

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-Connection Details".
4. Pass-thru transfer block framing is required at all point loads over bearings.

HANDLING AND INSTALLATION

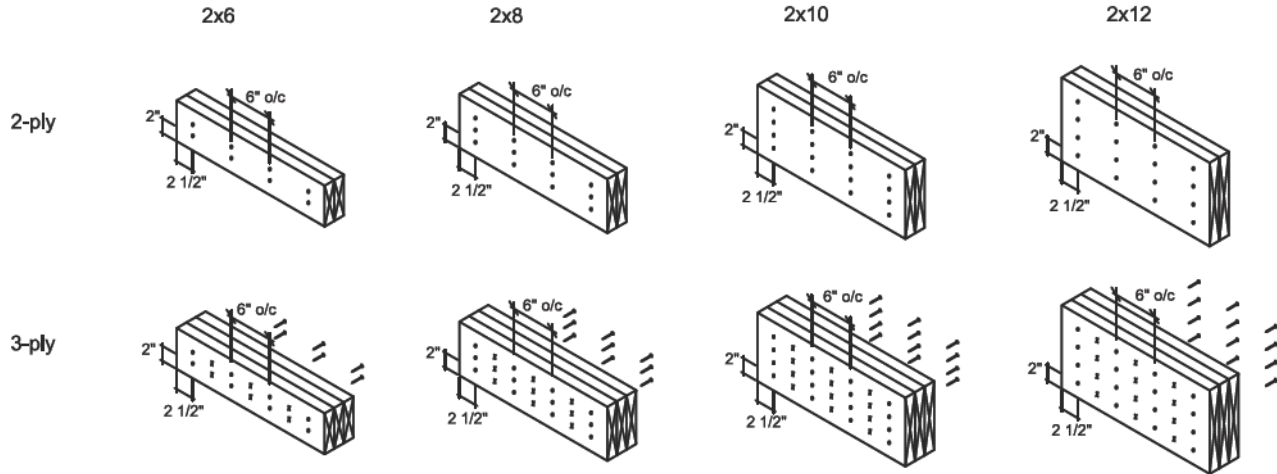
Do not drill any hole, cut or notch a certified building component without a written pre-authorization.



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

GREENPARK-TRINAR HALL-EAST
Gwillimbury-ON-LOT-36
Conventional Connections

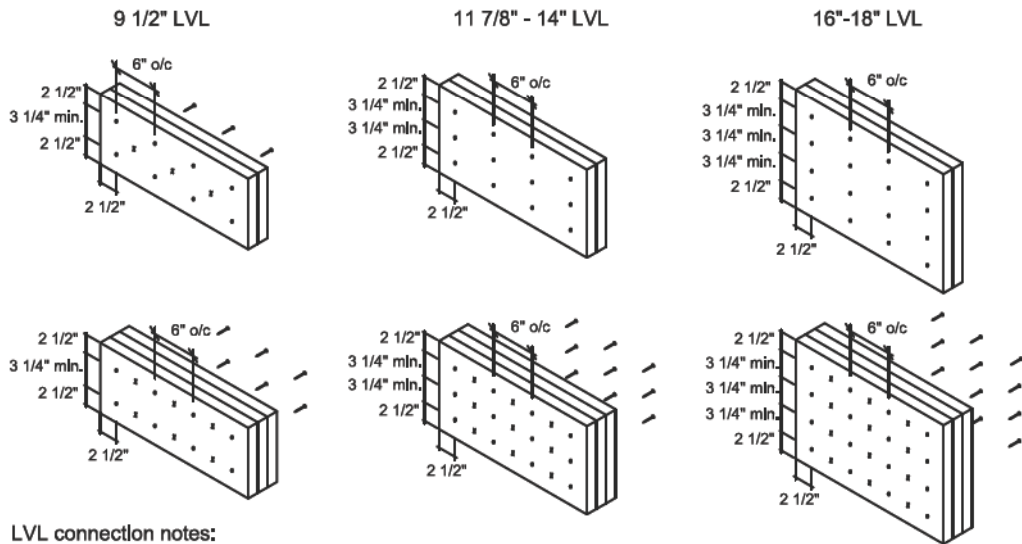


Conventional connection notes:

- 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

HEAD OF ALL SPECIFIED NAILS AND SCREWS MUST BE ON THE LOADED SIDE



LVL connection notes:

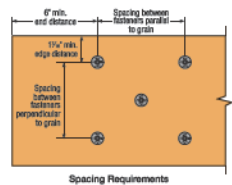
- LVL ply width is 1-3/4"
- Nails to be 3 1/2" common wire nails.
- Nails to be located 2 1/2" min. from the top and bottom of the member.
- Minimum 3 1/4" spacing between rows.
- Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail or screw driven from the opposite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

SIMPSON SDW SPACING REQUIREMENT

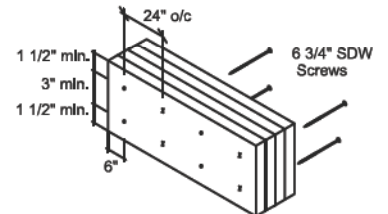
Table 9 — Spacing Requirements

Geometry	Minimum Dimensions (in.)	
	D-J-F-L	S-P-F
Spacing parallel to grain	6	5
End distance parallel to grain	6	6
Spacing perpendicular to grain	3	2 1/2
Edge distance perpendicular to grain	1 1/2	1 1/2

1. Additional screws may be staggered diagonally between rows.



4-ply LVL (Top load only)



FOR 4 PLY BEAMS, UNLESS NOTED OTHERWISE ON THE ROOF LAYOUT OR THE CALCULATION SHEET OF THE BEAM, USE MINIMUM 6-3/4" SDW SCREWS PLACED IN 2 ROWS AT 16" C/C

Multiple Member Connections

All connections are for uniformly distributed loads.

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



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Ottawa, ON
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Seepage System			
Zoning			

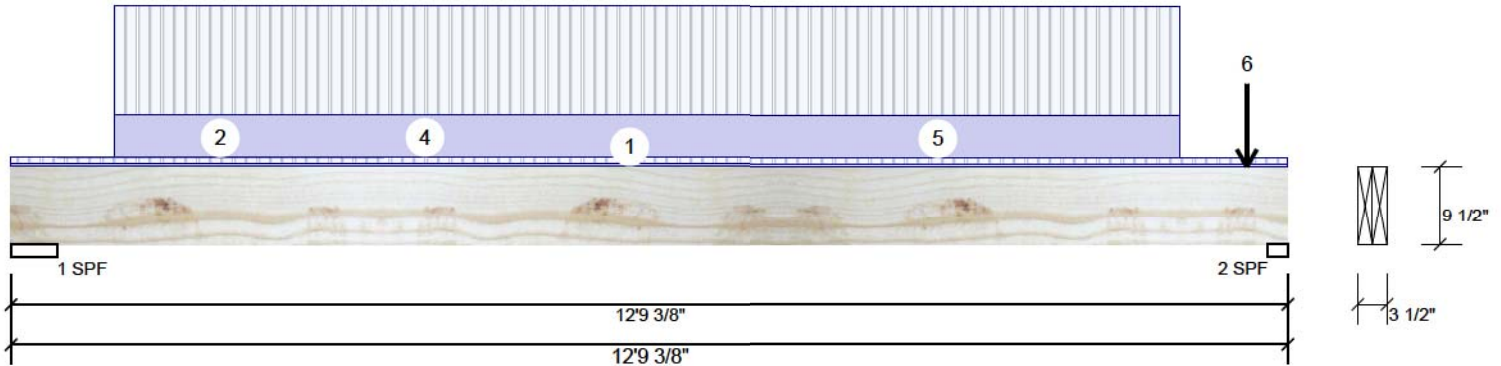
REFER TO MULTIPLE MEMBER TO MEMBER CONNECTION DETAIL FOR PLY TO PLY NAILING OR BOLTING REQUIREMENTS.

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

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.

F10-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 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:	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	1137	482	0	0
2	1233	518	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	19%	603 / 1706	2309 L	1.25D+1.5L
2 - SPF	2.375"	49%	647 / 1850	2497 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	7709 ft-lb	6'6 1/4"	22724 ft-lb	0.339 (34%)	1.25D+1.5L	L
Unbraced	7709 ft-lb	6'6 1/4"	19760 ft-lb	0.390 (39%)	1.25D+1.5L	L
Shear	2523 lb	11'10 1/4"	9277 lb	0.272 (27%)	1.25D+1.5L	L
Perm Defl in.	0.091 (L/1607)	6'6 1/4"	0.408 (L/360)	0.220 (22%)	D	Uniform
LL Defl inch	0.219 (L/673)	6'6 1/4"	0.408 (L/360)	0.540 (54%)	L	
TL Defl inch	0.310 (L/474)	6'6 1/4"	0.612 (L/240)	0.510 (51%)	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 ENGINEERING NOTE PAGE ENP-2. THIS NOTE PAGE IS AN INTEGRAL PART OF THIS CALCULATION SUMMARY PAGE AS IT CONTAINS SPECIFICATIONS AND CRITERIA USED IN THE DESIGN OF THIS COMPONENT.

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-9-6	0-3-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tapered Start	0-5-8		Top	0 PLF	0 PLF	0 PLF	0 PLF	
	End	3-8-11			1 PLF	0 PLF	0 PLF	0 PLF	
4	Part. Uniform	1-0-7 to 11-8-7		Near Face	73 PLF	194 PLF	0 PLF	0 PLF	
5	Part. Uniform	3-8-11 to 12-8-1		Top	1 PLF	0 PLF	0 PLF	0 PLF	
6	Point	12-4-7		Near Face	59 lb	156 lb	0 lb	0 lb	J1
	Self Weight				8 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott

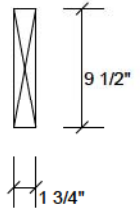
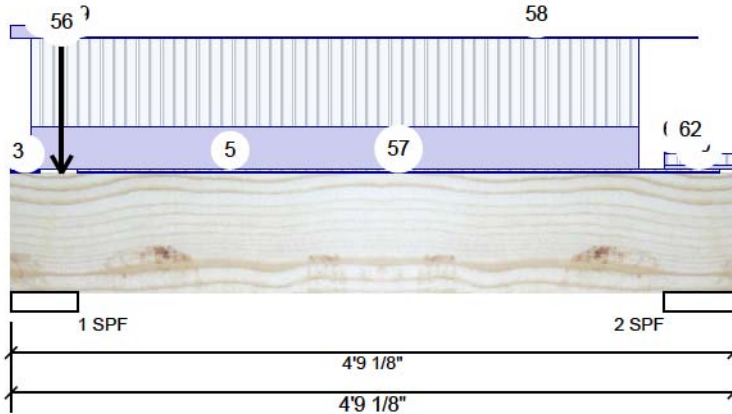
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F5-D Forex 2.0E-3000Fb LVL 1.750" X 9.500" - 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:	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	1010	486	0	0
2	551	278	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.250"	38% 607 / 1515	2122 L	1.25D+1.5L
2 - SPF	5.500"	20% 347 / 826	1173 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1256 ft-lb	2'4 3/8"	11362 ft-lb	0.111 (11%)	1.25D+1.5L	L
Unbraced	1256 ft-lb	2'4 3/8"	8847 ft-lb	0.142 (14%)	1.25D+1.5L	L
Shear	1253 lb	3'6 7/8"	4638 lb	0.270 (27%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/8786)	2'4 3/8"	0.133 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.011 (L/4417)	2'4 3/8"	0.133 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.016 (L/2939)	2'4 3/8"	0.199 (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 Top braced at bearings.
- 4 Bottom braced at bearings.

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
2	Tapered Start	0-0-0		Top	3 PLF	7 PLF	0 PLF	0 PLF	
	End	0-2-4			3 PLF	7 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 0-1-10		Top	31 PLF	82 PLF	0 PLF	0 PLF	J3
4	Part. Uniform	0-0-0 to 0-5-4		Top	41 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weigh
5	Part. Uniform	0-1-10 to 4-1-10		Far Face	142 PLF	290 PLF	0 PLF	0 PLF	
56	Point	0-4-0		Top	129 lb	335 lb	0 lb	0 lb	F5 F5
57	Tie-In	0-5-4 to 4-8-0	0-2-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	

Continued on page 2...

Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

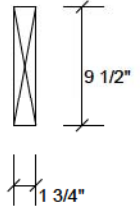
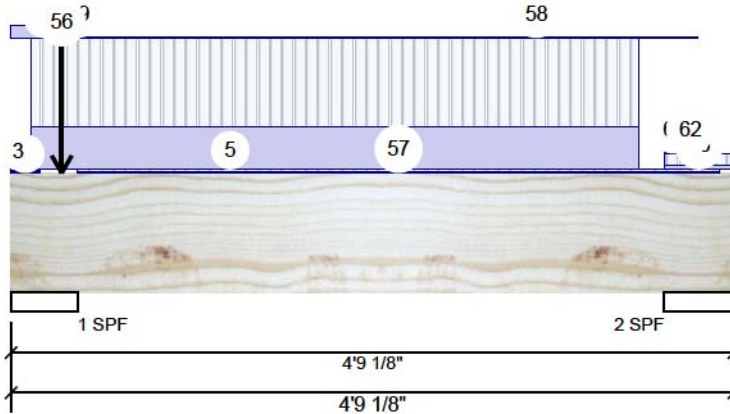
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F5-D Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
58	Part. Uniform	0-5-4 to 4-6-4		Top	1 PLF	0 PLF	0 PLF	0 PLF	
59	Part. Uniform	0-5-4 to 0-5-6		Top	82 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
60	Tie-In	4-3-10 to 4-9-2	0-11-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
61	Part. Uniform	4-3-10 to 4-5-2		Top	5 PLF	0 PLF	0 PLF	0 PLF	
62	Tapered Start	4-5-2		Top	5 PLF	0 PLF	0 PLF	0 PLF	
	End	4-6-4			0 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

Notes

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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

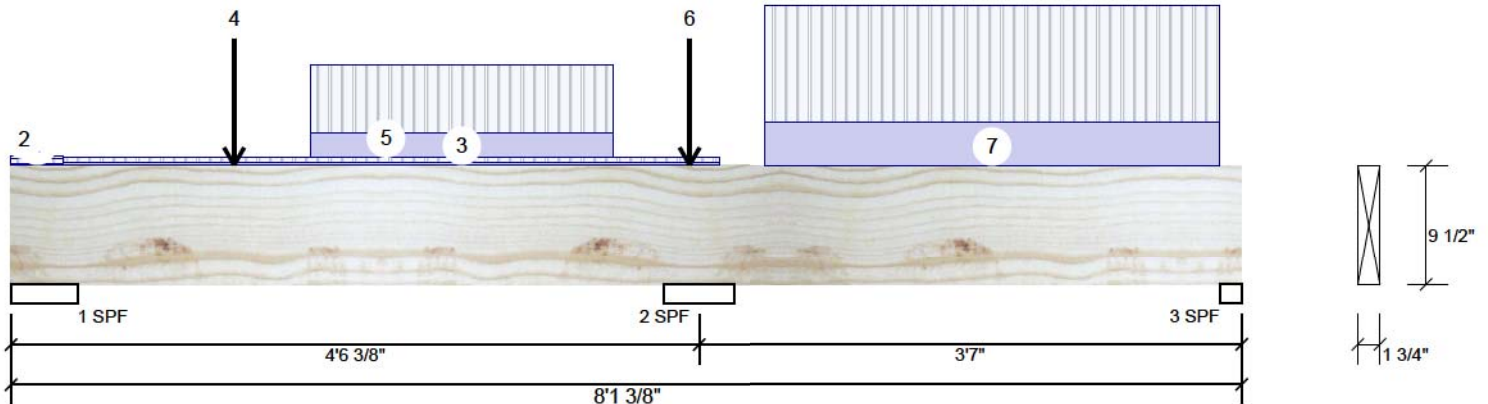
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This design is valid until 4/24/2023

F8-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" - 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:	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	466	183	0	0
2	1780	686	0	0
3	667	256	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	18%	214 / 775	990 L	1.25D+1.5L
2 - SPF	5.500"	62%	888 / 2765	3653 LL	1.25D+1.5L
3 - SPF	1.750"	75%	303 / 1111	1414 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-1407 ft-lb	4'6 3/8"	11362 ft-lb	0.124 (12%)	1.25D+1.5L	LL
Unbraced	-1407 ft-lb	4'6 3/8"	8633 ft-lb	0.163 (16%)	1.25D+1.5L	LL
Pos Moment	1091 ft-lb	6'6 9/16"	11362 ft-lb	0.096 (10%)	1.25D+1.5L	L
Unbraced	1037 ft-lb	1'11 11/16"	8633 ft-lb	0.120 (12%)	1.25D+1.5L	L
Shear	2105 lb	5'3 7/8"	4638 lb	0.454 (45%)	1.25D+1.5L	LL
Perm Defl in.	0.004 (L/13387)	2'2 13/16"	0.139 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.010 (L/4095)	6'4 1/16"	0.117 (L/360)	0.090 (9%)	L	L
TL Defl inch	0.014 (L/3098)	6'4 3/16"	0.175 (L/240)	0.080 (8%)	D+L	L

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



Design Notes

- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom braced at bearings.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-4-2	0-5-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-4-2	0-2-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-4-2 to 4-8-0	0-6-14	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	1-5-10		Near Face	169 lb	450 lb	0 lb	0 lb	J3
5	Part. Uniform	1-11-10 to 3-11-10		Near Face	109 PLF	291 PLF	0 PLF	0 PLF	
6	Point	4-5-10		Near Face	99 lb	264 lb	0 lb	0 lb	J3

Continued on page 2....

Notes

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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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

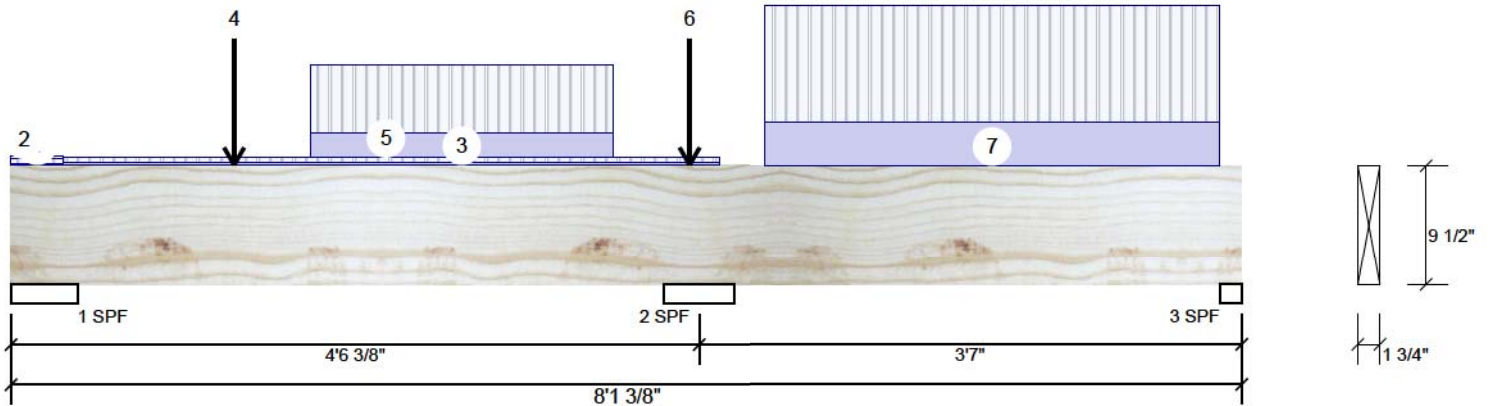
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F8-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Part. Uniform Self Weight	4-11-10 to 7-11-10		Near Face	189 PLF 4 PLF	503 PLF	0 PLF	0 PLF	

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

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

Discipline	Reviewer	BCIN	Date
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Sewage System			
Zoning			

Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
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Kott

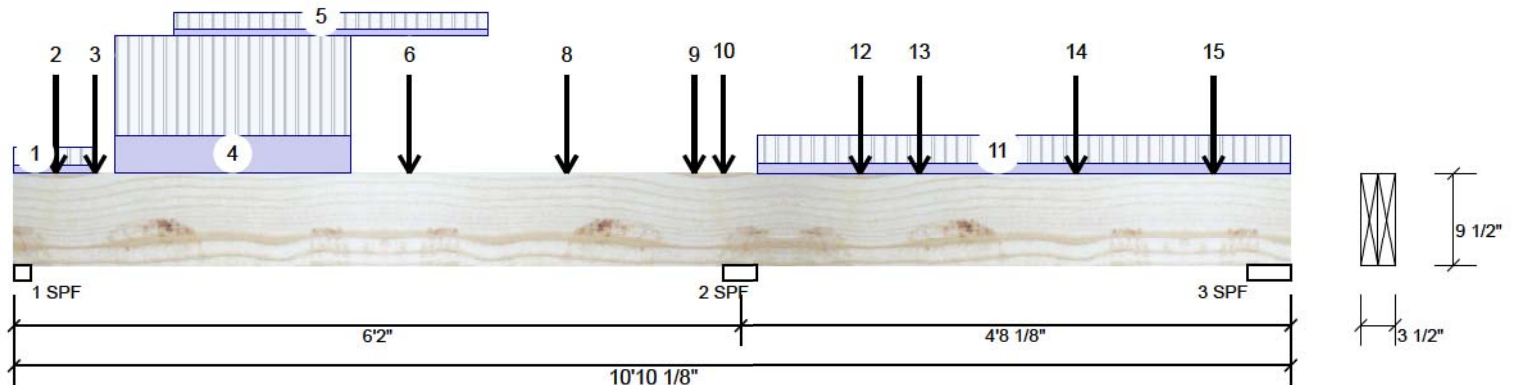
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This design is valid until 4/24/2023

F9-C Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
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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	1008	397	0	0
2	2237	906	0	0
3	622	265	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	1.750"	55% 486 / 1569	2055	L	1.25D+1.5L
2 - SPF	3.500"	61% 1158 / 3429	4586	LL	1.25D+1.5L
3 - SPF	4.375"	16% 317 / 1186	1504 (-32)	L	1.25D+1.5L (0.9D+1.5L)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-2440 ft-lb	6'2"	22724 ft-lb	0.107 (11%)	1.25D+1.5L	LL
Unbraced	-2440 ft-lb	6'2"	21993 ft-lb	0.111 (11%)	1.25D+1.5L	LL
Pos Moment	2177 ft-lb	2'7 3/16"	22724 ft-lb	0.096 (10%)	1.25D+1.5L	L
Unbraced	2177 ft-lb	2'7 3/16"	21993 ft-lb	0.099 (10%)	1.25D+1.5L	L
Shear	1997 lb	5'4 1/2"	9277 lb	0.215 (22%)	1.25D+1.5L	LL
Perm Defl in. (L/10925)	0.007	2'10 11/16"	0.203 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.019 (L/3773)	2'11 13/16"	0.203 (L/360)	0.100 (10%)	L	L
TL Defl inch	0.026 (L/2805)	2'11 9/16"	0.304 (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.
- Tie-down connection required at bearing 3 for uplift 32 lb (Combination 0.9D+1.5L, Load Case L).
- Top braced at bearings.
- Bottom braced at bearings.
- Lateral slenderness ratio based on full section width.

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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

- 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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott

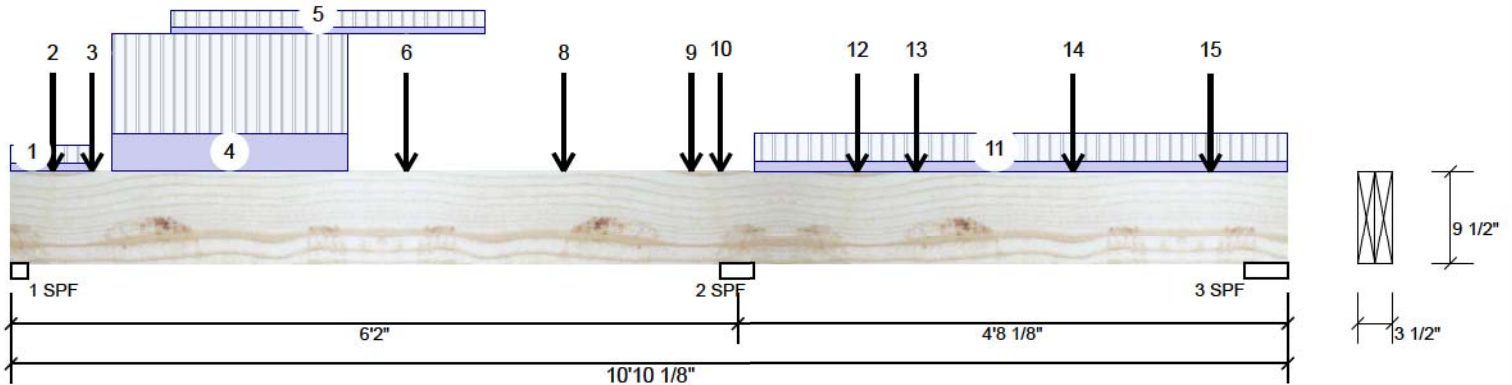
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F9-C Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Ground Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-10-4 to 2-10-4		Near Face	108 PLF	289 PLF	0 PLF	0 PLF	
5	Part. Uniform	1-4-4 to 4-0-4		Far Face	19 PLF	50 PLF	0 PLF	0 PLF	
6	Point	3-4-4		Near Face	124 lb	330 lb	0 lb	0 lb	J3
7	Point	4-8-4		Far Face	23 lb	60 lb	0 lb	0 lb	J4
8	Point	4-8-4		Near Face	141 lb	377 lb	0 lb	0 lb	J3
9	Point	5-9-4		Far Face	15 lb	39 lb	0 lb	0 lb	J4
10	Point	6-0-4		Near Face	132 lb	353 lb	0 lb	0 lb	J3
11	Part. Uniform	6-3-12 to 10-10-2		Top	30 PLF	80 PLF	0 PLF	0 PLF	
12	Point	7-2-4		Near Face	118 lb	267 lb	0 lb	0 lb	F16
13	Point	7-8-4		Near Face	88 lb	235 lb	0 lb	0 lb	J2
14	Point	9-0-4		Near Face	120 lb	320 lb	0 lb	0 lb	J2
15	Point	10-2-4		Near Face	148 lb	348 lb	0 lb	0 lb	F16
	Self Weight				8 PLF				

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Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

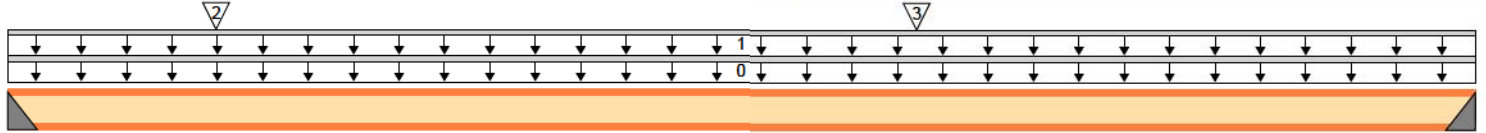
Forex
APA: PR-L318

Kott

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



This design is valid until 4/24/2023



B1 02-09-08 B2
Total Horizontal Product Length = 02-09-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	363 / 0	139 / 0		
B2, 2"	264 / 0	102 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	02-09-08	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	02-09-08	Top	26	10			n/a
2	J2	Conc. Pt. (lbs)	L	00-04-12	00-04-12	Back	235	88			n/a
3	J2	Conc. Pt. (lbs)	L	01-08-12	01-08-12	Back	320	120			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	471 ft-lbs	4095 ft-lbs	11.5%	1	01-08-12
End Reaction	719 lbs	1588 lbs	45.3%	1	00-00-00
End Shear	710 lbs	1830 lbs	38.8%	1	00-02-00
Total Load Deflection	L/999 (0.008")	n/a	n/a	4	01-08-12
Live Load Deflection	L/999 (0.006")	n/a	n/a	5	01-08-12
Max Defl.	0.008"	n/a	n/a	4	01-08-12
Span / Depth	3.3				

Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Hanger 2" x 2-1/2"	719 lbs	37.0%	45.3%	LF259
B2	Hanger 2" x 2-1/2"	523 lbs	26.9%	32.9%	LF259

Cautions

Hanger LF259 requires (10) 10dx1.5 face nails, (1) #8x1.25 joist nails.

Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist

Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

BC CALC® Member Report

Build 7364

Job name:

Address: GREENPARK HOMES
TRINA...L, EAST GWILLIMBURY, ON

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl

Description: Level - Ground Floor

Specifier:

Designer: S B

Company:

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

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Completeness and accuracy of input

must be reviewed by a qualified engineering expert to assure anyone relying on the evidence of suitability for application. The building code-a properties and Installation of B



East Gwillimbury
Building Standards Branch BCIN #19487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

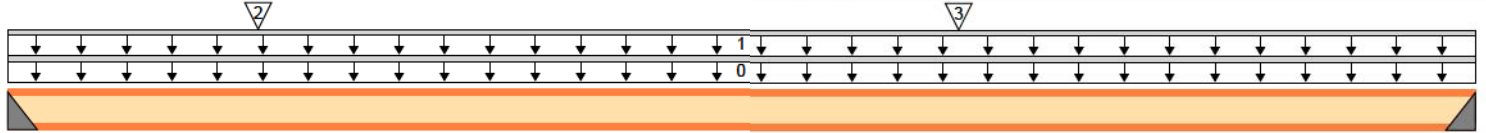
engineered work in accordance with the Guide and apply to obtain Installation questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

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B1 B2
Total Horizontal Product Length = 02-09-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	337 / 0	130 / 0		
B2, 2"	265 / 0	102 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	02-09-08	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	02-09-08	Top	24	9			n/a
2	J2	Conc. Pt. (lbs)	L	00-05-11	00-05-11	Front	236	89			n/a
3	J2	Conc. Pt. (lbs)	L	01-09-11	01-09-11	Front	299	112			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	437 ft-lbs	4095 ft-lbs	10.7%	1	01-09-11
End Reaction	668 lbs	1588 lbs	42.1%	1	00-00-00
End Shear	660 lbs	1830 lbs	36.1%	1	00-02-00
Total Load Deflection	L/999 (0.007")	n/a	n/a	4	01-09-11
Live Load Deflection	L/999 (0.005")	n/a	n/a	5	01-09-11
Max Defl.	0.007"	n/a	n/a	4	01-09-11
Span / Depth	3.3				

Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Hanger 2" x 2-1/2"	668 lbs	34.4%	42.1%	LF259
B2	Hanger 2" x 2-1/2"	525 lbs	27.0%	33.1%	LF259

Cautions

Hanger LF259 requires (10) 10dx1.5 face nails, (1) #8x1.25 joist nails.

Header for the hanger LF259 is a Single 2-1/2" x 9-1/2" I-joist

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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BC CALC® Member Report

Build 7364

Job name:

Address: GREENPARK HOMES
TRINA...L, EAST GWILLIMBURY, ON

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl

Description: Level - Ground Floor

Specifier:

Designer: S B

Company:

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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East Gwillimbury
Building Standards Branch BCIN #19487

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Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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Build 7364

Job name:

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TRINA...L, EAST GWILLIMBURY, ON

File name: C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl

Description: Level - Ground Floor

City, Province, Postal Code:

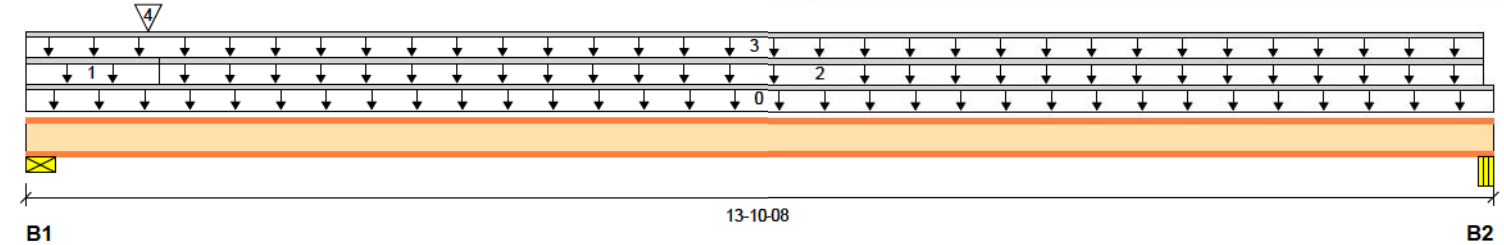
Specifier:

Customer:

Designer: S B

Code reports: CCMC 12787-R

Company:



Total Horizontal Product Length = 13-10-08

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	575 / 0	236 / 0		
B2, 5-1/4"	237 / 0	107 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	13-10-08	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-03-02	Top	60	23			n/a
2		Unf. Lin. (lb/ft)	L	01-03-02	13-09-06	Top	12	4			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	13-09-06	Top	18	7			n/a
4	F14	Conc. Pt. (lbs)	L	01-01-14	01-01-14	Back	337	130			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	1784 ft-lbs	5675 ft-lbs	31.4%	1	05-10-10
End Reaction	1157 lbs	1653 lbs	70.0%	1	00-00-00
End Shear	1125 lbs	1830 lbs	61.5%	1	00-02-06
Total Load Deflection	L/799 (0.201")	n/a	30.0%	4	06-07-03
Live Load Deflection	L/1151 (0.139")	n/a	31.3%	5	06-07-03
Max Defl.	0.201"	n/a	20.1%	4	06-07-03
Span / Depth	16.9				

Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	1157 lbs	31.7%	70.0%	Spruce-Pine-Fir
B2	Beam 5-1/4" x 2-1/2"	489 lbs	6.1%	26.4%	Spruce-Pine-Fir

Notes

Design meets Code minimum (L/240) Total load deflection criteria.
 Design meets Code minimum (L/360) Live load deflection criteria.
 Design meets User specified (1") Maximum Total load deflection criteria.
 Design meets User specified (0.72") Maximum live load deflection criteria.
 Calculations assume member is fully braced.
 Resistance Factor phi has been applied to all presented results per CSA O86.
 BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl

Address:

GREENPARK HOMES
TRINA...L, EAST GWILLIMBURY, ON

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

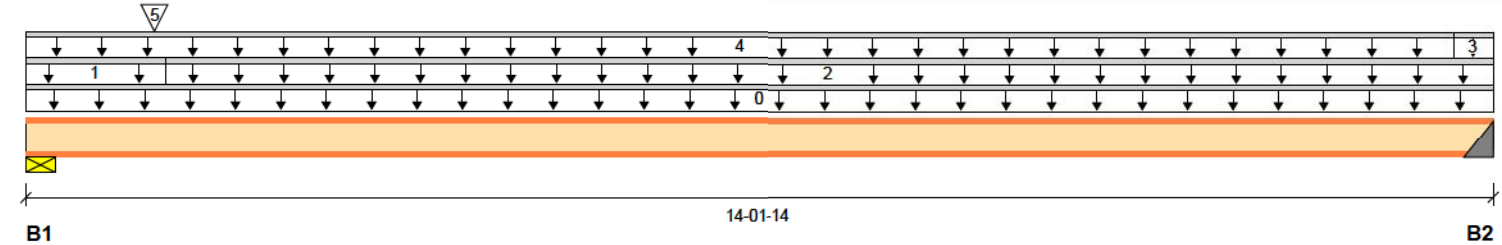
Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	621 / 0	254 / 0		
B2, 2"	348 / 0	148 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	14-01-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	60	23			n/a
2		Unf. Lin. (lb/ft)	L	01-04-02	14-01-14	Top	23	9			n/a
3		Unf. Lin. (lb/ft)	L	13-09-06	14-01-14	Top	10	4			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	13-09-06	Top	23	9			n/a
5	F14	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Back	264	102			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	2626 ft-lbs	5675 ft-lbs	46.3%	1	06-06-06
End Reaction	1249 lbs	1653 lbs	75.5%	1	00-00-00
End Shear	1216 lbs	1830 lbs	66.4%	1	00-02-06
Total Load Deflection	L/530 (0.315")	n/a	45.3%	4	06-10-13
Live Load Deflection	L/754 (0.221")	n/a	47.7%	5	06-10-13
Max Defl.	0.315"	n/a	31.5%	4	06-10-13
Span / Depth	17.6				



Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	1249 lbs	34.2%	75.5%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	707 lbs	28.0%	44.5%	LF259

Cautions

Hanger LF259 requires (10) 10d face nails, (1) #8x1.25 joist nails.
Header for the hanger LF259 is a Double 1-3/4" x 9-1/2" LVL beam



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Zoning			

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File name: C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl

Description: Level - Ground Floor

Specifier:

Designer: S B

Company:

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

Design meets User specified (1") Maximum Total load deflection criteria.

Design meets User specified (0.72") Maximum live load deflection criteria.

Calculations assume member is fully braced.

Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

BC CALC® analysis is based on Canadian Limit States Design, as per NBCC 2015 and CSA O86.

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

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Completeness and accuracy of input

must be reviewed by a qualified engineering expert to assure anyone relying on the evidence of suitability for application. The building code-a properties and Installation of B



East Gwillimbury
Building Standards Branch BCIN #19487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

engineered work in accordance with the Guide and apply to obtain Installation questions, please call (800)232-0788 before installation.

BC CALC®, BC FRAMER®, AJS™, ALLJOIST®, BC RIM BOARD™, BCI®, BOISE GLULAM™, BC FloorValue®, VERSA-LAM®, VERSA-RIM PLUS®,

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

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

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

Build 7364

Job name:

File name: C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl

Address:

GREENPARK HOMES
TRINA...L, EAST GWILLIMBURY, ON

Description: Level - Ground Floor

City, Province, Postal Code:

Specifier:

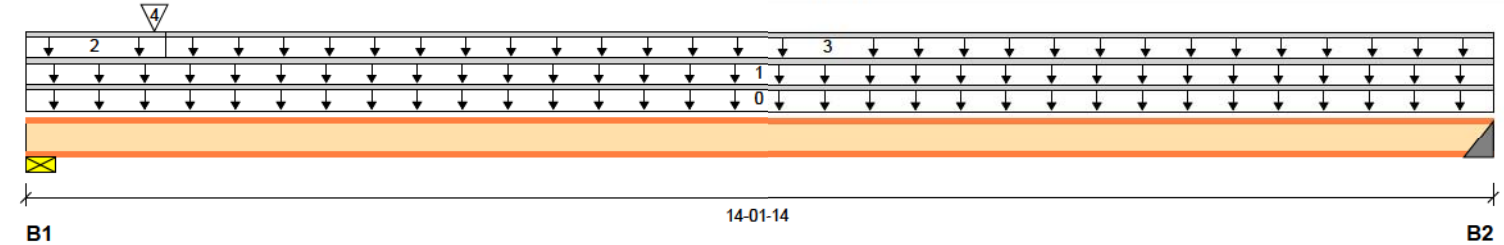
Customer:

Designer: S B

Code reports:

CCMC 12787-R

Company:



Total Horizontal Product Length = 14-01-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2-3/8"	635 / 0	259 / 0		
B2, 2"	267 / 0	118 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live 1.00	Dead 0.65	Snow 1.00	Wind 1.15	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	14-01-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	14-01-14	Top	23	9			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	01-04-02	Top	60	23			n/a
3		Unf. Lin. (lb/ft)	L	01-04-02	14-01-14	Top	10	4			n/a
4	F14	Conc. Pt. (lbs)	L	01-02-14	01-02-14	Front	363	139			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/ Resistance	Case	Location
Pos. Moment	2125 ft-lbs	5675 ft-lbs	37.5%	1	06-01-15
End Reaction	1276 lbs	1653 lbs	77.2%	1	00-00-00
End Shear	1243 lbs	1830 lbs	67.9%	1	00-02-06
Total Load Deflection	L/650 (0.257")	n/a	36.9%	4	06-10-13
Live Load Deflection	L/932 (0.179")	n/a	38.6%	5	06-08-09
Max Defl.	0.257"	n/a	25.7%	4	06-10-13
Span / Depth	17.6				



Bearing Supports

	Dim. (LxW)	Demand	Demand/ Resistance Support	Demand/ Resistance Member	Material
B1	Wall/Plate 2-3/8" x 2-1/2"	1276 lbs	34.9%	77.2%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	548 lbs	21.7%	34.5%	LF259

Cautions

Hanger LF259 requires (10) 10d face nails, (1) #8x1.25 joist nails.

Header for the hanger LF259 is a Double 1-3/4" x 9-1/2" LVL beam



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Sewage System			
Zoning			

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BC CALC® Member Report

Build 7364

Job name:

Address: GREENPARK HOMES
TRINA...L, EAST GWILLIMBURY, ON

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: C:\Data\SAUMIL\GREENP...GLENWAY 12A EL-2).isl

Description: Level - Ground Floor

Specifier:

Designer: S B

Company:

Notes

Design meets Code minimum (L/240) Total load deflection criteria.

Design meets Code minimum (L/360) Live load deflection criteria.

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Hanger Manufacturer: Simpson Strong-Tie, Inc.

Resistance Factor phi has been applied to all presented results per CSA O86.

