2"	0.265 (L/360)	0.130 (13%)	L	L
TL Defl inch	0.049 (L/1925)	4'1 1/2"	0.397 (L/240)	0.120 (12%)	D+L	L

### Design Notes

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

**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.**



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 3-11-8	(Span)0-7-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-2-4	(Span)0-4-7 to 0-1-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	1-2-4		Near Face	106 lb	283 lb	0 lb	0 lb	Pass-Thru Framing Squash Block is required at all point loads over bearings
4	Part. Uniform	1-10-4 to 4-6-4		Near Face	86 PLF	228 PLF	0 PLF	0 PLF	Refer to Multiple Member Connection Detail for ply to ply nailing or bolting requirements
5	Point	4-1-4		Far Face	172 lb	352 lb	0 lb	0 lb	

Continued on page 2...

### Notes

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

### Lumber

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

### Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

### Manufacturer Info

Forex  
APA: PR-L318

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



This design is valid until 10/18/2021



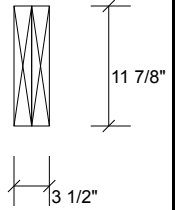
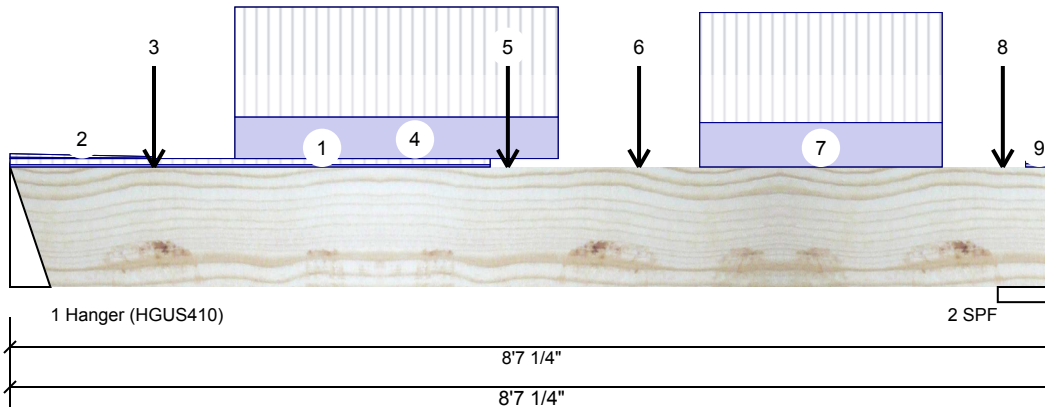


Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 2 of 2

**F12-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED** Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	5-2-4		Near Face	101 lb	267 lb	0 lb	0 lb	J1
7	Part. Uniform	5-8-4 to 7-8-4		Near Face	92 PLF	228 PLF	0 PLF	0 PLF	
8	Point	8-2-4		Near Face	7 lb	17 lb	0 lb	0 lb	J1
9	Tie-In	8-4-8 to 8-7-4	(Span) 0-10-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				



January 04, 2019

**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 Framing Squash Block is required at all point loads over bearings**

