

GREENPARK-TRINAR HALL-
BRENTWOOD 4-ELEV 2-R1

Engineering Note Page (ENP-2)

REVISION 2018-10-17

Please read all notes prior to installation of the component

DESIGN INFORMATION

This building component is certified as an individual component for the loads and conditions shown on the calculation and drawing page.

The responsibility of the undersigned engineer is only limited to the calculation of this building component for the loads and conditions shown on this drawing.

The responsibility of the undersigned is limited to the verification of the structural capacity of the floor joists and LVL beams based on placement as shown on the layout. The loads applied are limited to the gravity effects of the specified loads. The structural integrity of the building and the effect of wind, uplift, seismic, lateral or other forces, calculation of adequate support and anchorage of components, as well as the dimensions and design loads used to calculate components are the responsibility of the overall building designer.

Floor joists and OSB rim board are designed to carry uniformly distributed loads only. Point loads should be transferred through the floor cavity with transfer blocks. Structural elements such as walls, posts, connectors, and transfer blocks are the responsibility of the overall building designer.

The undersigned engineer disclaims any responsibility for damages as a result of being furnished faulty or incorrect information, specifications and/or designs.

Installation of floor joists is to be carried out in accordance with the current edition of the manufacturer's literature available at <http://www.kottgroup.com>.

CODE

This building component is designed in accordance with the National Building Code of Canada, the Ontario Building Code, CCMC and Canadian Standards Association guidelines.

COMPONENT

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

HANDLING AND INSTALLATION

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



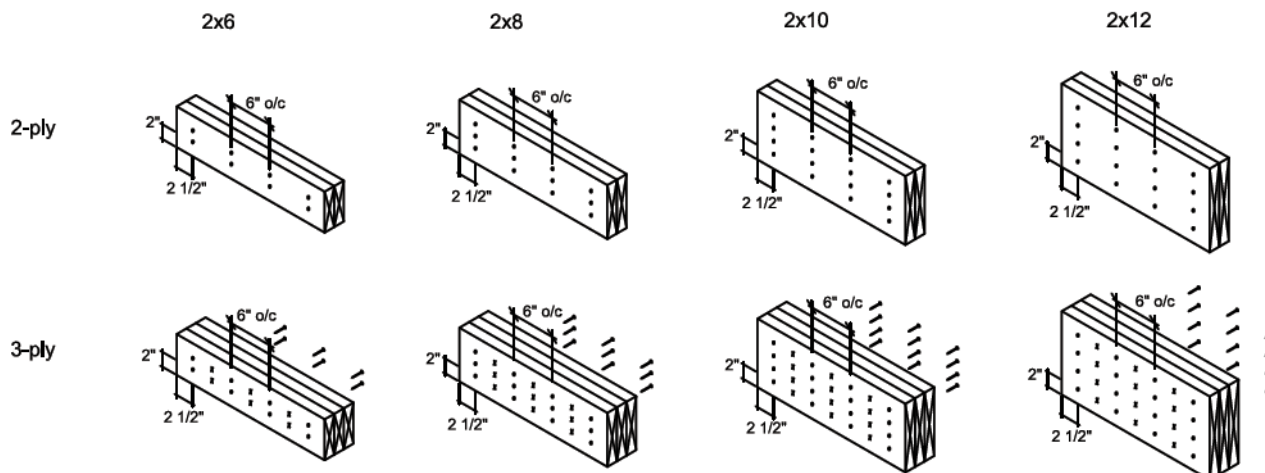
Town of
East Gwillimbury
Building Standards Branch BCIN #16487

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	2021-02-24
Sewage System			
Zoning			

GREENPARK-TRINAR HALL-
BRENTWOOD 4-ELEV 2-R1

Conventional Connections

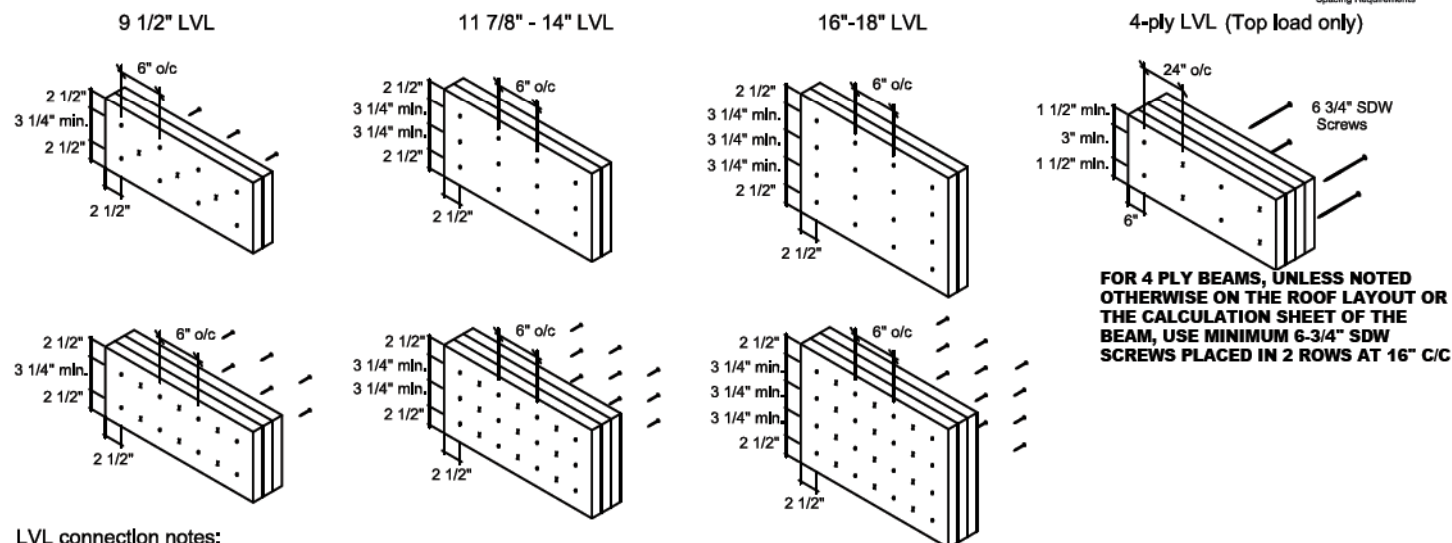


Conventional connection notes:

- 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:

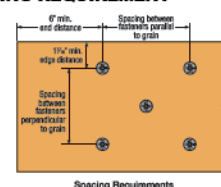
- LVL ply width is 1-3/4"
- Nails to be 3 1/2" common wire nails.
- Nails to be located 2 1/2" min. from the top and bottom of the member.
- Minimum 3 1/4" spacing between rows.
- Number of rows and spacing as per details shown, unless noted otherwise.
- "X" represents nail or screw driven from the opposite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

SIMPSON SDW SPACING REQUIREMENT

Table 9 — Spacing Requirements

Geometry	Minimum Dimensions (in.)	
	D-F-L	S-F-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.



Multiple Member Connections

All connections are for uniformly distributed loads.

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

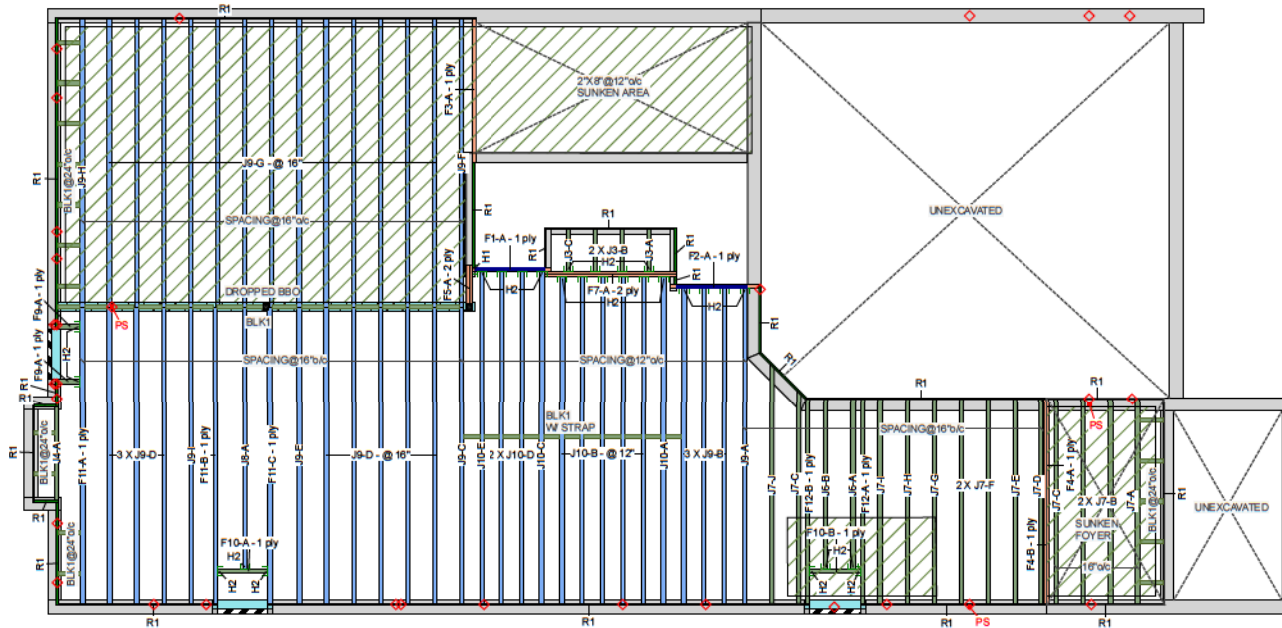


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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			



Kva Inc.
8 Moodie Drive
awa, ON
L7V1
-838-2775



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
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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.