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Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

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East Gwillimbury
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Zoning			

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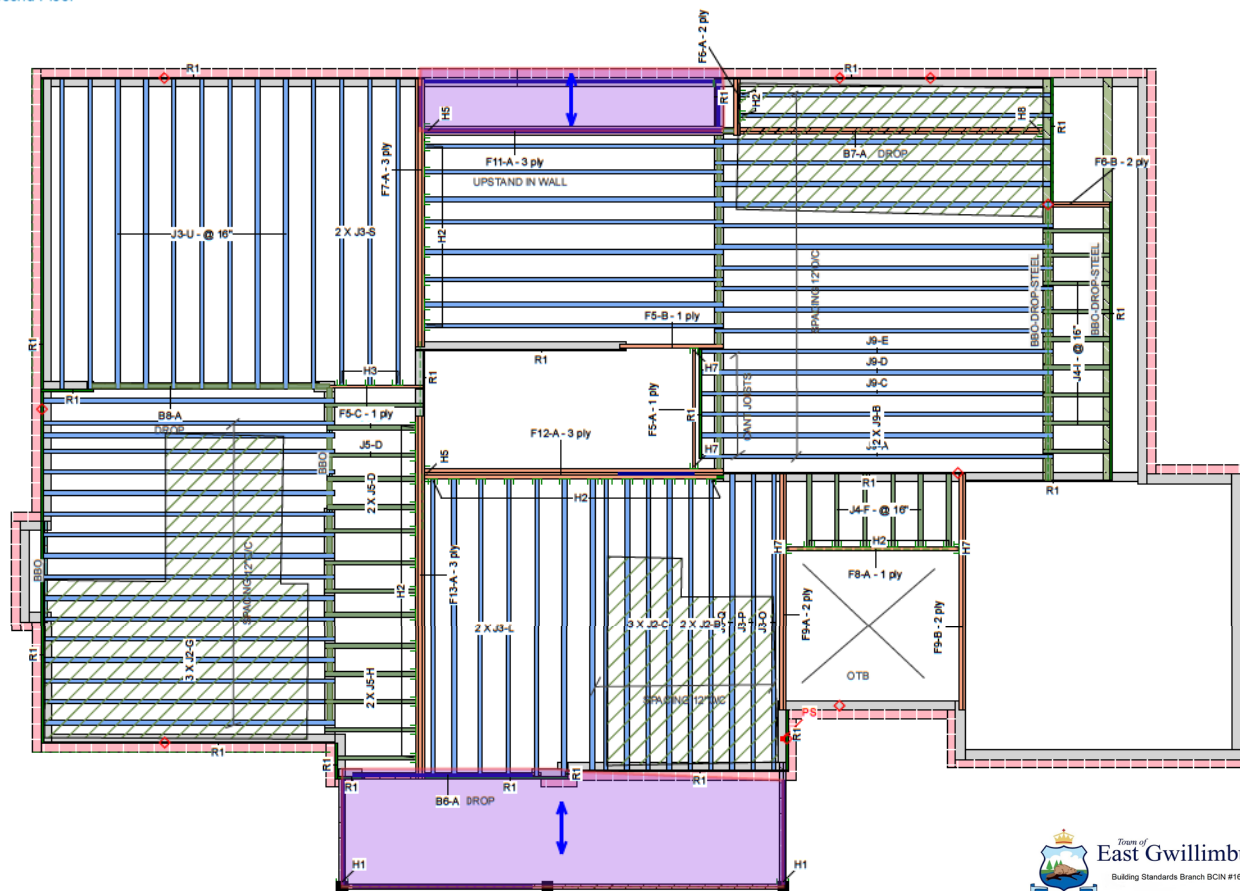
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Second Floor



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-0
Sewage System			
Zoning			

JOISTS SPACING 12" O/C
UNLESS
NOTED OTHERWISE

Second Floor LVL/LSL (Flush)							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F13	Forex 2.0E-3000Fb LVL	1.75	9.5	1	3	3	18-0-0
F12	Forex 2.0E-3000Fb LVL	1.75	9.5	1	3	3	16-0-0
F9	Forex 2.0E-3000Fb LVL	1.75	9.5	1	3	3	14-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	12-0-0
F8	Forex 2.0E-3000Fb LVL	1.75	9.5			1	10-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5			3	6-0-0
F6	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	4-0-0
F11	Forex 2.0E-3000Fb LVL	1.75	11.875	1	3	3	16-0-0

LVL/LSL (Dropped)		2.0E-3000-Fb LVL					
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
B7	Forex 2.0E-3000-Fb LVL	1.75	9.5	1	2	2	16-0-0
B8	Forex 2.0E-3000-Fb LVL	1.75	9.5	1	2	2	12-0-0
B6	Forex 2.0E-3000-Fb LVL	1.75	9.5	1	2	2	10-0-0

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
J5	AJS 140	2.5	9.5			13	6-0
J4	AJS 140	2.5	9.5			16	4-0
J9	AJS 20	2.5	9.5			16	18-0
J3	AJS 20	2.5	9.5			32	16-0
J2	AJS 20	2.5	9.5			24	14-0

Rim Board							
Label	Description	Width	Depth	Qty	Plies	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			14	12-0-0

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 140	2.5	9.5	LinRt		Varies	39-0-0
BLK2	AJS 140	2.5	11.875	LinRt		Varies	1-0-0

Beam/Girder	Supported
-------------	-----------

					Member	
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	2	Unknown Hanger				
H2	42	LF259			10 10d	1 #8x1 1/4WS
H3	3	LF259				
H5	2	HGUS5.50/10			46 16d	16 16d
H7	4	HUS1.81/10			30 16d	10 16d
H8	1	HGUS410			46 16d	16 16d

- | | | | |
|--|---|-------|-------|
| | 1. All blocking to be cut from 12" joists | 12-12 | 12-12 |
| | 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

PS	Point Load Support
◇	Load from Above
Wall	
Norbord Rimboard Plus 1.125 X 9.5	
AJS 140 9.5	
AJS 20 9.5	
Forex 2.0E-3000Fb L/VL 1.75 X 9.5 (Dropped)	
Forex 2.0E-3000Fb L/VL 1.75 X 9.5	
Forex 2.0E-3000Fb L/VL 1.75 X 11.875	
1.75 X 7.25 (Dropped)	

JOB INFORMATION

Builder
Project
Shipping
GREENPARK HOMES TRINAR HALL, EAST GWILLIMBURY, ON
Sales Rep
Designer
S B
Plotted
December 17, 2020
Layout Name
LOT-36 (GLENWAY 12A EL-2)
Job Path
C:\data\SAUMIL\GREENPARK HOMES\TRINAR HALL\LOT 36\FLOOR\LOT-36 (GLENWAY 12A

DESIGN CRITERIA

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

Floor

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

Roof

Live	0
Dead	17
Snow	36

Deflection Joist

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

Deflection Girder

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

Decking

Decking	SPF Plywood
Thickness	5/8"
Fastener	Nailed Only

CCMC References

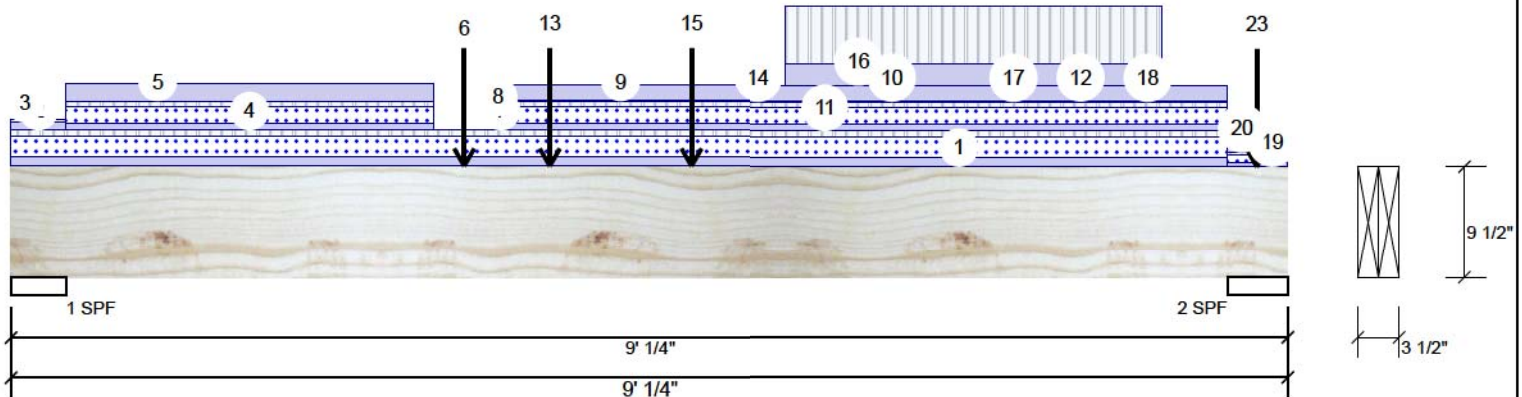
Boise - 12472-R , 12787-R
LP - 12412-R
Forex - 14056-R

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

Version 20.40.075 Powered by iStruct™

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.

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



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
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	1403	1256	816	0
2	1638	1290	794	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.625"	45%	1570 / 2920	4490	L	1.25D+1.5L +S
2 - SPF	5.125"	44%	1612 / 3251	4863	L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11028 ft-lb	3'10 3/16"	22724 ft-lb	0.485 (49%)	1.25D+1.5L +S	L
Unbraced	11028 ft-lb	3'10 3/16"	21352 ft-lb	0.516 (52%)	1.25D+1.5L +S	L
Shear	4020 lb	1'1 3/8"	9277 lb	0.433 (43%)	1.25D+1.5L +S	L
Perm Defl in.	0.082 (L/1226)	4'5"	0.278 (L/360)	0.290 (29%)	D	Uniform
LL Defl inch	0.130 (L/770)	4'5"	0.278 (L/360)	0.470 (47%)	L+0.5S	L
TL Defl inch	0.211 (L/473)	4'5"	0.417 (L/240)	0.510 (51%)	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 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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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 8-7-2		Top	45 PLF	31 PLF	104 PLF	0 PLF	
2	Part. Uniform	0-0-0 to 0-4-10		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weigh
3	Tapered Start	0-0-0		Top	4 PLF	9 PLF	0 PLF	0 PLF	
	End	0-4-10			4 PLF	9 PLF	0 PLF	0 PLF	

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

Continued on page 2...

Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott

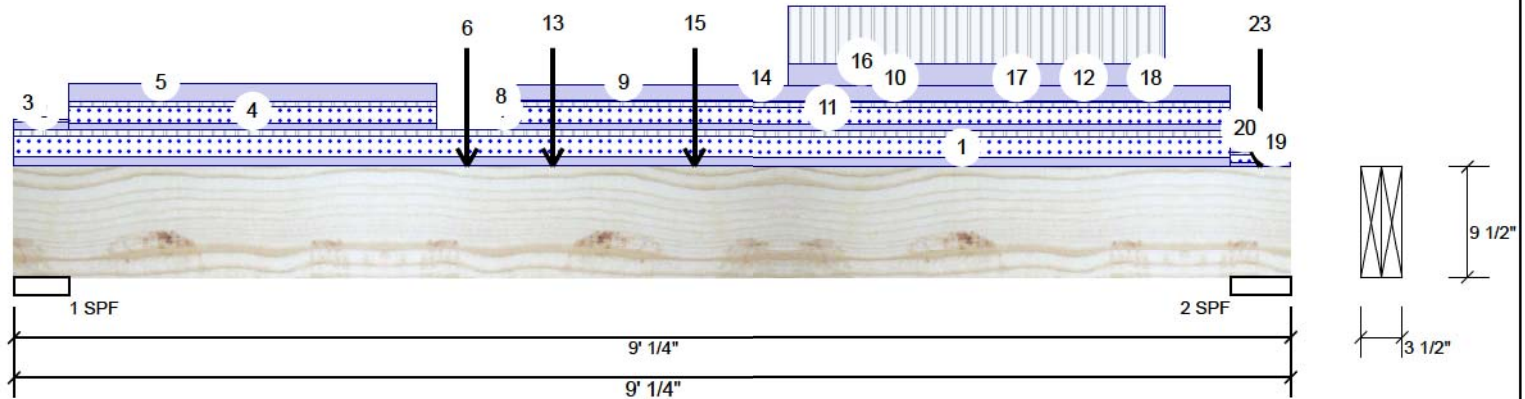
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

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

Level: Second Floor



Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-4-10 to 2-11-12		Top	37 PLF	25 PLF	85 PLF	0 PLF	
5	Part. Uniform	0-4-10 to 2-11-12		Top	88 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Point	3-2-6		Top	557 lb	1056 lb	41 lb	0 lb	F13
7	Part. Uniform	3-5-0 to 3-6-0		Top	18 PLF	12 PLF	42 PLF	0 PLF	
8	Part. Uniform	3-5-0 to 3-6-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
9	Tapered Start	3-5-0		Top	0 PLF	1 PLF	0 PLF	0 PLF	
	End	4-9-10			0 PLF	1 PLF	0 PLF	0 PLF	
10	Tapered Start	3-5-0		Top	0 PLF	1 PLF	0 PLF	0 PLF	
	End	8-7-2			0 PLF	1 PLF	0 PLF	0 PLF	
11	Part. Uniform	3-6-0 to 8-7-2		Top	37 PLF	25 PLF	85 PLF	0 PLF	
12	Part. Uniform	3-6-0 to 8-7-2		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
13	Point	3-9-10		Top	92 lb	244 lb	0 lb	0 lb	J3
14	Tapered Start	4-9-10		Top	0 PLF	1 PLF	0 PLF	0 PLF	
	End	6-1-10			0 PLF	1 PLF	0 PLF	0 PLF	
15	Point	4-9-10		Top	127 lb	338 lb	0 lb	0 lb	J3
16	Part. Uniform	5-5-10 to 8-1-10		Top	109 PLF	290 PLF	0 PLF	0 PLF	
17	Tapered Start	6-1-10		Top	0 PLF	1 PLF	0 PLF	0 PLF	
	End	7-5-10			0 PLF	1 PLF	0 PLF	0 PLF	
18	Tapered Start	7-5-10		Top	0 PLF	1 PLF	0 PLF	0 PLF	
	End	8-7-2			0 PLF	1 PLF	0 PLF	0 PLF	
19	Part. Uniform	8-7-2 to 9-0-4		Top	18 PLF	12 PLF	42 PLF	0 PLF	
20	Part. Uniform	8-7-2 to 9-0-4		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
23	Point	8-9-10		Top	57 lb	151 lb	0 lb	0 lb	J3
	Self Weight				8 PLF				

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Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

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2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
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APA: PR-L318

Kott

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This design is valid until 4/24/2023

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Level: Second Floor



Member Information

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Plies:	2	Design Method:	LSD
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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	725	1167	1493	0
2	15	72	3	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.750"	91%	1459 / 2964	4423	L	1.25D+1.5S +L
2 - Hanger	4.000"	1%	101 / 0	101	Uniform	1.4D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	633 ft-lb	3'8 13/16"	20224 ft-lb	0.031 (3%)	1.25D+1.5L	L
Unbraced	633 ft-lb	3'8 13/16"	17052 ft-lb	0.037 (4%)	1.25D+1.5L	L
Shear	730 lb	11 1/2"	8256 lb	0.088 (9%)	1.25D+1.5L	L
Perm Defl in.	0.028 (L/6395)	7'3 5/8"	0.503 (L/360)	0.060 (6%)	D	Uniform
LL Defl inch	0.013 (L/13939)	6'5 5/16"	0.503 (L/360)	0.030 (3%)	L+0.5S	L
TL Defl inch	0.041 (L/4397)	7' 9/16"	0.755 (L/240)	0.050 (5%)	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 4.5.
- 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 braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on full section width.