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

**Notes**

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

**Lumber**

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

**chemicals****Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Forex  
APA: PR-L318

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



This design is valid until 10/18/2021



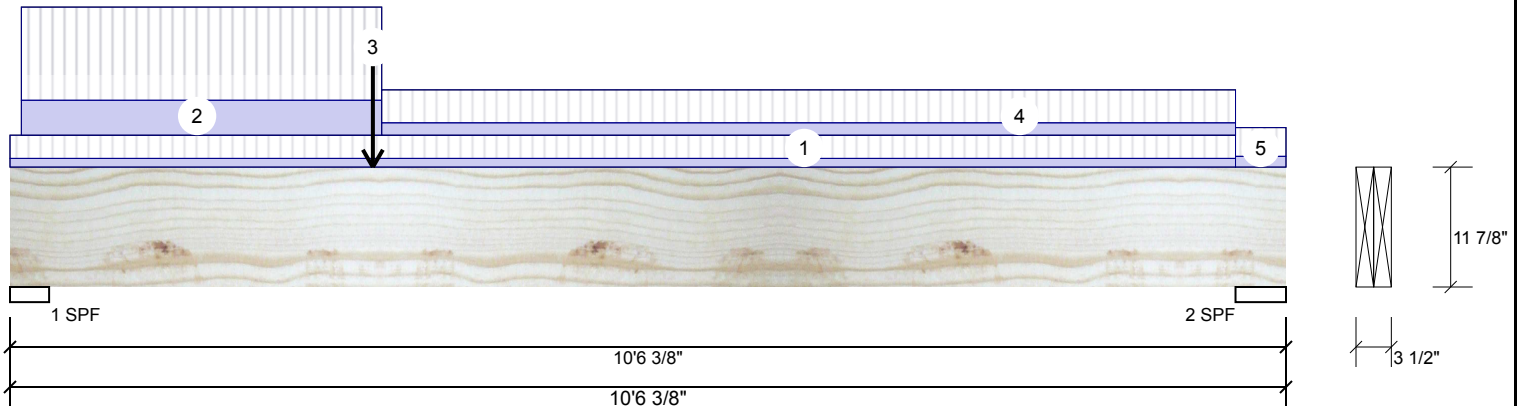


Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

**F18-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED** Level: Second Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	828	377	0	0
2	426	217	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.875"	21%	471 / 1242	1713	L	1.25D+1.5L
2 - SPF	5.000"	8%	271 / 640	911	L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3866 ft-lb	2'11 15/16"	34261 ft-lb	0.113 (11%)	1.25D+1.5L	L
Unbraced	3866 ft-lb	2'11 15/16"	29686 ft-lb	0.130 (13%)	1.25D+1.5L	L
Shear	1486 lb	1'3"	11596 lb	0.128 (13%)	1.25D+1.5L	L
Perm Defl in.	0.016 (L/7482)	4'9 1/16"	0.331 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.034 (L/3491)	4'8 1/8"	0.331 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.050 (L/2380)	4'8 7/16"	0.496 (L/240)	0.100 (10%)	D+L	L

### Design Notes

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-1-6	(Span) 0-10-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-1-2 to 3-0-13	(Span) 3-7-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	2-11-15		Far Face	270 lb	660 lb	0 lb	0 lb	F7
4	Tie-In	3-0-13 to 10-1-6	(Span) 1-3-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
5	Tie-In	10-1-6 to 10-6-6	(Span) 1-1-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				10 PLF				

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

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

### Notes

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

### Lumber

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

chemicals

### Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

Manufacturer info  
Forex  
APA: PR-L318

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



This design is valid until 10/18/2021



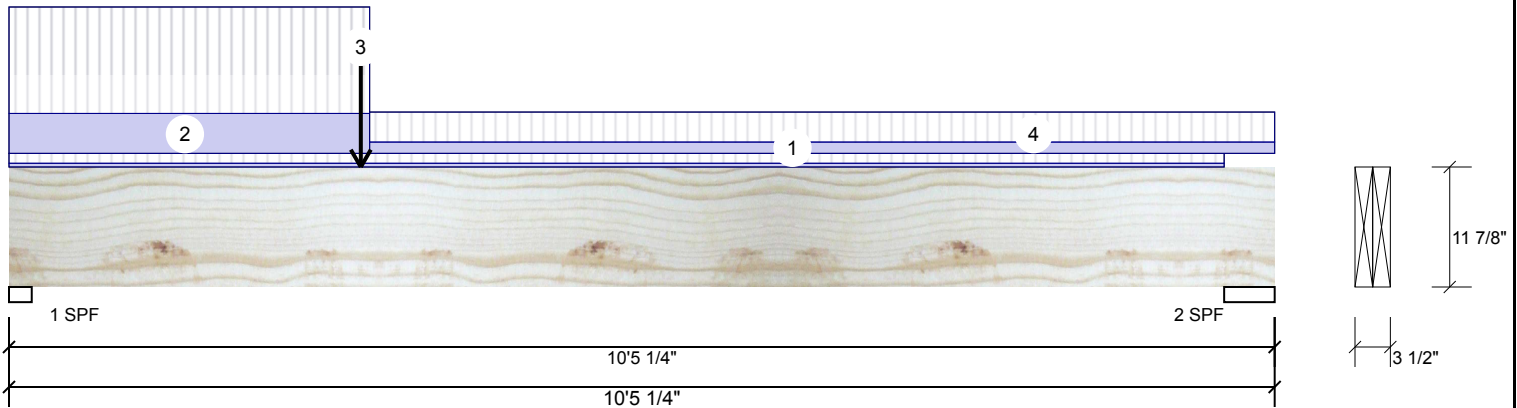


Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

**F18-B Forex 2.0E-3000Fb LVL 1.750" X 11.875" 2-Ply - PASSED** Level: Second Floor



### Member Information

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

### Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	744	344	0	0
2	346	187	0	0

### Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	2.250"	32% 430 / 1116	1546 L	1.25D+1.5L
2 - SPF	5.000"	7% 234 / 520	753 L	1.25D+1.5L

### Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3579 ft-lb	2'10 13/16"	34261 ft-lb	0.104 (10%)	1.25D+1.5L	L
Unbraced	3579 ft-lb	2'10 13/16"	29647 ft-lb	0.121 (12%)	1.25D+1.5L	L
Shear	1357 lb	1'1 3/8"	11596 lb	0.117 (12%)	1.25D+1.5L	L
Perm Defl in.	0.015 (L/8203)	4'7"	0.332 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.030 (L/3927)	4'5 3/4"	0.332 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.045 (L/2656)	4'6 3/16"	0.498 (L/240)	0.090 (9%)	D+L	L

### Design Notes

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 10-0-4	(Span)0-4-2	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 2-11-11	(Span)3-7-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Point	2-10-13		Near Face	266 lb	650 lb	0 lb	0 lb	F7
4	Tie-In	2-11-11 to 10-5-4	(Span)1-0-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	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.**

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

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

### Notes

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

### Lumber

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

### chemicals

### Handling & Installation

- LVL beams must not be cut or drilled
- Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
- Damaged Beams must not be used
- Design assumes top edge is laterally restrained
- Provide lateral support at bearing points to avoid lateral displacement and rotation

- For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**  
Forex  
APA: PR-L318

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



This design is valid until 10/18/2021







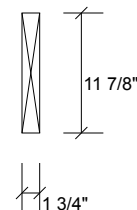
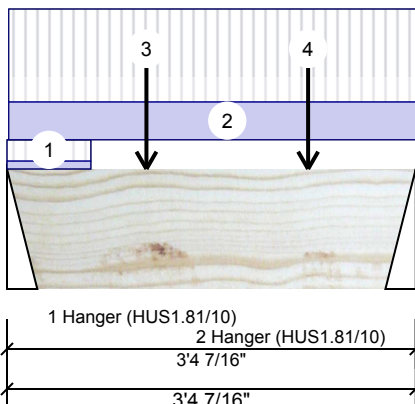
Client:  
Project:  
Address:

Date: 1/3/2019  
Designer: S B  
Job Name: LOT 15 (AMELIA 12 EL- 2)  
Project #:

Page 1 of 1

**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 2010 / OBC 2012
Deflection LL:	360	Load Sharing:	No
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

**Unfactored Reactions UNPATTERNED lb (Uplift)**

Brg	Live	Dead	Snow	Wind
1	660	270	0	0
2	650	266	0	0

**Bearings and Factored Reactions**

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	34%	338 / 990	1328	L	1.25D+1.5L
2 - Hanger	3.000"	34%	333 / 975	1307	L	1.25D+1.5L

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	923 ft-lb	1'7 3/16"	17130 ft-lb	0.054 (5%)	1.25D+1.5L	L
Unbraced	923 ft-lb	1'7 3/16"	13790 ft-lb	0.067 (7%)	1.25D+1.5L	L
Shear	662 lb	2'2 5/16"	5798 lb	0.114 (11%)	1.25D+1.5L	L
Perm Defl in. (L/21560)	0.002	1'7 3/4"	0.100 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch (L/8783)	0.004	1'7 11/16"	0.100 (L/360)	0.040 (4%)	L	L
TL Defl inch (L/6241)	0.006	1'7 11/16"	0.150 (L/240)	0.040 (4%)	D+L	L

**Design Notes**

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



January 04, 2019

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind
1	Tie-In	0-0-0 to 0-8-5	(Span)3-1-0	Top	15 PSF	40 PSF	0 PSF	0 PSF
2	Part. Uniform	0-0-3 to 3-4-7		Top	110 PLF	270 PLF	0 PLF	0 PLF
3	Point	1-1-13		Near Face	71 lb	190 lb	0 lb	0 lb J8
4	Point	2-5-13		Near Face	64 lb	171 lb	0 lb	0 lb J8
	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.**

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

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

**Notes**

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**Lumber**

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

**chemicals****Handling & Installation**

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

6. For flat roofs provide proper drainage to prevent ponding

**Manufacturer Info**

Forex  
APA: PR-L318

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