Ground Floor LVL/LSL (Flush)						
Label	Description	Width	Depth	Qty	Piles	Pcs Length
F4	Forex 2.0E-3000Fb LVL	1.75	9.5			2 12-0-0
F7	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2 8-0-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5			1 8-0-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5			1 6-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2 4-0-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			1 4-0-0

Joist (Flush)						
Label	Description	Width	Depth	Qty	Piles	Pcs Length
F12	AJS 140	2.5	9.5			2 12-0-0
F10	AJS 140	2.5	9.5			2 4-0-0
F9	AJS 140	2.5	9.5			2 2-0-0
J7	AJS 140	2.5	9.5			13 12-0-0
J6	AJS 140	2.5	9.5			2 10-0-0
J4	AJS 140	2.5	9.5			1 6-0-0
J3	AJS 140	2.5	9.5			4 4-0-0
J10	AJS 20	2.5	9.5			10 18-0-0
J9	AJS 20	2.5	9.5			30 16-0-0
J8	AJS 20	2.5	9.5			1 14-0-0
F11	AJS 20	2.5	9.5			3 16-0-0

Rim Board						
Label	Description	Width	Depth	Qty	Piles	Pcs Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			13 12-0-0

Blocking						
Label	Description	Width	Depth	Qty	Piles	Pcs Length
BLK1	AJS 140	2.5	9.5	LinR		Varies 44-0-0

Hanger						
Label	Pcs	Description	Skew	Slope	fasteners	Supported Member
H1	1	LF179			10 10d	1 #8x1 1/4WS
H2	27	LF259			10 10d	1 #8x1 1/4WS

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

JOB INFORMATION	
Builder	GREENPARK
Project	
Shipping	
Sales Rep	
Designer	R O
Plotted	December 16, 2020
Layout Name	BRENTWOOD 4-ELEV. 2-R1
Job Path	S:\CUSTOMERS\GREENPARK\TRINAR HALL MODEL\BRENTWOOD 4-ELEV 2\FLOOR\RSR1 BRENTWOOD 4-ELEV. 2-R1.lis

DESIGN CRITERIA	
Ground Floor	LSD (Canada)
Design Method	NBCC 2015 / OBC 2012
Building Code	
Floor	
Loads	
Live	40
Dead	15
Deflection Joist	
LL Span /	480
TL Span /	360
LL Cant /	480
TL Cant /	360
Deflection Girder	
LL Span /	360
TL Span /	240
LL Cant /	480
TL Cant /	240
Decking	OSB
Thickness	5/8"
Fastener	Nailed & Glued
Vibration	
Strapping	1"X4", 1 Row at Midspan

CCMC References	
Boise - 12472-R, 12787-R	
LP - 12412-R	
Forex - 14056-R	
Kott Lumber Company	
14 Anderson Blvd Stouffville, Ontario Canada K2H7V1	

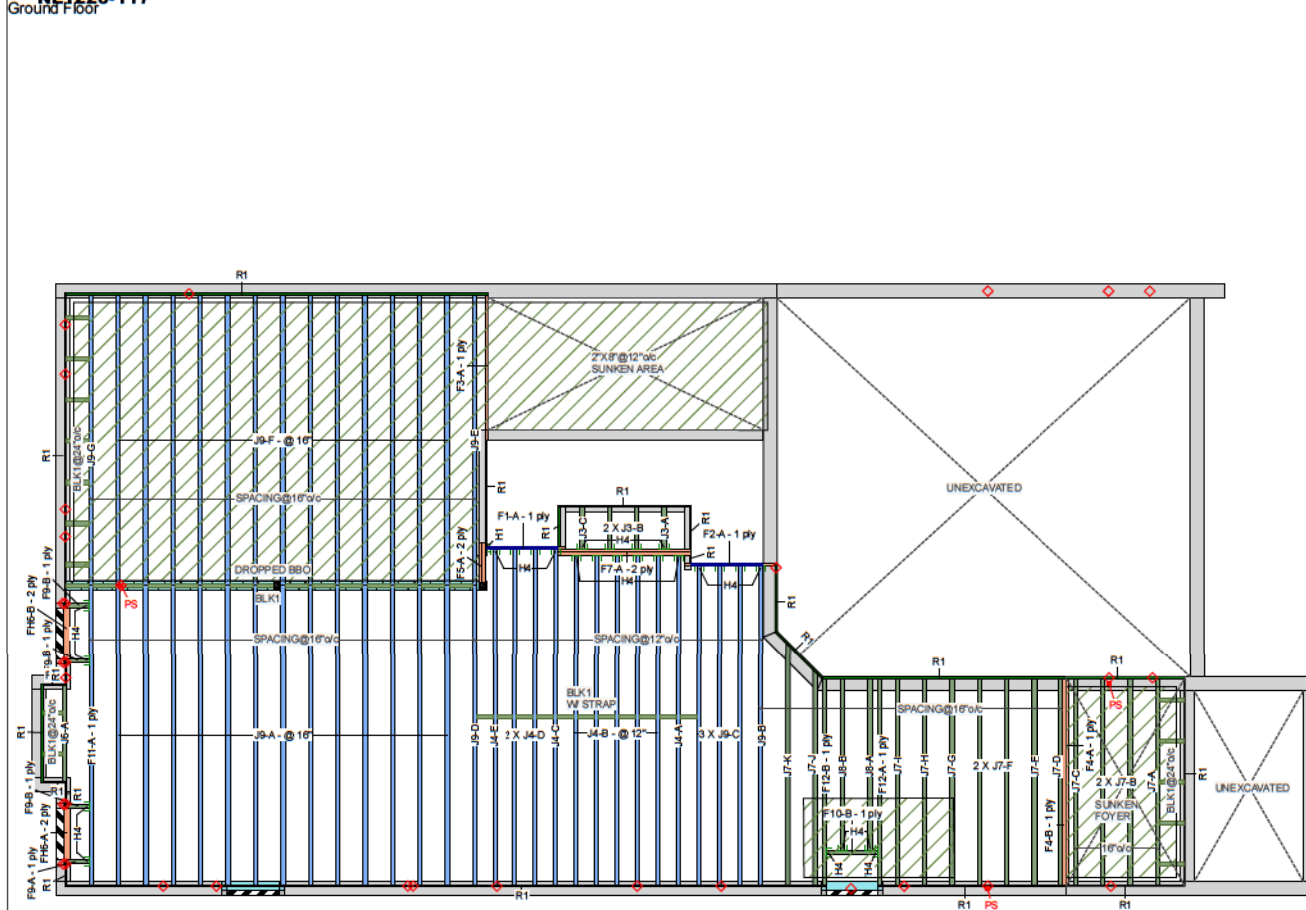


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Discipline	Reviewer	BCIN	Date
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Sewage System			
Zoning			

Legend	
PS	Point Load Support
◇	Load from Above

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



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BLOCK IS REQUIRED AT ALL
POINT LOADS OVER BEARINGS**



 Town of
East Gwillimbury

Building Standards Branch BCIN #16487

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Ground Floor							
LVL/SL (Flush)							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F4	Forex 2.0E-3000Fb LVL	1.75	9.5			2	12-0
F7	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	8-0
F3	Forex 2.0E-3000Fb LVL	1.75	9.5			1	8-0
F2	Forex 2.0E-3000Fb LVL	1.75	9.5			1	6-0
FH6	Forex 2.0E-3000Fb LVL	1.75	9.5	2	2	4	4-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0
F1	Forex 2.0E-3000Fb LVL	1.75	9.5			1	4-0

I Joist (Flush)							
Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F12	AJS 140	2.5	9.5			2	12-0
F10	AJS 140	2.5	9.5			1	4-0
F9	AJS 140	2.5	9.5			4	2-0
J7	AJS 140	2.5	9.5			13	12-0
J8	AJS 140	2.5	9.5			2	10-0
J6	AJS 140	2.5	9.5			1	6-0
J3	AJS 140	2.5	9.5			4	4-0
J4	AJS 20	2.5	9.5			10	18-0
J9	AJS 20	2.5	9.5			33	16-0
F11	AJS 20	2.5	9.5			1	16-0

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
R1	Norbord Rimboard	1125	95			13	12.0

R1	Norbord 4 Rimbord Plus 1.125 X 9.5	1.125	9.5		13	12-0
Blocking						
Label	Description	Width	Depth	Qty	Price	Length

Label	Description	Width	Depth	Qty	Plies	Pcs	Length
BLK1	AJS 140	2.5	9.5	LinFt		Varies	41-0

Hanger

					Beam/Girder	Supported Member
Label	Pcs	Description	Skew	Slope	fasteners	fasteners
H1	1	LF179			10 10d	1 #8x1 1/4V
H4	26	LF259			10 10d	1 #8x1 1/4V

1. All blocking to be cut from 12" joists
2. 2' & 4' Lengths to be cut from 8' Length, 6' lengths to be cut from 12' Length
3. Ends of joists to be laterally supported
4. Packing of Steel beams and attachment by others
5. Shower and water dose/ 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. Architect to review and approve the deviation prior to construction.

JOB INFORMATION	
Builder	GREENPARK
Project	
Shipping	
Sales Rep	
Designer	R O
Plotted	December 16, 2020
Layout Name	BRENTWOOD 4-ELEV. 2 DECK COND-R1
Job Path	

h	S:\CUSTOMERS\GREEN PARK\KITRINAR HALL
h	MODEL SBRENTWOOD 4-ELEV 2/FLO ORS/R1
h	DECK COND/BRENTWOOD 4-ELEV. 2 DECK COND
h	R1.tbl
h	DESIGN CRITERIA
h	Ground Floor
h	Design Method LSD (Canada)
h	Building Code NBCC 2015 / OBC 2012
h	Floor
h	Loads
h	Live 40
h	Dead 15

Dead	15
Deflection Joist	
LL Span L/	480

TL Span 1/	360
LL Cart 2L/	480
TL Cart 2L/	360

LL Cant 2L/	360
Deflection Girder	
LL Span L/	360

TL Span 1/	240
LL Cant 2L/	480
TL Cant 2L/	240
S Decking	
S Decking	OSB

Thickness	5/8"
Fastener	Nailed & Glued
Vibration	
Strapping	1"X4", 1 Row at Midspan

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

**Kott Lumber
Company**
14 Anderson Blvd
Stouffville, Ontario
Canada
K2H7V1



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

Version 20.20.002 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.

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-2
Sewage System			
Zoning			

Legend

PS	Point Load Support
◇	Load from Above

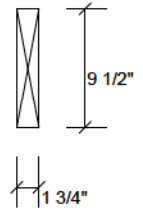
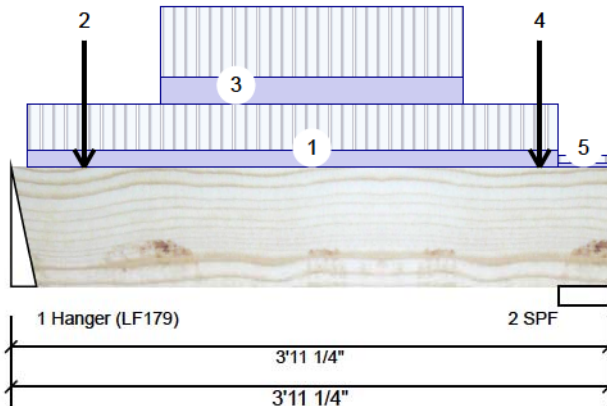


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

F1-A 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	984	376	0	0
2	1061	406	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Hanger	2.000"	75% 470 / 1476	1946	L	1.25D+1.5L
2 - SPF	4.000"	49% 507 / 1591	2098	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1666 ft-lb	1'10 9/16"	11362 ft-lb	0.147 (15%)	1.25D+1.5L	L
Unbraced	1666 ft-lb	1'10 9/16"	9357 ft-lb	0.178 (18%)	1.25D+1.5L	L
Shear	1696 lb	2'10 1/2"	4638 lb	0.366 (37%)	1.25D+1.5L	L
Perm Defl in.	0.005 (L/8267)	1'10 9/16"	0.119 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.014 (L/3158)	1'10 9/16"	0.119 (L/360)	0.110 (11%)	L	
TL Defl inch	0.019 (L/2285)	1'10 9/16"	0.178 (L/240)	0.110 (11%)	D+L	L

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.