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-1-6		Top	830 lb	426 lb	1423 lb	0 lb	F11
2	Part. Uniform	0-2-12 to 0-8-12		Top	78 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Point	0-10-8		Top	252 lb	314 lb	73 lb	0 lb	F6
	Self Weight				8 PLF				

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

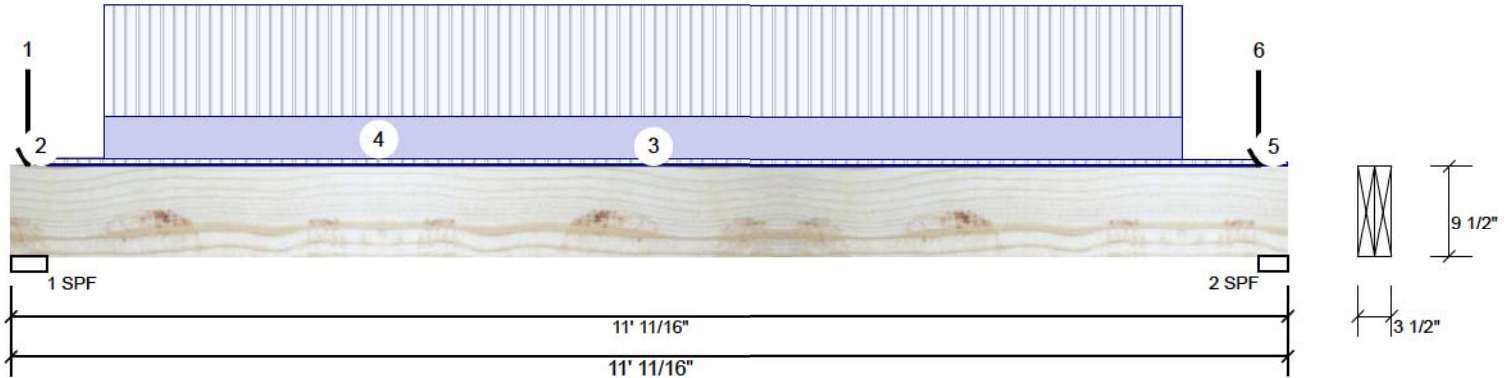
Kott

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



This design is valid until 4/24/2023

B8-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	1638	654	0	0
2	1591	638	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.688"	41%	818 / 2457	3275 L	1.25D+1.5L
2 - SPF	3.000"	49%	798 / 2387	3185 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8549 ft-lb	5'6 9/16"	22724 ft-lb	0.376 (38%)	1.25D+1.5L	L
Unbraced	8549 ft-lb	5'6 9/16"	20494 ft-lb	0.417 (42%)	1.25D+1.5L	L
Shear	2783 lb	10' 15/16"	9277 lb	0.300 (30%)	1.25D+1.5L	L
Perm Defl in.	0.075 (L/1698)	5'6 11/16"	0.354 (L/360)	0.210 (21%)	D	Uniform
LL Defl inch	0.188 (L/678)	5'6 11/16"	0.354 (L/360)	0.530 (53%)	L	
TL Defl inch	0.263 (L/484)	5'6 11/16"	0.531 (L/240)	0.500 (50%)	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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PASS THRU FRAMING SQUASH BLOCK IS REQUIRED AT ALL POINT LOADS OVER BEARINGS.



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-1-11		Top	64 lb	172 lb	0 lb	0 lb	J3
2	Tapered Start	0-2-7		Top	3 PLF	7 PLF	0 PLF	0 PLF	
	End	0-3-11			3 PLF	7 PLF	0 PLF	0 PLF	
3	Tapered Start	0-3-11		Top	5 PLF	14 PLF	0 PLF	0 PLF	
	End	10-9-11			5 PLF	13 PLF	0 PLF	0 PLF	

Continued on page 2....

Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

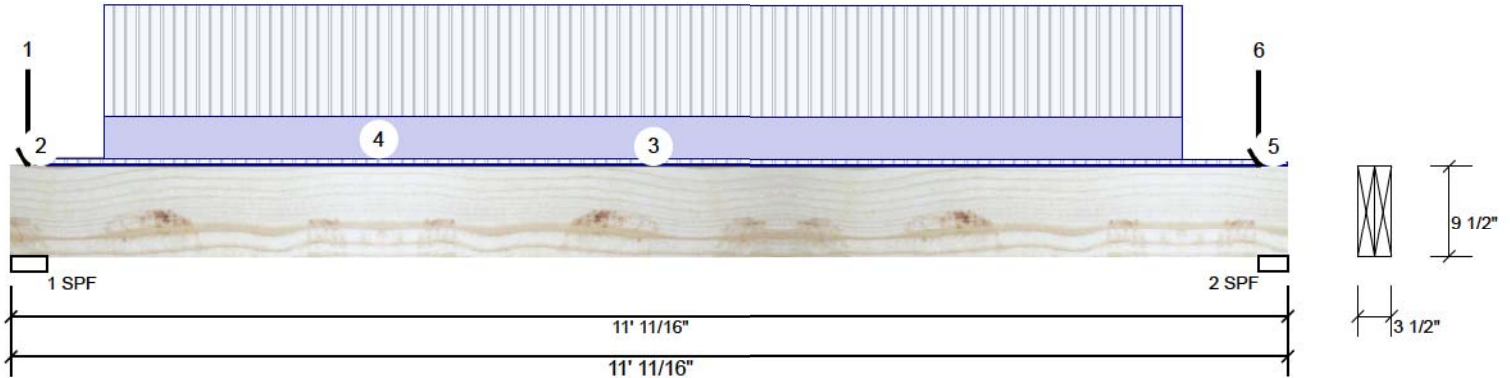
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B8-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
4	Part. Uniform	0-9-11 to 10-1-11		Top	110 PLF	294 PLF	0 PLF	0 PLF	
5	Tapered Start	10-9-11		Top	3 PLF	7 PLF	0 PLF	0 PLF	
	End	11-0-11			3 PLF	7 PLF	0 PLF	0 PLF	
6	Point	10-9-11		Top	64 lb	169 lb	0 lb	0 lb	J3
	Self Weight				8 PLF				

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

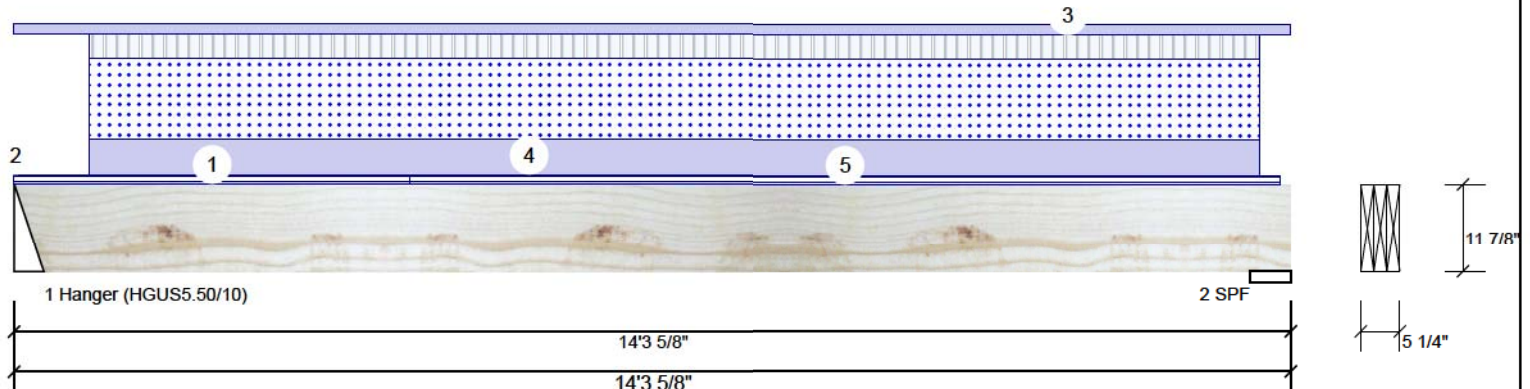
Kott

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



This design is valid until 4/24/2023

F11-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1175	2333	3931	0
2	1277	2490	4269	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - Hanger	4.000"	64% 2916 / 7071	9987 L	1.25D+1.5S +L
2 - SPF	5.500"	61% 3113 / 7681	10793 L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	36306 ft-lb	7'1 3/16"	53447 ft-lb	0.679 (68%)	1.25D+1.5S +L	L
Unbraced	36306 ft-lb	7'1 3/16"	50564 ft-lb	0.718 (72%)	1.25D+1.5S +L	L
Shear	9148 lb	1'3 1/8"	17394 lb	0.526 (53%)	1.25D+1.5S +L	L
Perm Defl in.	0.205 (L/798)	7'1 1/8"	0.455 (L/360)	0.450 (45%)	D	Uniform
LL Defl inch	0.409 (L/400)	7'1 1/8"	0.455 (L/360)	0.900 (90%)	S+0.5L	L
TL Defl inch	0.614 (L/267)	7'1 1/8"	0.682 (L/240)	0.900 (90%)	D+S+0.5L	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.

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Continued on page 2...

Notes

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Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

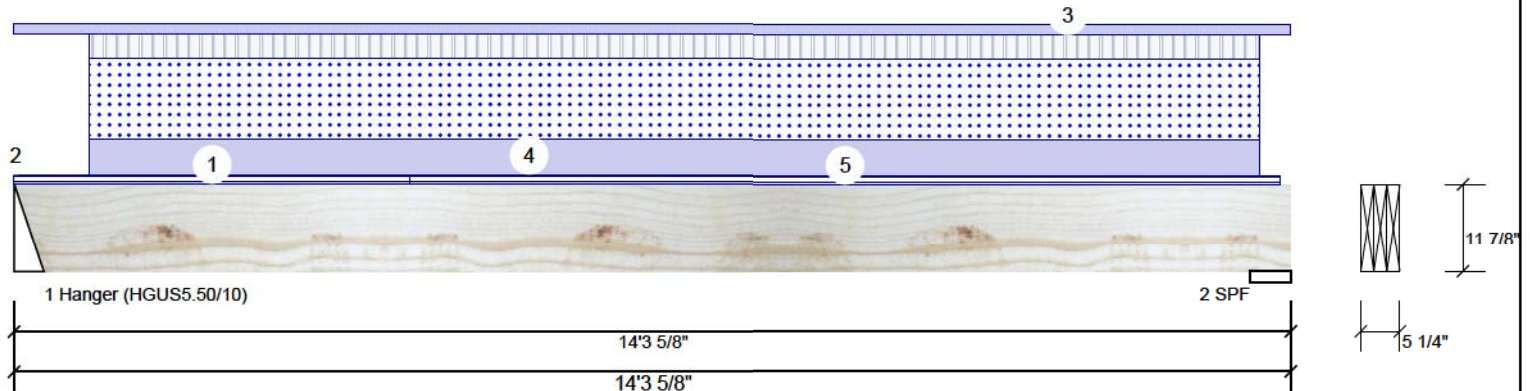
Forex
APA: PR-L318

Kott
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613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F11-A Forex 2.0E-3000Fb LVL 1.750" X 11.875" 3-Ply - PASSED Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
5	Part. Uniform	4-5-3 to 14-2-4		Top	12 PLF	12 PLF	42 PLF	0 PLF	
	Self Weight				14 PLF				

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

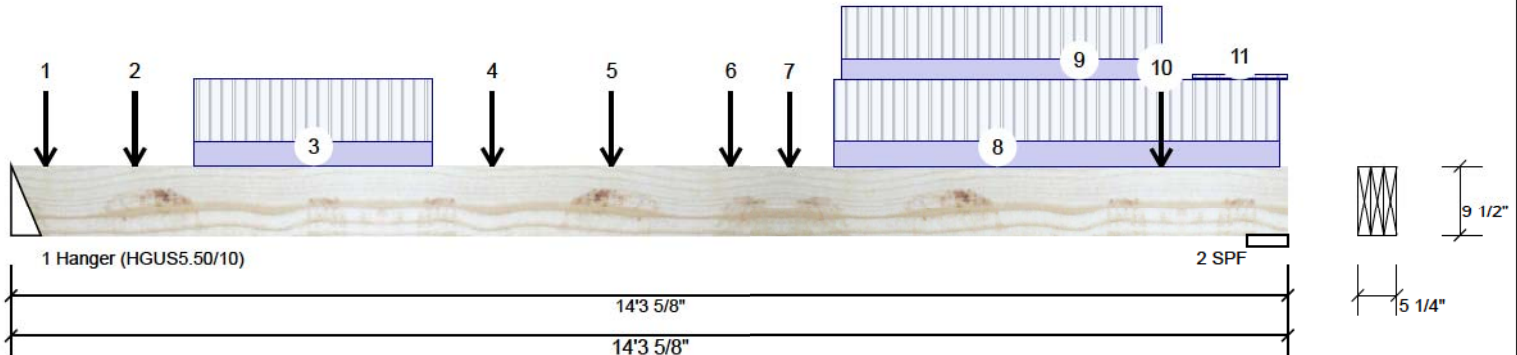
Manufacturer Info

Forex
APA: PR-L318

Kott

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

F12-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 3-Ply - PASSED Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	2151	902	0	0
2	2682	1152	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	4.000"	28%	1127 / 3227	4354 L	1.25D+1.5L
2 - SPF	5.500"	31%	1440 / 4023	5463 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	15680 ft-lb	8' 5/8"	35449 ft-lb	0.442 (44%)	1.25D+1.5L	L
Unbraced	15680 ft-lb	8' 5/8"	34225 ft-lb	0.458 (46%)	1.25D+1.5L	L
Shear	4797 lb	13'1 3/8"	13915 lb	0.345 (34%)	1.25D+1.5L	L
Perm Defl in.	0.154 (L/1062)	7'2 15/16"	0.455 (L/360)	0.340 (34%)	D	Uniform
LL Defl inch	0.365 (L/448)	7'2 13/16"	0.455 (L/360)	0.800 (80%)	L	
TL Defl inch	0.519 (L/315)	7'2 7/8"	0.682 (L/240)	0.760 (76%)	D+L	L

Design Notes

- Fill all hanger nailing holes.
- 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.