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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	Part. Uniform	0-1-4 to 3-7-4		Top	79 PLF	210 PLF	0 PLF	0 PLF	
2	Point	0-5-12		Near Face	118 lb	315 lb	0 lb	0 lb	J10
3	Part. Uniform	0-11-12 to 2-11-12		Near Face	123 PLF	329 PLF	0 PLF	0 PLF	
4	Point	3-5-12		Near Face	121 lb	323 lb	0 lb	0 lb	J10
5	Tie-In	3-7-4 to 3-11-4	1-0-3	Top	15 PSF	40 PSF	0 PSF	0 PSF	
	Self Weight				4 PLF				



East Gwillimbury
Building Standards Branch BCIN #16487

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

This design is valid until 1/8/2023

Discipline	Reviewer	BCIN	Date
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Sewage System			
Zoning			

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Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



CSD | DRAW DESIGN BUILD



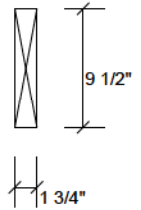
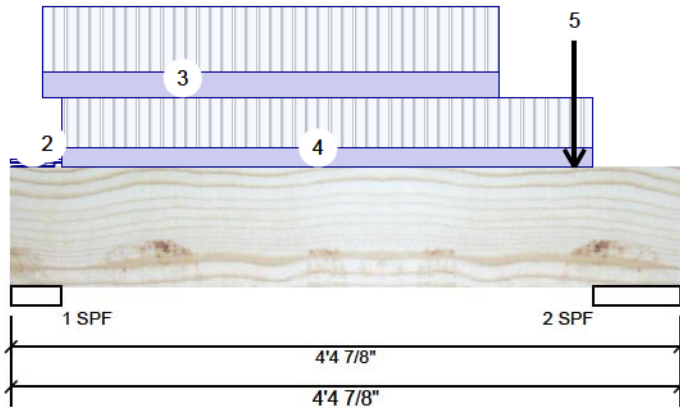
Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

Page 2 of 13

F2-A 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	1007	386	0	0
2	1102	423	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	46%	482 / 1511	1993 L	1.25D+1.5L
2 - SPF	6.875"	29%	528 / 1653	2181 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1780 ft-lb	2' 15/16"	11362 ft-lb	0.157 (16%)	1.25D+1.5L	L
Unbraced	1780 ft-lb	2' 15/16"	9286 ft-lb	0.192 (19%)	1.25D+1.5L	L
Shear	2252 lb	3' 1 1/4"	4638 lb	0.485 (49%)	1.25D+1.5L	L
Perm Defl in.	0.006 (L/7724)	2' 15/16"	0.121 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.015 (L/2950)	2' 15/16"	0.121 (L/360)	0.120 (12%)	L	
TL Defl inch	0.020 (L/2135)	2' 15/16"	0.181 (L/240)	0.110 (11%)	D+L	L

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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Tie-In	0-0-0 to 0-3-7	0-0-7 to 0-4-9	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 0-4-0	0-3-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Part. Uniform	0-2-8 to 3-2-8		Near Face	117 PLF	312 PLF	0 PLF	0 PLF	
4	Part. Uniform	0-4-0 to 3-10-0		Top	90 PLF	240 PLF	0 PLF	0 PLF	
5	Point	3-8-8		Near Face	123 lb	327 lb	0 lb	0 lb	J9
	Self Weight				4 PLF				

Notes

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chemicals

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



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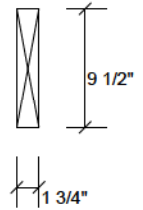
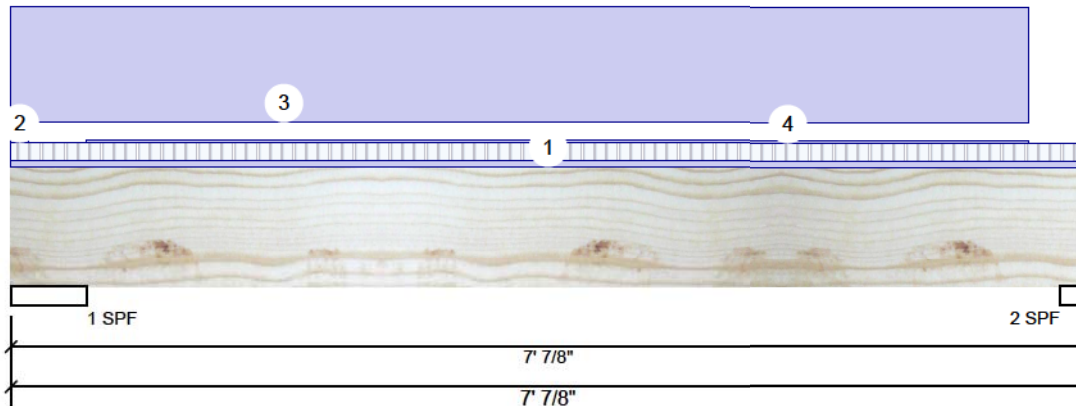
Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

Page 3 of 13

F3-A 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	47	334	0	0
2	41	275	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.000"	12%	418 / 70	488 L	1.25D+1.5L
2 - SPF	1.875"	31%	343 / 62	405 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	701 ft-lb	3'8 7/16"	7385 ft-lb	0.095 (9%)	1.25D+1.5L	L
Unbraced	701 ft-lb	3'8 7/16"	5529 ft-lb	0.127 (13%)	1.25D+1.5L	L
Shear	326 lb	6'2 1/4"	3015 lb	0.108 (11%)	1.25D+1.5L	L
Perm Defl in.	0.018 (L/4318)	3'8 1/2"	0.218 (L/360)	0.080 (8%)	D	Uniform
LL Defl inch	0.002 (L/31758)	3'8 1/2"	0.218 (L/360)	0.010 (1%)	L	L
TL Defl inch	0.021 (L/3801)	3'8 1/2"	0.327 (L/240)	0.060 (6%)	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 7-0-14	0-3-11	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tapered Start	0-0-0		Top	4 PLF	10 PLF	0 PLF	0 PLF	
	End	0-1-6			4 PLF	10 PLF	0 PLF	0 PLF	
3	Part. Uniform	0-0-0 to 6-8-8		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Part. Uniform	0-5-15 to 6-8-8		Top	2 PLF	0 PLF	0 PLF	0 PLF	
	Self Weight				4 PLF				

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

This design is valid until 1/8/2023



Town of
East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



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DESIGN
BUILD

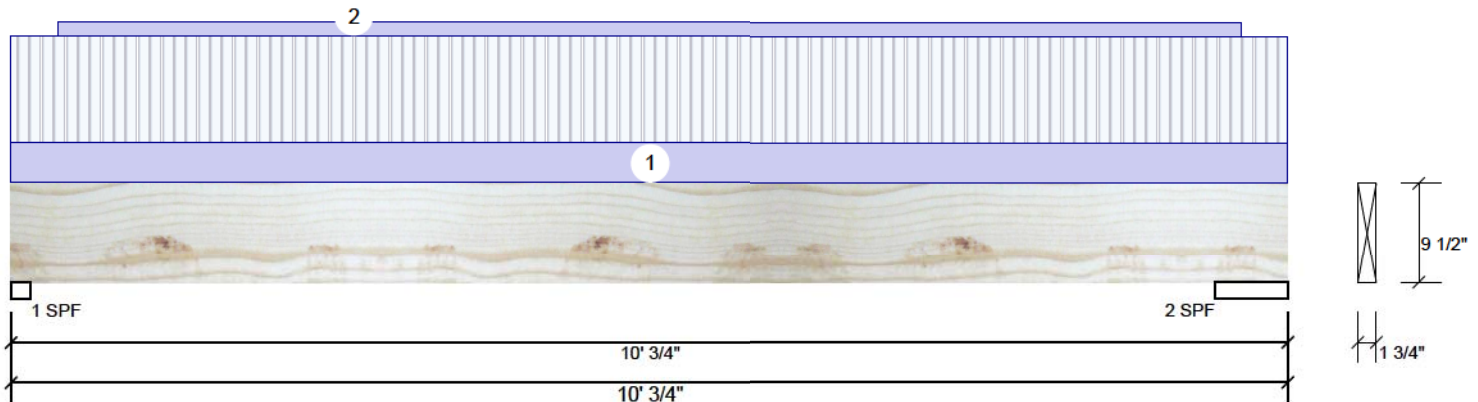


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

F4-A 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	39	37	0	0
2	42	41	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	1.875"	5%	47 / 58	105 L 1.25D+1.5L
2 - SPF	6.875"	2%	51 / 63	114 L 1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	245 ft-lb	4'9 7/8"	11362 ft-lb	0.022 (2%)	1.25D+1.5L	L
Unbraced	245 ft-lb	4'9 7/8"	3941 ft-lb	0.062 (6%)	1.25D+1.5L	L
Shear	86 lb	10 5/8"	4638 lb	0.019 (2%)	1.25D+1.5L	L
Perm Defl in. (L/18168)	0.006	4'9 7/8"	0.315 (L/360)	0.020 (2%)	D	Uniform
LL Defl inch (L/17643)	0.006	4'9 7/8"	0.315 (L/360)	0.020 (2%)	L	L
TL Defl inch	0.013 (L/8951)	4'9 7/8"	0.473 (L/240)	0.030 (3%)	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 10-0-12	0-2-7	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Part. Uniform	0-4-6 to 9-8-6		Top	1 PLF	0 PLF	0 PLF	0 PLF	
	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

- For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



CSD | DRAW DESIGN BUILD

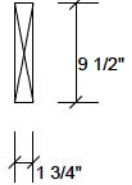
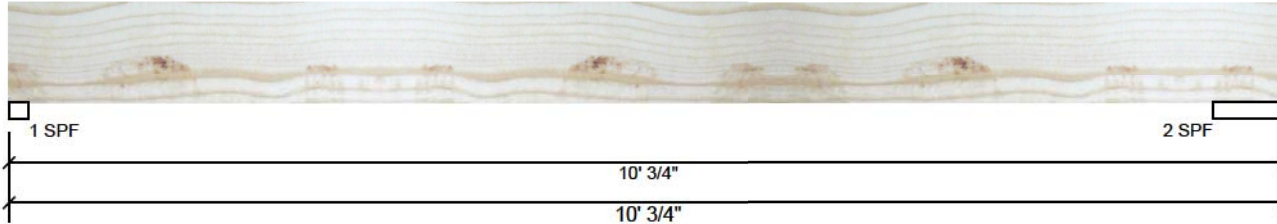


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

F4-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	0	18	0	0
2	0	20	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	1.875"	2%	26 / 0	26 Uniform	1.4D
2 - SPF	6.875"	1%	28 / 0	28 Uniform	1.4D

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	60 ft-lb	4'9 7/8"	7385 ft-lb	0.008 (1%)	1.4D	Uniform
Unbraced	60 ft-lb	4'9 7/8"	3941 ft-lb	0.015 (2%)	1.4D	Uniform
Shear	21 lb	10 5/8"	3015 lb	0.007 (1%)	1.4D	Uniform
Perm Defl in. (L/37352)	0.003	4'9 7/8"	0.315 (L/360)	0.010 (1%)	D	Uniform
LL Defl inch (L/999)	0.000	0	999.000 (L/0)	0.000 (0%)		
TL Defl inch (L/37352)	0.003	4'9 7/8"	0.473 (L/240)	0.010 (1%)	D	Uniform

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
	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

- For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



CSD | DRAW DESIGN BUILD

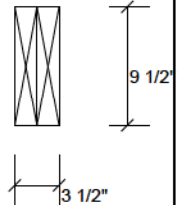
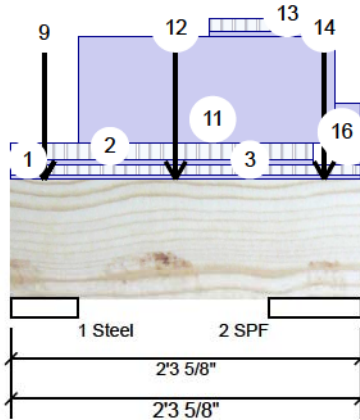


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

F5-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	1592	751	0	0
2	2446	1087	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - Steel	5.250"	24%	939 / 2388	3327 L	1.25D+1.5L
2 - SPF	7.250"	32%	1358 / 3669	5028 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	1997 ft-lb	1'1"	22724 ft-lb	0.088 (9%)	1.25D+1.5L	L
Unbraced	1997 ft-lb	1'1"	22724 ft-lb	0.088 (9%)	1.25D+1.5L	L
Shear	2160 lb	1'2"	9277 lb	0.233 (23%)	1.25D+1.5L	L
Perm Defl in.	0.002 (L/9658)	1'1"	0.046 (L/360)	0.040 (4%)	D	Uniform
LL Defl inch	0.004 (L/4243)	1'1"	0.046 (L/360)	0.080 (8%)	L	L
TL Defl inch	0.006 (L/2948)	1'1"	0.069 (L/240)	0.080 (8%)	D+L	L

Design Notes

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

READ ALL NOTES ON THIS PAGE AND ON 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 0-2-10	0-2-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
2	Tie-In	0-0-0 to 1-11-14	0-3-12	Top	15 PSF	40 PSF	0 PSF	0 PSF	
3	Tie-In	0-2-10 to 2-3-10	0-2-4	Top	15 PSF	40 PSF	0 PSF	0 PSF	
4	Point	0-2-10		Top	2 lb	6 lb			
5	Point	0-2-10		Top	2 lb	6 lb			

Continued on page 2...

Notes

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

Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

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



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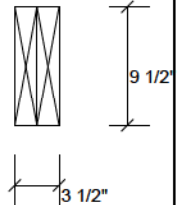
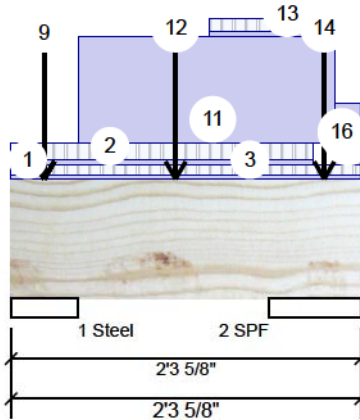


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

F5-A 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
6	Point	0-2-10		Top	2 lb	0 lb	0 lb	0 lb	Wall Self Weight
7	Point	0-2-10		Top	43 lb	116 lb	0 lb	0 lb	J9
8	Point	0-2-10		Top	27 lb	72 lb	0 lb	0 lb	J9
9	Point	0-2-10		Top	37 lb	0 lb	0 lb	0 lb	Wall Self Weight
11	Part. Uniform	0-5-6 to 2-1-10		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
12	Point	1-1-0		Top	1170 lb	2803 lb	0 lb	0 lb	F8 F8
13	Tapered Start	1-3-10		Top	4 PLF	10 PLF	0 PLF	0 PLF	
	End	2-1-10			4 PLF	10 PLF	0 PLF	0 PLF	
14	Point	2-0-12		Near Face	376 lb	984 lb	0 lb	0 lb	F1
15	Tapered Start	2-1-10		Top	2 PLF	5 PLF	0 PLF	0 PLF	
	End	2-3-10			2 PLF	5 PLF	0 PLF	0 PLF	
16	Part. Uniform	2-1-10 to 2-3-10		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				8 PLF				

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

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

READ ALL NOTES ON THIS PAGE AND ON
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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
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4. Design assumes top edge is laterally restrained
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6. For flat roofs provide proper drainage to prevent ponding

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

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



CSD | DRAW
DESIGN
BUILD

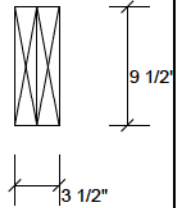
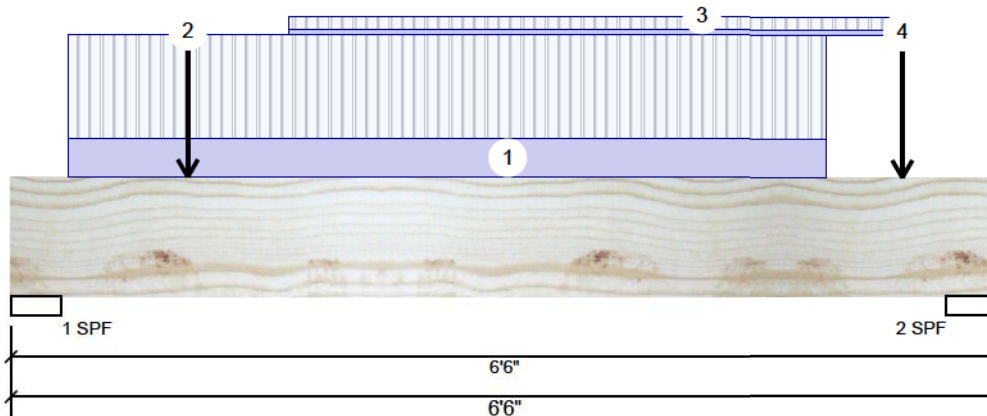


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

F7-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	1028	411	0	0
2	1105	440	0	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	4.000"	24%	513 / 1542	2056 L	1.25D+1.5L
2 - SPF	4.000"	26%	550 / 1657	2207 L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	3189 ft-lb	3'3"	22724 ft-lb	0.140 (14%)	1.25D+1.5L	L
Unbraced	3189 ft-lb	3'3"	22023 ft-lb	0.145 (14%)	1.25D+1.5L	L
Shear	2602 lb	5'5 1/4"	9277 lb	0.280 (28%)	1.25D+1.5L	L
Perm Defl in.	0.010 (L/6947)	3'3"	0.199 (L/360)	0.050 (5%)	D	Uniform
LL Defl inch	0.026 (L/2756)	3'3"	0.199 (L/360)	0.130 (13%)	L	
TL Defl inch	0.036 (L/1973)	3'3"	0.298 (L/240)	0.120 (12%)	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 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	Part. Uniform	0-4-8 to 5-4-8		Near Face	121 PLF	323 PLF	0 PLF	0 PLF	
2	Point	1-1-15		Far Face	17 lb	45 lb	0 lb	0 lb	J3
3	Part. Uniform	1-9-15 to 5-9-15		Far Face	15 PLF	39 PLF	0 PLF	0 PLF	
4	Point	5-10-8		Near Face	119 lb	317 lb	0 lb	0 lb	J10
	Self Weight				8 PLF				

Notes

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

Lumber

- 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

This design is valid until 1/8/2023



Town of
East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



CSD | DRAW
DESIGN
BUILD

F9-A

Dry | 1 span | No cant.

December 17, 2020 12:24:44

BC CALC® Member Report

Build 7364

Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

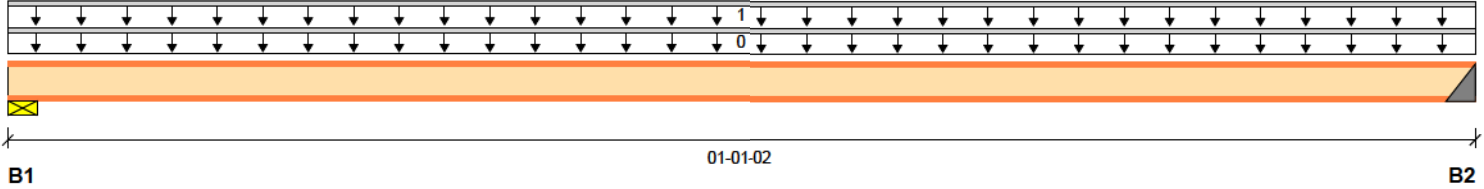
File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Description: Level - Ground Floor

Specifier:

Designer: R O

Company: GREENPARK



Total Horizontal Product Length = 01-01-02

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	29 / 0	12 / 0		
B2, 2"	30 / 0	12 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	01-01-02	Top	1.00	0.65	1.00	1.15	00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-01-02	Top	54	20			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	11 ft-lbs	4095 ft-lbs	0.3%	1	00-06-08
End Reaction	60 lbs	1588 lbs	3.8%	1	01-01-02
End Shear	42 lbs	1830 lbs	2.3%	1	00-01-14
Total Load Deflection	L/999 (0")	n/a	n/a	4	00-06-08
Live Load Deflection	L/999 (0")	n/a	n/a	5	00-06-08
Max Defl.	0"	n/a	n/a	4	00-06-08
Span / Depth	1.1				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	59 lbs	2.1%	3.8%	Spruce-Pine-Fir
B2	Hanger 2" x 2-1/2"	60 lbs	3.1%	3.8%	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

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.

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

Design based on Dry Service Condition.

Importance Factor : Normal Part code : Part 9

Disclosure

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

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

F10-A

Dry | 1 span | No cant.