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-4-10		Near Face	86 lb	229 lb	0 lb	0 lb	J3
2	Point	1-4-10		Near Face	125 lb	332 lb	0 lb	0 lb	J3
3	Part. Uniform	2-0-10 to 4-8-10		Near Face	107 PLF	285 PLF	0 PLF	0 PLF	
4	Point	5-4-10		Near Face	141 lb	375 lb	0 lb	0 lb	J3
5	Point	6-8-10		Near Face	137 lb	366 lb	0 lb	0 lb	J3
6	Point	8-0-10		Near Face	103 lb	275 lb	0 lb	0 lb	J2

Continued on page 2...

Notes

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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

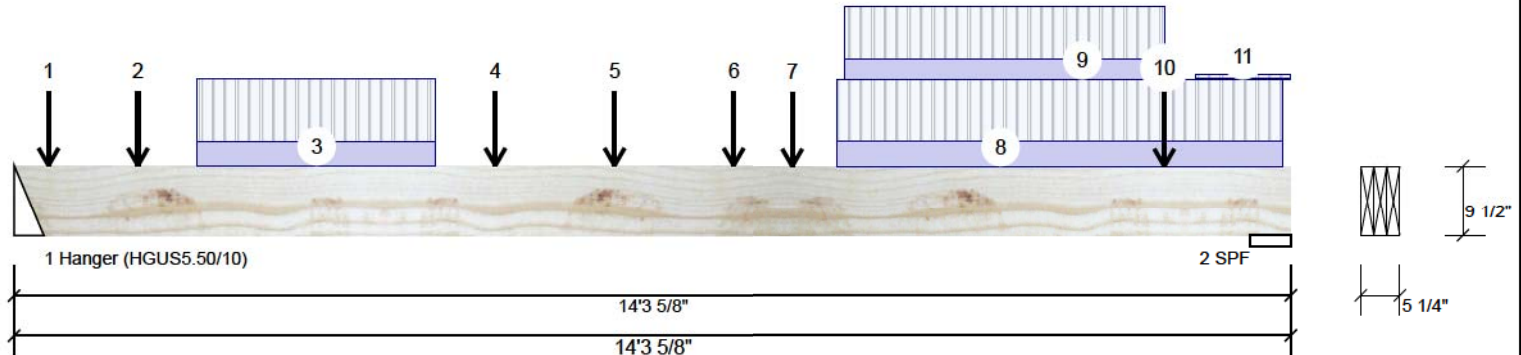
Forex
APA: PR-L318

Kott

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



F12-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 3-Ply - PASSED Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
7	Point	8-8-10		Near Face	93 lb	229 lb	0 lb	0 lb	J2
8	Part. Uniform	9-2-10 to 14-2-10		Near Face	115 PLF	275 PLF	0 PLF	0 PLF	
9	Part. Uniform	9-3-10 to 12-10-10		Top	90 PLF	240 PLF	0 PLF	0 PLF	
10	Point	12-10-10		Far Face	16 lb	14 lb	0 lb	0 lb	F5
11	Tie-In	13-2-12 to 14-3-10	0-5-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				11 PLF				

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott

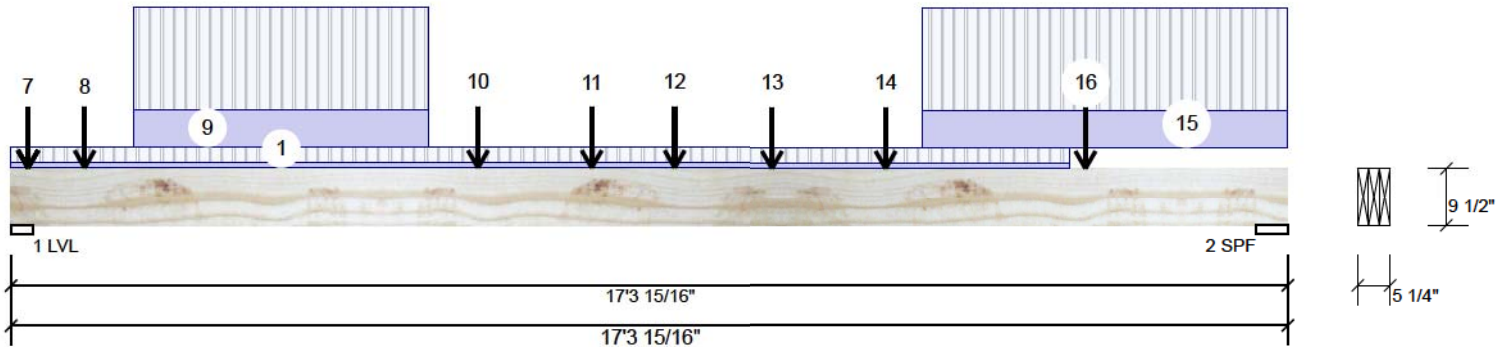
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This design is valid until 4/24/2023

F13-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 3-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1056	557	41	0
2	2626	1164	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - LVL	3.500"	17%	696 / 1626	2322 L	1.25D+1.5L +S
2 - SPF	5.196"	32%	1455 / 3939	5394 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	13010 ft-lb	11'10 7/16"	35449 ft-lb	0.367 (37%)	1.25D+1.5L	L
Unbraced	13010 ft-lb	11'10 7/16"	33607 ft-lb	0.387 (39%)	1.25D+1.5L	L
Shear	5193 lb	16'2"	13915 lb	0.373 (37%)	1.25D+1.5L	L
Perm Defl in.	0.198 (L/1011)	9'1 5/8"	0.558 (L/360)	0.360 (36%)	D	Uniform
LL Defl inch	0.433 (L/464)	9'2 5/16"	0.558 (L/360)	0.780 (78%)	L+0.5S	L
TL Defl inch	0.631 (L/318)	9'2 1/16"	0.836 (L/240)	0.750 (75%)	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 4.5.
- 2 Girders are designed to be supported on the bottom edge only.
- 3 Multiple plies must be fastened together as per manufacturer's details.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 Lateral slenderness ratio based on full section width.

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 14-4-6	0-3-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-2-12		Top	2 lb	1 lb	4 lb	0 lb	
3	Point	0-2-12		Top	3 lb	0 lb	0 lb	0 lb	Wall Self Weigh
4	Point	0-2-12		Top	12 lb	8 lb	28 lb	0 lb	
5	Point	0-2-12		Top	26 lb	0 lb	0 lb	0 lb	Wall Self Weigh

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

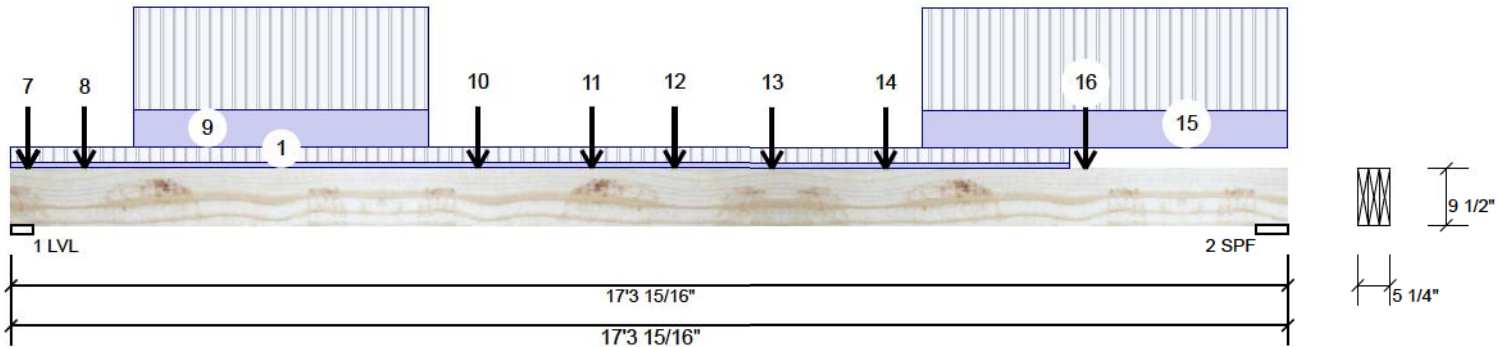
Kott

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



F13-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 3-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	0-2-12		Top	4 lb	3 lb	9 lb	0 lb	
7	Point	0-2-12		Top	9 lb	0 lb	0 lb	0 lb	Wall Self Weight
8	Point	0-11-15		Far Face	28 lb	75 lb	0 lb	0 lb	J4
9	Part. Uniform	1-7-15 to 5-7-15		Far Face	30 PLF	81 PLF	0 PLF	0 PLF	
10	Point	6-3-15		Far Face	43 lb	116 lb	0 lb	0 lb	J5
11	Point	7-10-7		Far Face	40 lb	107 lb	0 lb	0 lb	J5
12	Point	8-11-15		Far Face	37 lb	99 lb	0 lb	0 lb	J5
13	Point	10-3-15		Far Face	43 lb	116 lb	0 lb	0 lb	J5
14	Point	11-10-7		Far Face	40 lb	107 lb	0 lb	0 lb	J5
15	Part. Uniform	12-4-6 to 17-3-15		Far Face	30 PLF	81 PLF	0 PLF	0 PLF	
16	Point	14-7-0		Near Face	902 lb	2151 lb	0 lb	0 lb	F12
	Self Weight				11 PLF				

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

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

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

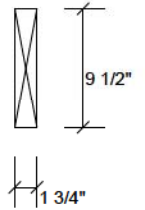
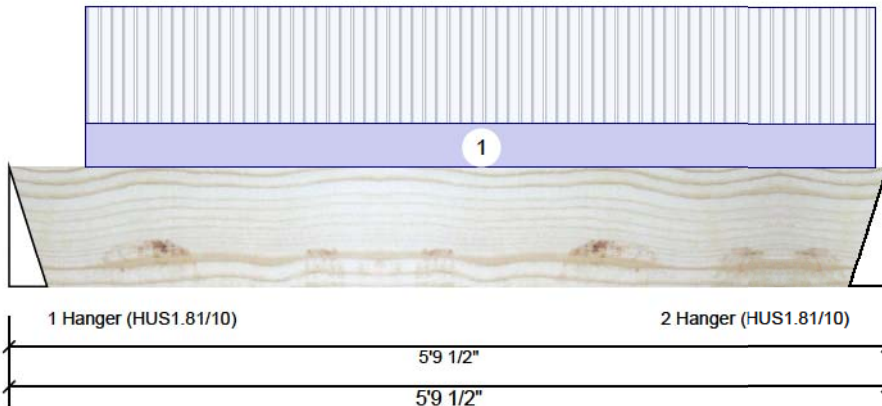
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F5-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - 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:	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	14	16	0	0
2	17	17	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	1%	20 / 21	42	L	1.25D+1.5L
2 - Hanger	3.000"	1%	22 / 25	47	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	60 ft-lb	2'10 13/16"	11135 ft-lb	0.005 (1%)	1.25D+1.5L	L
Unbraced	60 ft-lb	2'10 13/16"	6882 ft-lb	0.009 (1%)	1.25D+1.5L	L
Shear	32 lb	11 3/4"	4546 lb	0.007 (1%)	1.25D+1.5L	L
Perm Defl in.	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
LL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch	0.000 (L/999)	0	999.000 (L/0)	0.000 (0%)		

Design Notes

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

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-6-1 to 5-8-9	0-1-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

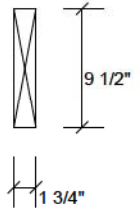
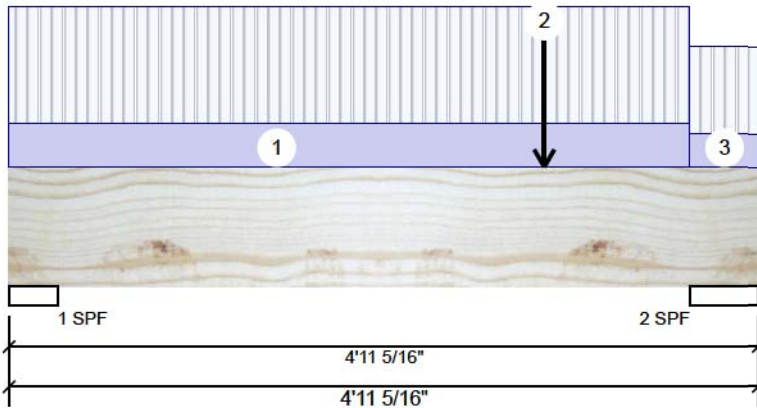
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F5-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" - 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:	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	52	31	0	0
2	61	41	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	3.813"	3%	39 / 78	117 L	1.25D+1.5L
2 - SPF	5.500"	2%	51 / 92	143 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	127 ft-lb	2'7 13/16"	11362 ft-lb	0.011 (1%)	1.25D+1.5L	L
Unbraced	127 ft-lb	2'7 13/16"	8454 ft-lb	0.015 (1%)	1.25D+1.5L	L
Shear	95 lb	3'9 1/16"	4638 lb	0.021 (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/46174)	2'5 7/8"	0.143 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.002 (L/28142)	2'6 1/8"	0.215 (L/240)	0.010 (1%)	D+L	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom braced at bearings.