December 17, 2020 12:24:44

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

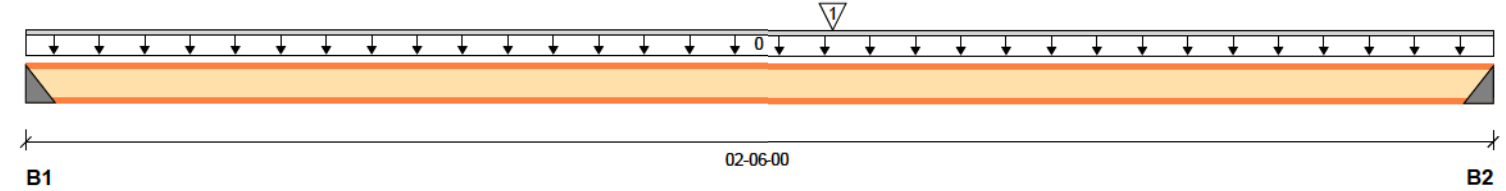
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	156 / 0	61 / 0		
B2, 2"	194 / 0	75 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	02-06-00	Top	1.00	0.65	1.00	1.15	00-00-00
1	J8	Conc. Pt. (lbs)	L	01-04-08	01-04-08	Back	350	131			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	391 ft-lbs	4095 ft-lbs	9.6%	1	01-04-08
End Reaction	385 lbs	1588 lbs	24.3%	1	02-06-00
End Shear	385 lbs	1830 lbs	21.0%	1	02-04-00
Total Load Deflection	L/999 (0.006")	n/a	n/a	4	01-04-08
Live Load Deflection	L/999 (0.004")	n/a	n/a	5	01-04-08
Max Defl.	0.006"	n/a	n/a	4	01-04-08
Span / Depth	2.9				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	311 lbs	16.0%	19.6%	LF259
B2	Hanger 2" x 2-1/2"	385 lbs	19.8%	24.3%	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

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.
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
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	2021-02-24
Sewage System			
Zoning			

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F10-B

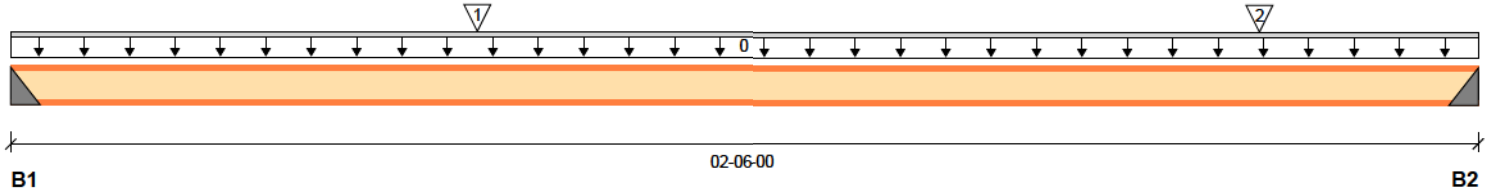
BC CALC® Member Report
Build 7364
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports:

Dry | 1 span | No cant.

December 17, 2020 12:24:44

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl
Description: Level - Ground Floor
Specifier:
Designer: R O
Company: GREENPARK

CCMC 12787-R



Total Horizontal Product Length = 02-06-00

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 2"	141 / 0	64 / 0		
B2, 2"	181 / 0	82 / 0		

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	02-06-00	Top	1.00	0.65	1.00	1.15	00-00-00
1	J6	Conc. Pt. (lbs)	L	00-09-08	00-09-08	Back	178	77			n/a
2	J6	Conc. Pt. (lbs)	L	02-01-08	02-01-08	Back	144	63			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	200 ft-lbs	4095 ft-lbs	4.9%	1	00-09-08
End Reaction	373 lbs	1588 lbs	23.5%	1	02-06-00
End Shear	373 lbs	1830 lbs	20.4%	1	02-04-00
Total Load Deflection	L/999 (0.003")	n/a	n/a	4	00-09-08
Live Load Deflection	L/999 (0.002")	n/a	n/a	5	00-09-08
Max Defl.	0.003"	n/a	n/a	4	00-09-08
Span / Depth	2.9				

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Hanger 2" x 2-1/2"	292 lbs	15.0%	18.4%	LF259
B2	Hanger 2" x 2-1/2"	373 lbs	19.2%	23.5%	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

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.
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
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	2021-02-24
Sewage System			
Zoning			

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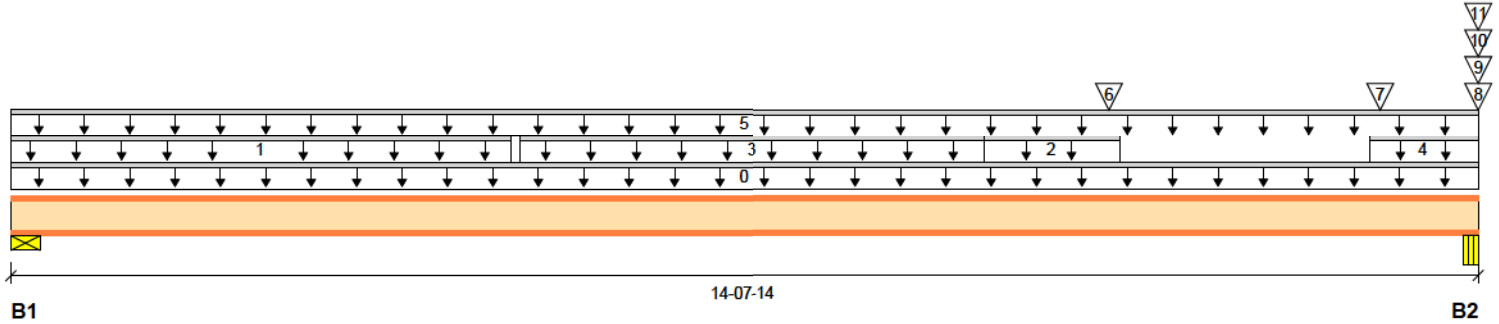
F11-A

BC CALC® Member Report
Build 7364
Job name:
Address:
City, Province, Postal Code:
Customer:
Code reports: CCMC 12787-R

Dry | 1 span | No cant.

December 17, 2020 12:24:44

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl
Description: Level - Ground Floor
Specifier:
Designer: R O
Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	377 / 0	160 / 0		
B2, 2-5/8"	711 / 0	349 / 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	14-07-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	04-11-14	Top	25	9			n/a
2		Unf. Lin. (lb/ft)	L	09-08-12	11-00-14	Top	25	9			n/a
3		Unf. Lin. (lb/ft)	L	05-01-00	09-08-12	Top	26	10			n/a
4		Unf. Lin. (lb/ft)	L	13-06-14	14-07-14	Top	25	9			n/a
5		Unf. Lin. (lb/ft)	L	00-00-00	14-07-14	Top	27	10			n/a
6	F9	Conc. Pt. (lbs)	L	10-11-10	10-11-10	Back	30	12			n/a
7	F9	Conc. Pt. (lbs)	L	13-08-02	13-08-02	Back	30	12			n/a
8	J9	Conc. Pt. (lbs)	L	14-07-14	14-07-14	Top	161	60			n/a
9	J9	Conc. Pt. (lbs)	L	14-07-14	14-07-14	Top	59	26			n/a
10	J9	Conc. Pt. (lbs)	L	14-07-14	14-07-14	Top	112	49			n/a
11	Wall Self Weight	Conc. Pt. (lbs)	L	14-07-14	14-07-14	Top		52			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	2731 ft-lbs	5675 ft-lbs	48.1%	1	07-04-14
End Reaction	1503 lbs	1697 lbs	88.6%	1	14-07-14
End Shear	749 lbs	1830 lbs	40.9%	1	00-01-14
Total Load Deflection	L/506 (0.342")	n/a	47.5%	4	07-04-14
Live Load Deflection	L/720 (0.24")	n/a	50.0%	5	07-04-14
Max Defl.	0.342"	n/a	34.2%	4	07-04-14
Span / Depth	18.2				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Mat
B1	Wall/Plate 1-7/8" x 2-1/2"	765 lbs	26.5%	48.9%	Spr
B2	Beam 2-5/8" x 2-1/2"	1503 lbs	0.6%	88.6%	Ste



Town of
East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

F11-A

Dry | 1 span | No cant.

December 17, 2020 12:24:44

BC CALC® Member Report

Build 7364

Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Description: Level - Ground Floor

Specifier:

Designer: R O

Company: GREENPARK

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.

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	2021-02-24
Sewage System			
Zoning			

F11-B

Dry | 1 span | No cant.

December 17, 2020 12:24:44

BC CALC® Member Report

Build 7364

Job name:

Address:

City, Province, Postal Code:

Customer:

Code reports: CCMC 12787-R

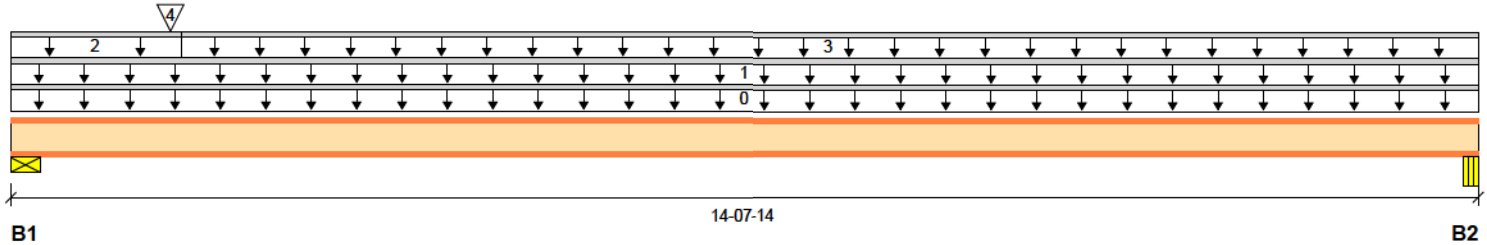
File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Description: Level - Ground Floor

Specifier:

Designer: R O

Company: GREENPARK



Total Horizontal Product Length = 14-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	568 / 0	234 / 0		
B2, 2-5/8"	411 / 0	173 / 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	14-07-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	14-07-14	Top	24	9			n/a
2		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	54	20			n/a
3		Unf. Lin. (lb/ft)	L	01-08-06	14-07-14	Top	30	11			n/a
4	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Front	156	61			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	3075 ft-lbs	5675 ft-lbs	54.2%	1	06-11-02
End Reaction	1145 lbs	1566 lbs	73.1%	1	00-00-00
End Shear	1120 lbs	1830 lbs	61.2%	1	00-01-14
Total Load Deflection	L/443 (0.391")	n/a	54.2%	4	07-01-05
Live Load Deflection	L/628 (0.275")	n/a	57.3%	5	07-01-05
Max Defl.	0.391"	n/a	39.1%	4	07-01-05
Span / Depth	18.2				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	1145 lbs	39.7%	73.1%	Spruce-Pine-Fir
B2	Beam 2-5/8" x 2-1/2"	832 lbs	0.3%	49.1%	Steel

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.
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Sewage 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.

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

F11-C

Dry | 1 span | No cant.

December 17, 2020 12:24:44

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

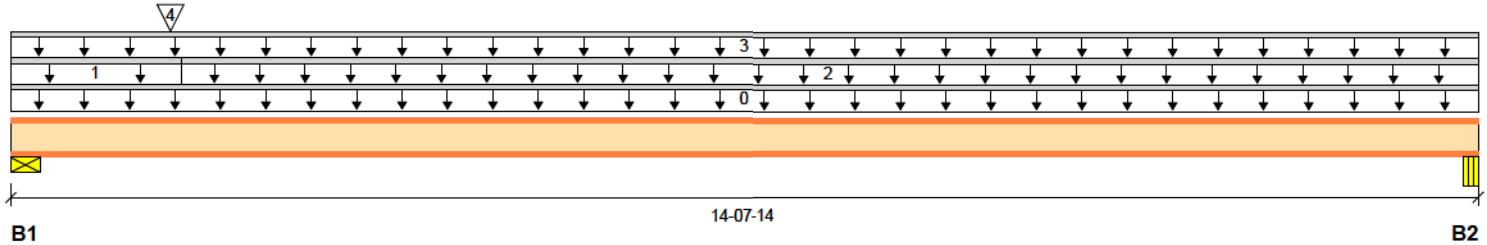
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



Total Horizontal Product Length = 14-07-14

Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	611 / 0	249 / 0		
B2, 2-5/8"	416 / 0	175 / 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	14-07-14	Top		3			00-00-00
1		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	54	20			n/a
2		Unf. Lin. (lb/ft)	L	01-08-06	14-07-14	Top	25	9			n/a
3		Unf. Lin. (lb/ft)	L	00-00-00	14-07-14	Top	29	11			n/a
4	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Back	194	75			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	3143 ft-lbs	5675 ft-lbs	55.4%	1	06-11-02
End Reaction	1228 lbs	1566 lbs	78.4%	1	00-00-00
End Shear	1202 lbs	1830 lbs	65.7%	1	00-01-14
Total Load Deflection	L/432 (0.4")	n/a	55.5%	4	07-01-05
Live Load Deflection	L/613 (0.282")	n/a	58.8%	5	07-01-05
Max Defl.	0.4"	n/a	40.0%	4	07-01-05
Span / Depth	18.2				



Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	1228 lbs	42.6%	78.4%	Spruce-Pine-Fir
B2	Beam 2-5/8" x 2-1/2"	842 lbs	0.3%	49.6%	Steel

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.
 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
 Design based on Dry Service Condition.
 Importance Factor : Normal Part code : Part 9

Disclosure

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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.

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

©, BC FRAMER®, AJS™, T®, BC RIM BOARD™, BCI®, LULAM™, BC FloorValue®, LAM®, VERSA-RIM PLUS®,



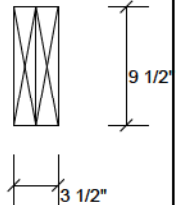
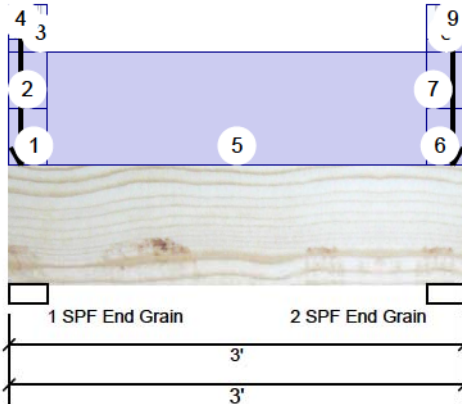
Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2 DECK COND-R1
Project #:

Page 9 of 17

FH6-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	137	426	323	0
2	124	422	323	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	19%	532 / 622	1154 L	1.25D+1.5S +L
2 - SPF End Grain	3.000"	19%	527 / 609	1136 L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	106 ft-lb	1'6"	14770 ft-lb	0.007 (1%)	1.4D	Uniform
Unbraced	106 ft-lb	1'6"	14770 ft-lb	0.007 (1%)	1.4D	Uniform
Shear	68 lb	11 3/4"	6030 lb	0.011 (1%)	1.4D	Uniform
Perm Defl in. (L/70195)	0.000	1'6"	0.088 (L/360)	0.010 (1%)	D	Uniform
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

- 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	Part. Uniform	0-0-0 to 0-3-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 0-3-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Tapered Start	0-0-0		Near Face	9 PLF	25 PLF	0 PLF	0 PLF	
	End	0-3-0			9 PLF	25 PLF	0 PLF	0 PLF	

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

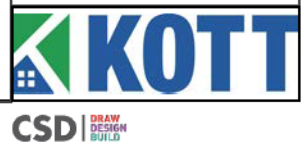
This design is valid until 1/8/2023



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



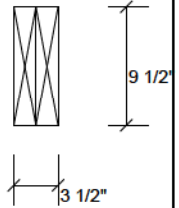
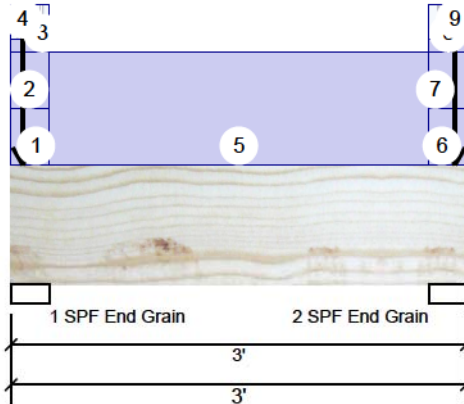


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2 DECK COND-R1
Project #:

FH6-A 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	Point	0-0-15		Top	292 lb	131 lb	323 lb	0 lb	F9 Header Column Header Column
5	Part. Uniform	0-3-0 to 2-9-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
6	Part. Uniform	2-9-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	2-9-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Tapered Start	2-9-0		Near Face	9 PLF	25 PLF	0 PLF	0 PLF	
	End	3-0-0			9 PLF	25 PLF	0 PLF	0 PLF	
9	Point	2-11-1		Top	288 lb	118 lb	323 lb	0 lb	Header Column Header Column F9
	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

chemicals

Handling & Installation

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2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
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5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



CSD | DRAW DESIGN BUILD

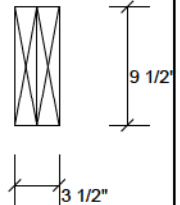
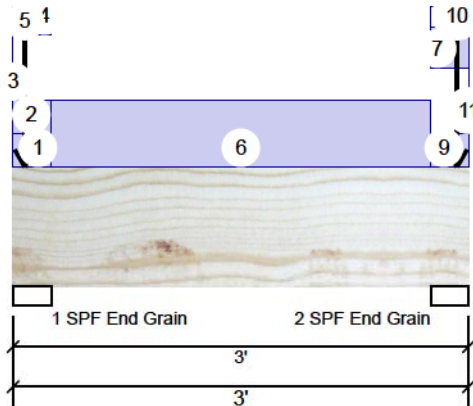


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2 DECK COND-R1
Project #:

FH6-B 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	140	463	418	0
2	146	489	451	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.000"	23%	578 / 767	1346	L	1.25D+1.5S +L
2 - SPF End Grain	3.000"	24%	611 / 823	1434	L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	106 ft-lb	1'6"	14770 ft-lb	0.007 (1%)	1.4D	Uniform
Unbraced	106 ft-lb	1'6"	14770 ft-lb	0.007 (1%)	1.4D	Uniform
Shear	68 lb	11 3/4"	6030 lb	0.011 (1%)	1.4D	Uniform
Perm Defl in. (L/70195)	0.000	1'6"	0.088 (L/360)	0.010 (1%)	D	Uniform
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

- 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.
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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-0-0 to 0-3-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
2	Part. Uniform	0-0-0 to 0-3-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
3	Part. Uniform	0-0-0 to 0-0-0		Near Face	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
4	Tapered Start	0-0-0		Near Face	9 PLF	25 PLF			

Continued on page 2...

Notes

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Lumber

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chemicals

Handling & Installation

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6. For flat roofs provide proper drainage to prevent ponding

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Town of
East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



CSD | DRAW
DESIGN
BUILD

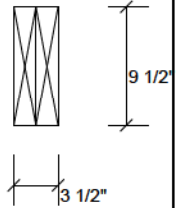
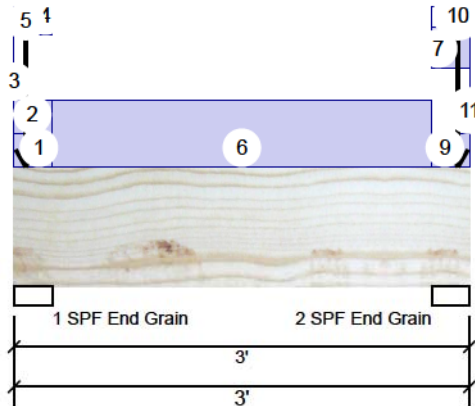


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2 DECK COND-R1
Project #:

FH6-B 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
	End	0-3-0			9 PLF	25 PLF	0 PLF	0 PLF	
5	Point	0-0-15		Top	329 lb	134 lb	418 lb	0 lb	F9 Header Column Header Column
6	Part. Uniform	0-3-0 to 2-9-0		Top	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
7	Part. Uniform	2-9-0 to 3-0-0		Near Face	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
8	Tapered Start	2-9-0		Near Face	9 PLF	25 PLF	0 PLF	0 PLF	
	End	3-0-0			9 PLF	25 PLF	0 PLF	0 PLF	
9	Part. Uniform	2-9-0 to 3-0-0		Top	40 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
10	Point	2-11-1		Top	355 lb	140 lb	451 lb	0 lb	Header Column Header Column F9
11	Part. Uniform	3-0-0 to 3-0-0		Near Face	80 PLF	0 PLF	0 PLF	0 PLF	Wall Self Weight
	Self Weight				8 PLF				

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



CSD | DRAW DESIGN BUILD

F12-A

Dry | 1 span | No cant.

December 17, 2020 12:24:44

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

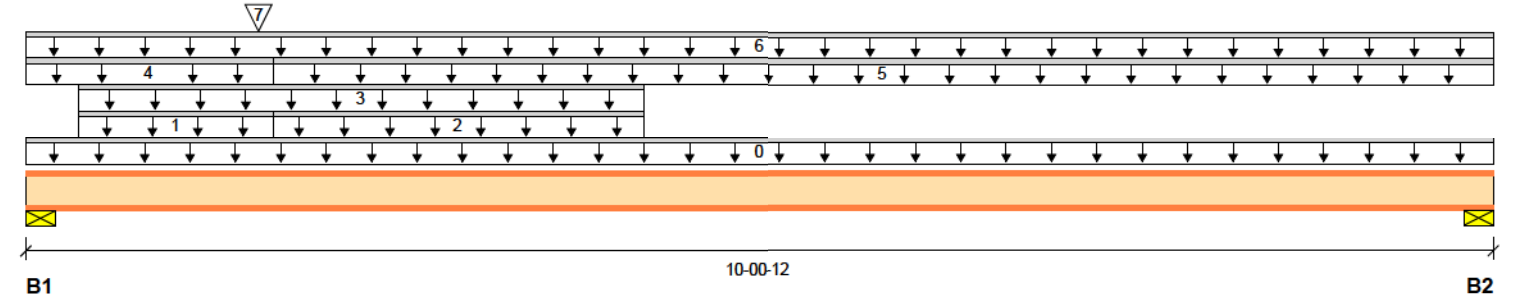
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	351 / 0	170 / 0		
B2, 6-7/8"	174 / 0	83 / 0		

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.