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 4-5-13	0-6-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	3-6-5		Near Face	17 lb	17 lb	0 lb	0 lb	F5
3	Tie-In	4-5-13 to 4-11-5	0-4-8	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott

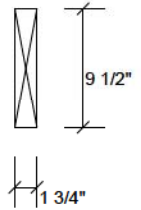
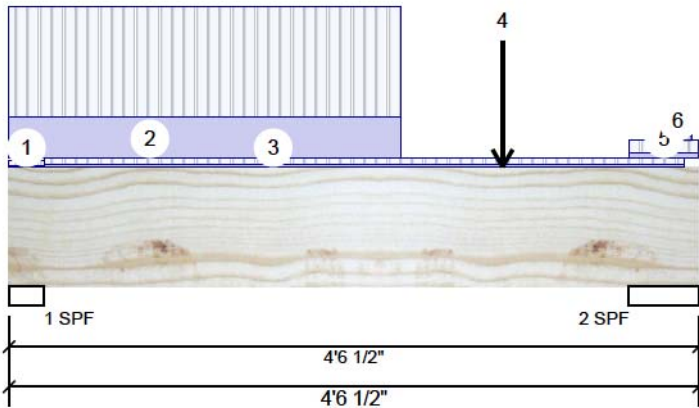
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F5-C Forex 2.0E-3000Fb LVL 1.750" X 9.500" - 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:	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	669	258	0	0
2	566	221	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	2.750"	45%	323 / 1004	1327 L	1.25D+1.5L
2 - SPF	5.500"	19%	276 / 849	1125 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1203 ft-lb	2'1 9/16"	11362 ft-lb	0.106 (11%)	1.25D+1.5L	L
Unbraced	1203 ft-lb	2'1 9/16"	8860 ft-lb	0.136 (14%)	1.25D+1.5L	L
Shear	1501 lb	3'4 1/4"	4638 lb	0.324 (32%)	1.25D+1.5L	L
Perm Defl in.	0.004 (L/11055)	2'1 13/16"	0.133 (L/360)	0.030 (3%)	D	Uniform
LL Defl inch	0.011 (L/4270)	2'1 13/16"	0.133 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.016 (L/3080)	2'1 13/16"	0.199 (L/240)	0.080 (8%)	D+L	L

Design Notes

- Girders are designed to be supported on the bottom edge only.
- Top braced at bearings.
- Bottom braced at bearings.

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

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

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-2-12	0-4-0	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-0-0 to 2-7-0		Far Face	111 PLF	297 PLF	0 PLF	0 PLF	
3	Tie-In	0-2-12 to 4-5-6	0-5-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	3-3-0		Far Face	138 lb	369 lb	0 lb	0 lb	J3
5	Tie-In	4-1-0 to 4-6-8	0-10-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
6	Tie-In	4-3-12 to 4-5-15	0-11-4 to 0-8-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

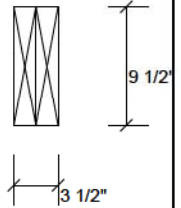
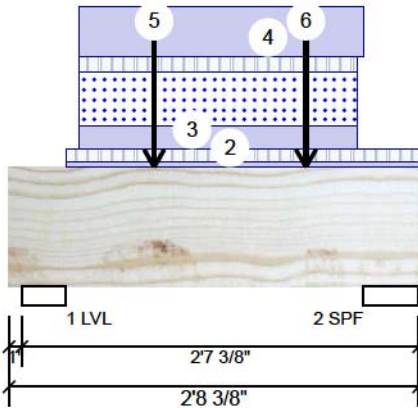
Kott

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



F6-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	314	252	73	0
2	373	293	82	0

Bearings and Factored Reactions

Bearing	Length	Cap. React	D/L lb	Total	Ld. Case	Ld. Comb.
1 - LVL	3.500"	9%	314 / 545	860	_L	1.25D+1.5L +S
2 - SPF	4.375"	11%	367 / 643	1009	_L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	580 ft-lb	11 7/16"	22724 ft-lb	0.026 (3%)	1.25D+1.5L +S	_L
Unbraced	580 ft-lb	11 7/16"	22724 ft-lb	0.026 (3%)	1.25D+1.5L +S	_L
Shear	764 lb	1'7 1/4"	9277 lb	0.082 (8%)	1.25D+1.5L +S	_L
Perm Defl in.	0.001 (L/30600)	1'2 5/8"	0.072 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.001 (L/21417)	1'1 9/16"	0.072 (L/360)	0.020 (2%)	L+0.5S	LL
TL Defl inch	0.002 (L/12612)	1'2 1/16"	0.108 (L/240)	0.020 (2%)	D+L+0.5S	LL
LL Cant	-0.000 (2L/40376)	Lt Cant	0.200 (2L/480)	0.000 (0%)	L+0.5S	LL
TL Cant	-0.000 (2L/23806)	Lt Cant	0.300 (2L/360)	0.000 (0%)	D+L+0.5S	LL

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



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.

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

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

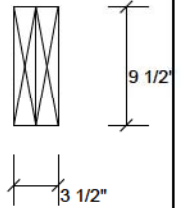
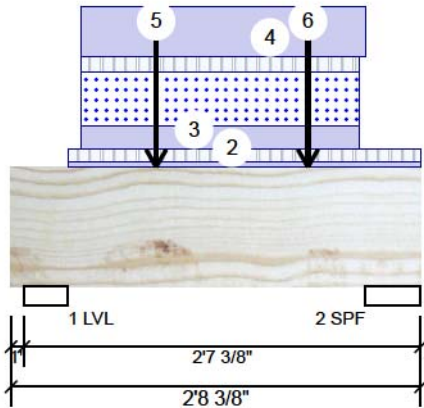
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3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



F6-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
2	Tie-In	0-4-8 to 2-8-6	0-6-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-5-8 to 2-3-8		Top	37 PLF	25 PLF	85 PLF	0 PLF	
4	Part. Uniform	0-5-8 to 2-4-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
5	Point	0-11-7		Near Face	161 lb	330 lb	0 lb	0 lb	J3
6	Point	1-11-7		Near Face	127 lb	263 lb	0 lb	0 lb	J3
	Self Weight				8 PLF				

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

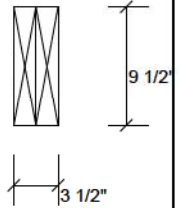
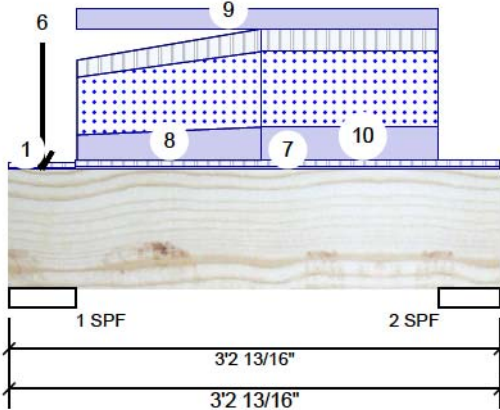
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F6-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	253	466	716	0
2	145	274	347	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.250"	17%	583 / 1327	1910 L	1.25D+1.5S +L
2 - SPF	4.813"	10%	343 / 665	1008 L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	648 ft-lb	1'7 7/8"	22724 ft-lb	0.029 (3%)	1.25D+1.5S +L	L
Unbraced	648 ft-lb	1'7 7/8"	22724 ft-lb	0.029 (3%)	1.25D+1.5S +L	L
Shear	400 lb	1'2"	9277 lb	0.043 (4%)	1.25D+1.5S +L	L
Perm Defl in.	0.001 (L/29897)	1'7 3/4"	0.084 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch	0.002 (L/19475)	1'7 13/16"	0.084 (L/360)	0.020 (2%)	S+0.5L	L
TL Defl inch	0.003 (L/11793)	1'7 13/16"	0.126 (L/240)	0.020 (2%)	D+S+0.5L	L

Design Notes

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

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

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

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



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

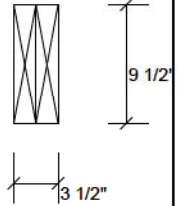
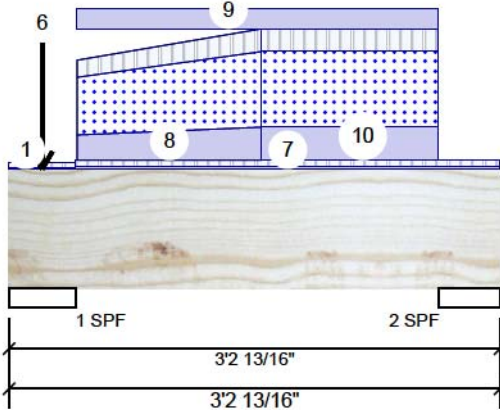
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F6-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-5-4	0-5-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	0-2-10		Top	13 lb	9 lb	30 lb	0 lb	
3	Point	0-2-10		Top	14 lb	0 lb	0 lb	0 lb	Wall Self Weight
4	Point	0-2-10		Top	166 lb	106 lb	355 lb	0 lb	F1 F1
5	Point	0-2-10		Top	5 lb	3 lb	11 lb	0 lb	
6	Point	0-2-10		Top	6 lb	0 lb	0 lb	0 lb	Wall Self Weight
7	Tie-In	0-5-4 to 3-2-13	0-7-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
8	Tapered Start	0-5-6		Top	100 PLF	68 PLF	228 PLF	0 PLF	
	End	1-7-15			131 PLF	90 PLF	299 PLF	0 PLF	
9	Part. Uniform	0-5-6 to 2-9-14		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Part. Uniform	1-7-15 to 2-9-14		Top	131 PLF	90 PLF	299 PLF	0 PLF	
	Self Weight				8 PLF				

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

Notes

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Lumber

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

chemicals

Handling & Installation

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
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

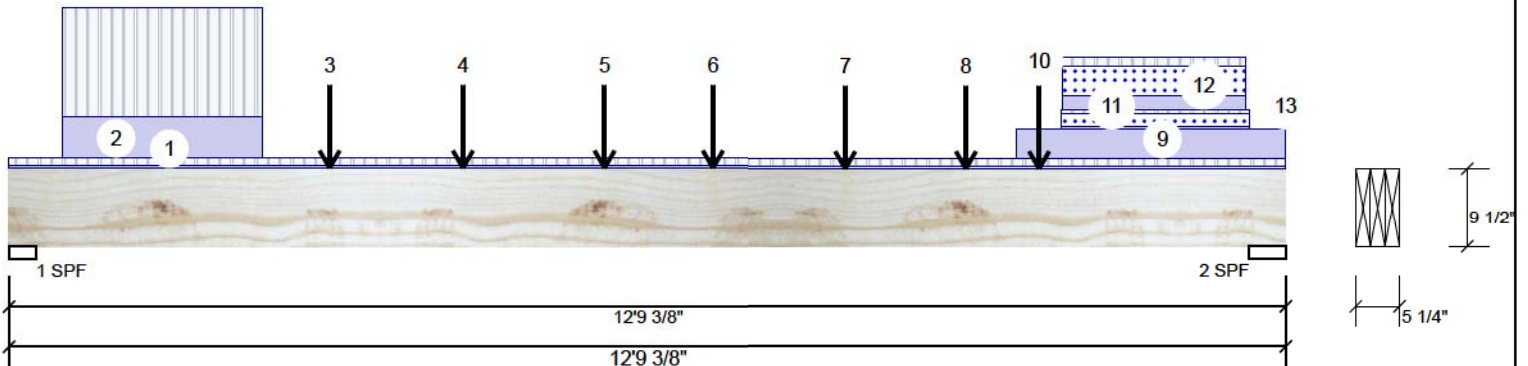
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613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F7-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 3-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	3	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	360	Load Sharing:	Yes
Deflection TL:	240	Deck:	Not Checked
Importance:	Normal	Vibration:	Not Checked
General Load			
Floor Live:	40 PSF		
Dead:	15 PSF		

Unfactored Reactions UNPATTERNED lb (Uplift)

Brg	Live	Dead	Snow	Wind
1	1921	1151	713	0
2	2248	2729	3442	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	3.250"	48% 1439 / 3595	5034 L	1.25D+1.5L +S
2 - SPF	4.375"	77% 3411 / 7411	10822 L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	22427 ft-lb	10'3 3/4"	35449 ft-lb	0.633 (63%)	1.25D+1.5S +L	L
Unbraced	22427 ft-lb	10'3 3/4"	35449 ft-lb	0.633 (63%)	1.25D+1.5S +L	L
Shear	10677 lb	11'8 1/4"	13915 lb	0.767 (77%)	1.25D+1.5S +L	L
Perm Defl in.	0.202 (L/729)	6'10 9/16"	0.409 (L/360)	0.490 (49%)	D	Uniform
LL Defl inch	0.352 (L/418)	6'8 7/16"	0.409 (L/360)	0.860 (86%)	L+0.5S	L
TL Defl inch	0.554 (L/266)	6'9 3/16"	0.614 (L/240)	0.900 (90%)	D+L+0.5S	L

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

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



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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 12-9-6	0-6-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-6-7 to 2-6-7		Near Face	114 PLF	303 PLF	0 PLF	0 PLF	
3	Point	3-2-7		Near Face	131 lb	350 lb	0 lb	0 lb	J3
4	Point	4-6-7		Near Face	144 lb	385 lb	0 lb	0 lb	J3
5	Point	5-11-7		Near Face	131 lb	350 lb	0 lb	0 lb	J3

Continued on page 2...