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	10-00-12	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	01-08-06	Top		7			n/a
2		Unf. Lin. (lb/ft)	L	01-08-06	04-02-13	Top		1			n/a
3		Unf. Lin. (lb/ft)	L	00-04-06	04-02-13	Top		2			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	54	20			n/a
5		Unf. Lin. (lb/ft)	L	01-08-06	10-00-12	Top	10	4			n/a
6		Unf. Lin. (lb/ft)	L	00-00-00	10-00-12	Top	17	6			n/a
7	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Back	181	82			n/a

Controls Summary

Pos. Moment	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	1026 ft-lbs	4095 ft-lbs	25.1%	1	03-05-04
End Reaction	739 lbs	1566 lbs	47.2%	1	00-00-00
End Shear	716 lbs	1830 lbs	39.1%	1	00-01-14
Total Load Deflection	L/999 (0.077")	n/a	n/a	4	04-06-02
Live Load Deflection	L/999 (0.052")	n/a	n/a	5	04-06-02
Max Defl.	0.077"	n/a	n/a	4	04-06-02
Span / Depth	11.9				



Disclosure

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Bearing Supports

Bearing Supports	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	739 lbs	25.6%	47.2%	Spruce-Pine-Fir
B2	Wall/Plate 6-7/8" x 2-1/2"	365 lbs	3.5%	19.7%	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.
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
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9



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.

**READ ALL NOTES ON THIS P
ENGINEERING NOTE PAGE E
NOTE PAGE IS AN INTEGRAL
CALCULATION SUMMARY PA
CONTAINS SPECIFICATIONS
USED IN THE DESIGN OF THIS COMPONENT.**

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

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T®, BC RIM BOARD™, BCI®,
LULAM™, BC FloorValue®,
LAM®, VERSA-RIM PLUS®,

F12-B

Dry | 1 span | No cant.

December 17, 2020 12:24:44

BC CALC® Member Report

Build 7364

Job name:

File name: S:\CUSTOMERS\GREENPA...OOD 4-ELEV. 2-R1.isl

Address:

Description: Level - Ground Floor

City, Province, Postal Code:

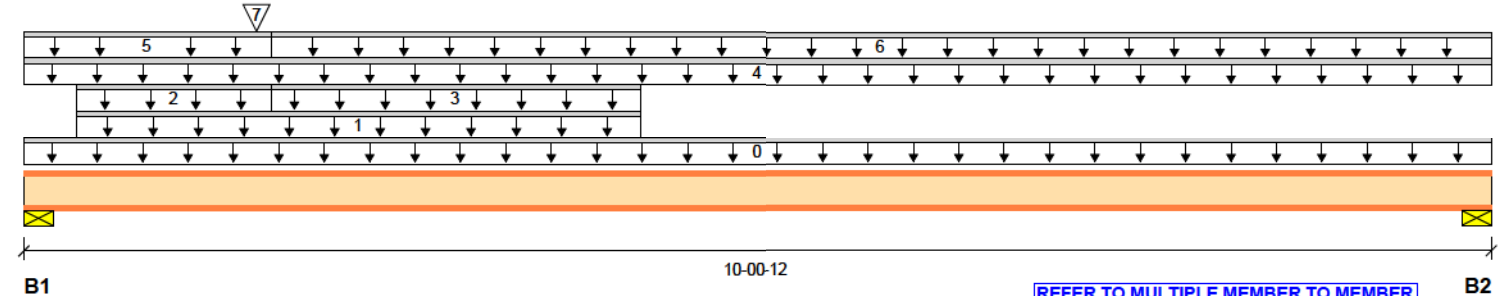
Specifier:

Customer:

Designer: R O

Code reports: CCMC 12787-R

Company: GREENPARK



Reaction Summary (Down / Uplift) (lbs)

Bearing	Live	Dead	Snow	Wind
B1, 1-7/8"	304 / 0	149 / 0		
B2, 6-7/8"	167 / 0	79 / 0		

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.

Load Summary

Tag	Description	Load Type	Ref.	Start	End	Loc.	Live	Dead	Snow	Wind	Tributary
0	Self-Weight	Unf. Lin. (lb/ft)	L	00-00-00	10-00-12	Top		2			00-00-00
1		Unf. Lin. (lb/ft)	L	00-04-06	04-02-11	Top		1			n/a
2		Unf. Lin. (lb/ft)	L	00-04-06	01-08-06	Top		7			n/a
3		Unf. Lin. (lb/ft)	L	01-08-06	04-02-11	Top		2			n/a
4		Unf. Lin. (lb/ft)	L	00-00-00	10-00-12	Top	9	3			n/a
5		Unf. Lin. (lb/ft)	L	00-00-00	01-08-06	Top	54	20			n/a
6		Unf. Lin. (lb/ft)	L	01-08-06	10-00-12	Top	18	7			n/a
7	F10	Conc. Pt. (lbs)	L	01-07-02	01-07-02	Front	141	64			n/a

Controls Summary

	Factored Demand	Factored Resistance	Demand/Resistance	Case	Location
Pos. Moment	934 ft-lbs	4095 ft-lbs	22.8%	1	03-09-00
End Reaction	642 lbs	1566 lbs	41.0%	1	00-00-00
End Shear	622 lbs	1830 lbs	34.0%	1	00-01-14
Total Load Deflection	L/999 (0.071")	n/a	n/a	4	04-06-01
Live Load Deflection	L/999 (0.048")	n/a	n/a	5	04-06-01
Max Defl.	0.071"	n/a	n/a	4	04-06-01
Span / Depth	11.9				



Disclosure

Use of the Boise Cascade Software is subject to the terms of the End User License Agreement (EULA). Completeness and accuracy of input must be reviewed and verified by a qualified engineer or other appropriate expert to assure its adequacy, prior to anyone relying on such output as evidence of suitability for a particular application. The output here is based on building code-accepted design

Bearing Supports

	Dim. (LxW)	Demand	Demand/Resistance Support	Demand/Resistance Member	Material
B1	Wall/Plate 1-7/8" x 2-1/2"	642 lbs	22.3%	41.0%	Spruce-Pine-Fir
B2	Wall/Plate 6-7/8" x 2-1/2"	350 lbs	3.3%	18.9%	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.
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
Design based on Dry Service Condition.
Importance Factor : Normal Part code : Part 9

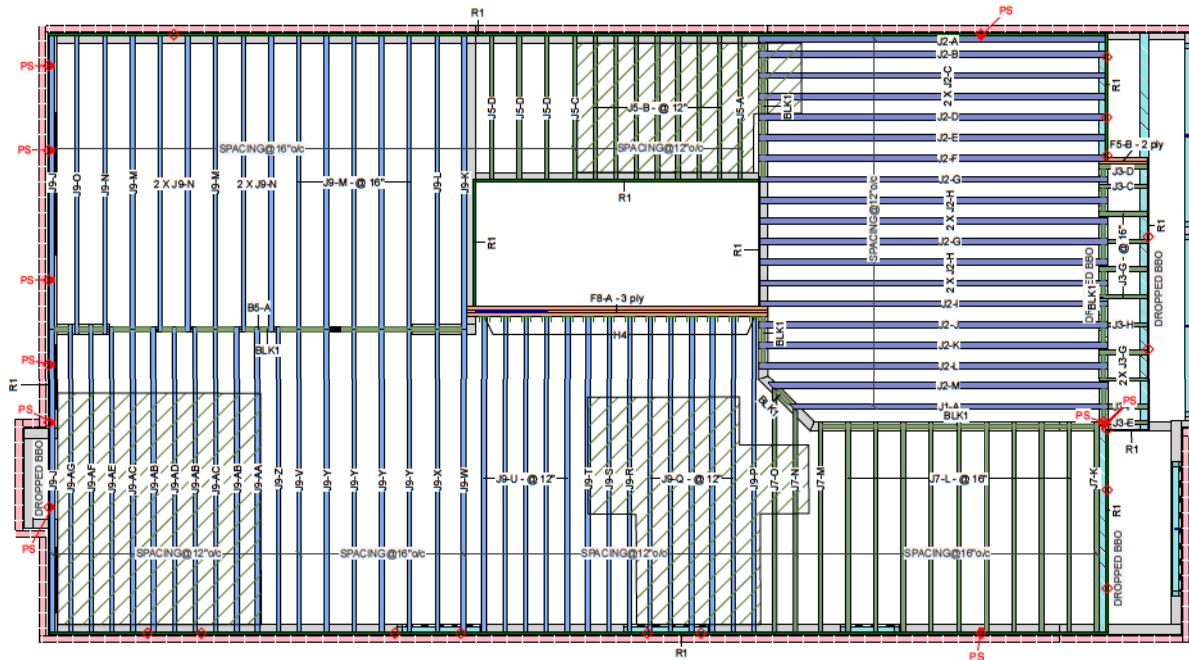


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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

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LULAM™, BC FloorValue®,
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.