Notes

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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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

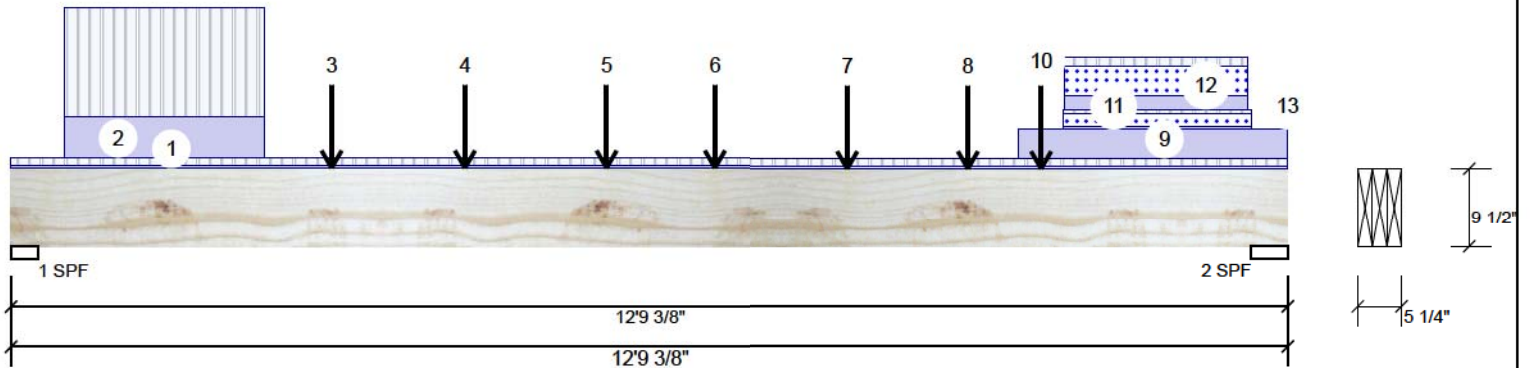
Kott

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F7-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 3-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Point	7-0-7		Near Face	127 lb	339 lb	0 lb	0 lb	J3
7	Point	8-4-7		Near Face	134 lb	356 lb	0 lb	0 lb	J3
8	Point	9-6-15		Near Face	102 lb	272 lb	0 lb	0 lb	J3
9	Part. Uniform	10-1-0 to 12-9-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Point	10-3-12		Near Face	2333 lb	1175 lb	3931 lb	0 lb	F11
11	Part. Uniform	10-6-6 to 12-5-0		Top	10 PLF	10 PLF	36 PLF	0 PLF	
12	Part. Uniform	10-6-8 to 12-4-8		Top	37 PLF	25 PLF	85 PLF	0 PLF	
13	Part. Uniform	12-9-6 to 12-9-6		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				11 PLF				

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

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

Kott

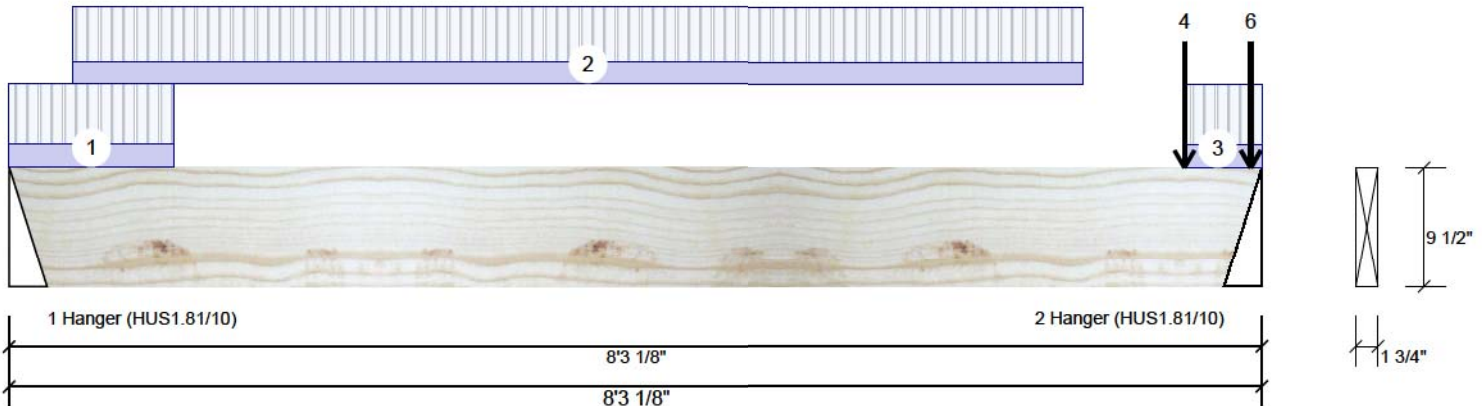
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This design is valid until 4/24/2023

F8-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" - 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:	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	319	136	0	0
2	349	273	158	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	3.000"	17%	170 / 479	649 L	1.25D+1.5L
2 - Hanger	3.000"	26%	341 / 682	1023 L	1.25D+1.5L +S

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1070 ft-lb	4' 13/16"	11362 ft-lb	0.094 (9%)	1.25D+1.5L	L
Unbraced	1070 ft-lb	4' 13/16"	4727 ft-lb	0.226 (23%)	1.25D+1.5L	L
Shear	612 lb	7'3 3/8"	4638 lb	0.132 (13%)	1.25D+1.5L	L
Perm Defl in.	0.012 (L/8016)	4'1 5/16"	0.263 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.027 (L/3487)	4'1 1/4"	0.263 (L/360)	0.100 (10%)	L+0.5S	L
TL Defl inch	0.039 (L/2430)	4'1 5/16"	0.394 (L/240)	0.100 (10%)	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 4.5.
- 2 Fill all hanger nailing holes.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top braced at bearings.
- 5 Bottom braced at bearings.

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 1-1-0	1-9-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-5-0 to 7-1-0		Far Face	25 PLF	66 PLF	0 PLF	0 PLF	
3	Tie-In	7-9-0 to 8-3-2	1-9-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	7-9-0		Far Face	25 lb	66 lb	0 lb	0 lb	J4
5	Point	8-2-4		Top	69 lb	47 lb	158 lb	0 lb	
6	Point	8-2-4		Top	74 lb	0 lb	0 lb	0 lb	Wall Self Weigh
	Self Weight				4 PLF				



These plans have been reviewed for use with the corrections as noted. No other changes may be made without written approval of the Building Standards Branch. All work must comply with Zoning By-Law 2018-043, as amended, and the Ontario Building Code, as amended. These approved documents must be kept on site at all times. The building permit must be clearly posted on site at all times.

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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

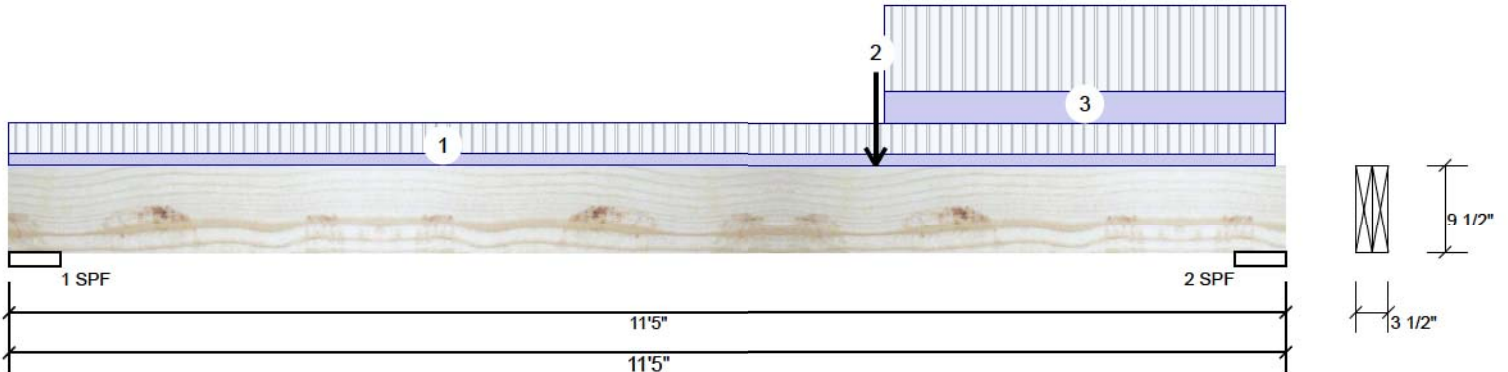
3228 Moodie Dr, Ottawa, Ontario
613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F9-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	160	109	0	0
2	346	185	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.500"	3%	136 / 240	376 L 1.25D+1.5L
2 - SPF	5.500"	6%	231 / 520	751 L 1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1961 ft-lb	7'9"	22724 ft-lb	0.086 (9%)	1.25D+1.5L	L
Unbraced	1961 ft-lb	7'9"	20494 ft-lb	0.096 (10%)	1.25D+1.5L	L
Shear	663 lb	10'2 3/4"	9277 lb	0.071 (7%)	1.25D+1.5L	L
Perm Defl in.	0.018 (L/6955)	6'1 13/16"	0.354 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.033 (L/3860)	6'3 5/8"	0.354 (L/360)	0.090 (9%)	L	
TL Defl inch	0.051 (L/2483)	6'2 15/16"	0.531 (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.

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



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 11-3-14	0-2-10	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Point	7-9-0		Near Face	136 lb	319 lb	0 lb	0 lb	F8
3	Tie-In	7-9-14 to 11-5-0	0-7-6	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				8 PLF				



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

Notes

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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

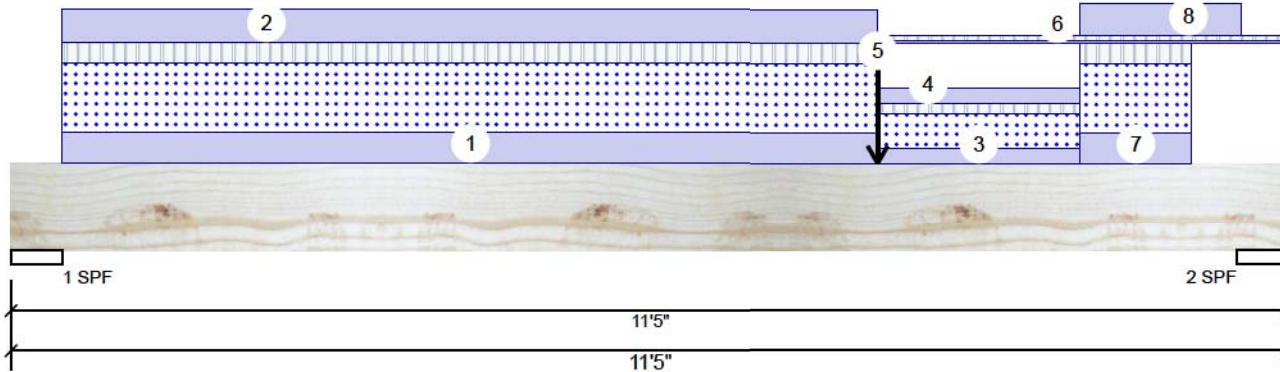
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613-838-2775 / 905-642-4400



This design is valid until 4/24/2023

F9-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



Member Information

Type:	Girder	Application:	Floor (Residential)
Plies:	2	Design Method:	LSD
Moisture Condition:	Dry	Building Code:	NBCC 2015 / OBC 2012
Deflection LL:	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	371	911	910	0
2	494	925	818	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.500"	24% 1139 / 1735	2874 L	1.25D+1.5S +L
2 - SPF	5.500"	24% 1156 / 1721	2877 L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	8240 ft-lb	6' 15/16"	22724 ft-lb	0.363 (36%)	1.25D+1.5S +L	L
Unbraced	8240 ft-lb	6' 15/16"	20494 ft-lb	0.402 (40%)	1.25D+1.5S +L	L
Shear	2633 lb	10'2 3/4"	9277 lb	0.284 (28%)	1.25D+1.5S +L	L
Perm Defl in.	0.114 (L/1119)	5'9 5/16"	0.354 (L/360)	0.320 (32%)	D	Uniform
LL Defl inch	0.137 (L/929)	5'9 5/16"	0.354 (L/360)	0.390 (39%)	S+0.5L	L
TL Defl inch	0.251 (L/508)	5'9 5/16"	0.531 (L/240)	0.470 (47%)	D+S+0.5L	L

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

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

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



Design Notes

- 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.

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-5-8 to 7-9-0		Top	75 PLF	51 PLF	171 PLF	0 PLF	
2	Part. Uniform	0-5-8 to 7-9-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weigh
3	Part. Uniform	7-9-0 to 9-6-12		Top	37 PLF	25 PLF	84 PLF	0 PLF	
4	Part. Uniform	7-9-0 to 9-6-12		Top	39 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weigh
5	Point	7-9-0		Far Face	273 lb	349 lb	158 lb	0 lb	F8

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

- 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

6. For flat roofs provide proper drainage to prevent ponding

Manufacturer Info

Forex
APA: PR-L318

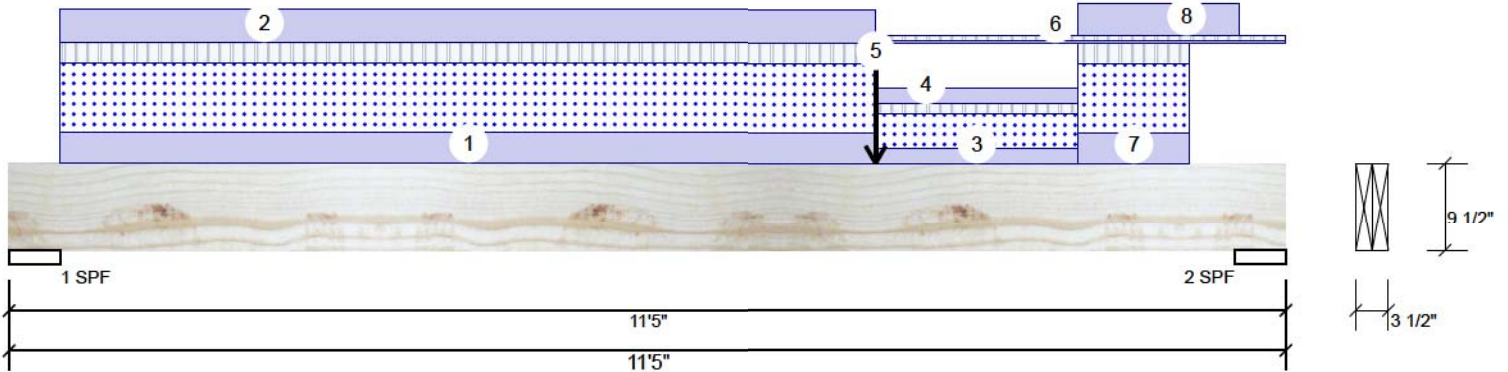
Kott

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



F9-B Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



...Continued from page 1

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
6	Tie-In	7-9-14 to 11-5-0	0-3-15	Top	15 PSF	40 PSF	0 PSF	0 PSF	
7	Part. Uniform	9-6-12 to 10-6-11		Top	75 PLF	51 PLF	171 PLF	0 PLF	
8	Part. Uniform	9-6-12 to 11-0-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				8 PLF				

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

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

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

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

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
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Kott

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This design is valid until 4/24/2023