**Second Floor
LVL/LSL (Flush)**

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
F8	Forex 2.0E-3000Fb LVL	1.75	9.5	1	3	3	16-0-0
F5	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	4-0-0

LVL/LSL (Dropped)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
B5	Forex 2.0E-3000Fb LVL	1.75	9.5	1	2	2	16-0-0

I Joist (Flush)

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
J7	AJS 140	2.5	9.5			13	12-0-0
J5	AJS 140	2.5	9.5			12	8-0-0
J3	AJS 140	2.5	9.5			11	4-0-0
J9	AJS 20	2.5	9.5			49	16-0-0
J2	AJS 25	3.5	9.5			18	18-0-0
J1	AJS 25	3.5	9.5			1	16-0-0

Rim Board

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
R1	Norbord Rimboard Plus 1.125 X 9.5	1.125	9.5			16	12-0-0

Blocking

Label	Description	Width	Depth	Qty	Piles	Pcs	Length
BLK1	AJS 140	2.5	9.5	LinR		Varies	40-0-0

Hanger

Label	Pcs	Description	Skew	Slope	fasteners	Supported Member
H4	14	HU310				

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

JOB INFORMATION

Builder	GREENPARK
Project	
Shipping	
Sales Rep	
Designer	R O
Plotted	December 16, 2020
Layout Name	BRENTWOOD 4-ELEV. 2-R1
Job Path	S:\CUSTOMERS\GREENPARK\TRINAR HALL MODEL\BRENTWOOD 4-ELEV 2\FLOOR\RSR1 BRENTWOOD 4-ELEV. 2-R1.rvt

DESIGN CRITERIA

Second Floor	LSD (Canada)
Design Method	
Building Code	NBCC 2015 / OBC 2012
Floor Loads	
Live	40
Dead	15
Deflection Joist	
LL Span L/	480
TL Span L/	360
LL Cant 2L/	480
TL Cant 2L/	360
Deflection Girder	
LL Span L/	360
TL Span L/	240
LL Cant 2L/	480
TL Cant 2L/	240
Decking	OSB
Thickness	5/8"
Fastener	Nailed & Glued
Vibration	
Ceiling:	Gypsum 1/2"

CCMC References

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

Kott Lumber Company
14 Anderson Blvd
Stouffville, Ontario
Canada
K2H7V1



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Sewage System			
Zoning			

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Legend

PS Point Load Support
Load from Above

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

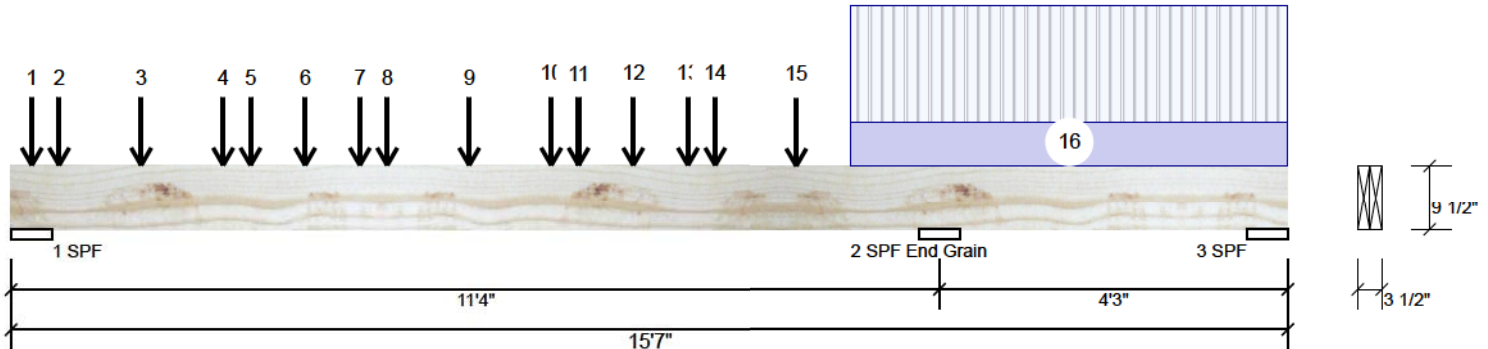


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

B5-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	2647	1111	0	0
2	6319	2546	0	0
3	0 (-264)	(-137)	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	6.000"	41%	1368 / 3947	5315	L	1.25D+1.5L
2 - SPF	6.000"	83%	3262 / 9713	12975	LL	1.25D+1.5L
End Grain						
3 - SPF	6.000"	14%	-166 / 1892	1726 (-2319)	L	0.9D+1.5L (1.25D+1.5L)

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Neg Moment	-13126 ft-lb	11'4"	22724 ft-lb	0.578 (58%)	1.25D+1.5L	LL
Unbraced	-13126 ft-lb	11'4"	20379 ft-lb	0.644 (64%)	1.25D+1.5L	LL
Pos Moment	11230 ft-lb	4'7 1/16"	22724 ft-lb	0.494 (49%)	1.25D+1.5L	L
Unbraced	11230 ft-lb	4'7 1/16"	20379 ft-lb	0.551 (55%)	1.25D+1.5L	L
Shear	6489 lb	10'6 1/2"	9277 lb	0.700 (70%)	1.25D+1.5L	LL
Perm Defl in.	0.098 (L/1336)	5'5 5/8"	0.363 (L/360)	0.270 (27%)	D	Uniform
LL Defl inch	0.242 (L/540)	5'6 1/8"	0.363 (L/360)	0.670 (67%)	L	L
TL Defl inch	0.340 (L/385)	5'5 15/16"	0.545 (L/240)	0.620 (62%)	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 Tie-down connection required at bearing 3 for uplift 2319 lb (Combination 1.25D+1.5L, Load Case L).
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 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.

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Notes

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

Lumber

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

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023



East Gwillimbury
Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-24
Seismic System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



CSD | DRAW DESIGN BUILD

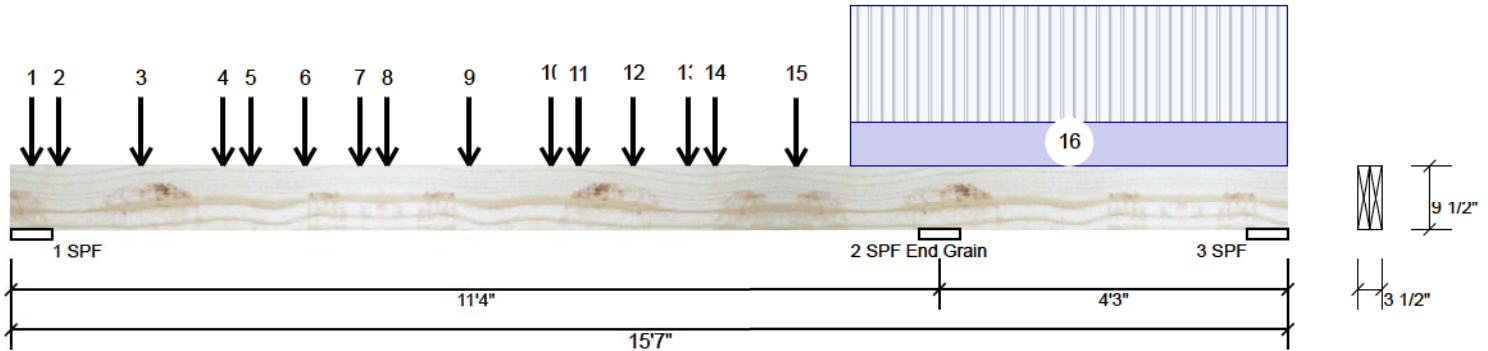


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

B5-A Forex 2.0E-3000Fb LVL 1.750" X 9.500" 2-Ply - PASSED

Level: Second Floor



ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-3-0		Top	54 lb	144 lb	0 lb	0 lb	J9
2	Point	0-7-0		Top	125 lb	287 lb	0 lb	0 lb	J9
3	Point	1-7-0		Top	265 lb	660 lb	0 lb	0 lb	J9
4	Point	2-7-0		Top	126 lb	288 lb	0 lb	0 lb	J9
5	Point	2-11-0		Top	139 lb	370 lb	0 lb	0 lb	J9
6	Point	3-7-0		Top	127 lb	291 lb	0 lb	0 lb	J9
7	Point	4-3-0		Top	139 lb	370 lb	0 lb	0 lb	J9
8	Point	4-7-0		Top	126 lb	288 lb	0 lb	0 lb	J9
9	Point	5-7-0		Top	265 lb	660 lb	0 lb	0 lb	J9
10	Point	6-7-0		Top	126 lb	288 lb	0 lb	0 lb	J9
11	Point	6-11-0		Top	139 lb	370 lb	0 lb	0 lb	J9
12	Point	7-7-0		Top	122 lb	291 lb	0 lb	0 lb	J9
13	Point	8-3-0		Top	139 lb	370 lb	0 lb	0 lb	J9
14	Point	8-7-0		Top	108 lb	288 lb	0 lb	0 lb	J9
15	Point	9-7-0		Top	266 lb	709 lb	0 lb	0 lb	J9
16	Part. Uniform	10-3-0 to 15-7-0		Top	213 PLF	568 PLF	0 PLF	0 PLF	
	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
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Zoning			

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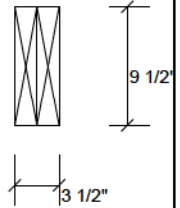
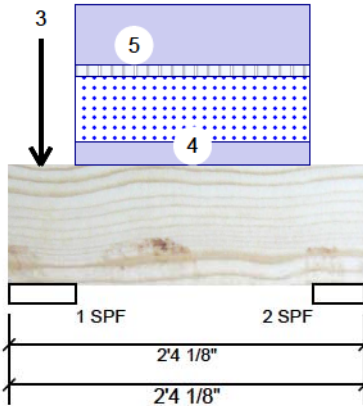


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

F5-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	98	309	597	0
2	7	58	40	0

Bearings and Factored Reactions

Bearing	Length	Cap. React D/L lb	Total Ld. Case	Ld. Comb.
1 - SPF	5.250"	15% 386 / 993	1379 L	1.25D+1.5S +L
2 - SPF	4.125"	2% 73 / 66	139 L	1.25D+1.5S +L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	63 ft-lb	1'2 5/8"	22724 ft-lb	0.003 (0%)	1.25D+1.5S +L	L
Unbraced	63 ft-lb	1'2 5/8"	22724 ft-lb	0.003 (0%)	1.25D+1.5S +L	L
Shear	9 lb	1'3 1/4"	9277 lb	0.001 (0%)	1.25D+1.5S +L	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%)		

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



Design Notes

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

ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Point	0-2-8		Top	2 lb	0 lb	0 lb	0 lb	Wall Self Weight
2	Point	0-2-8		Top	239 lb	91 lb	0 lb	0 lb	
3	Point	0-2-8		Top	8 lb	0 lb	0 lb	0 lb	
4	Part. Uniform	0-5-4 to 1-11-12		Top	18 PLF	9 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
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6. For flat roofs provide proper drainage to prevent ponding

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Zoning			

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14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



CSD | DRAW DESIGN BUILD

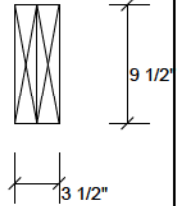
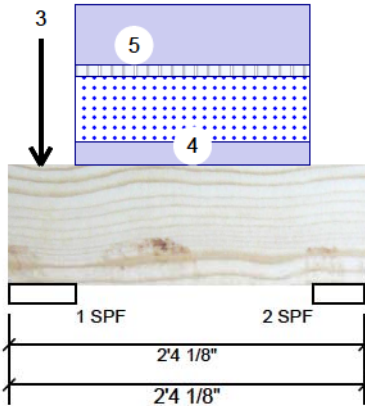


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

F5-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
5	Part. Uniform	0-5-4 to 1-11-12		Top	47 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.

Notes

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Lumber

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

chemicals

Handling & Installation

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

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 1/8/2023



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	2021-02-24
Sewage System			
Zoning			

Kott Lumber Company
14 Anderson Blvd, Ontario
Canada
K2H7V1
905-642-4400



CSD | DRAW DESIGN BUILD

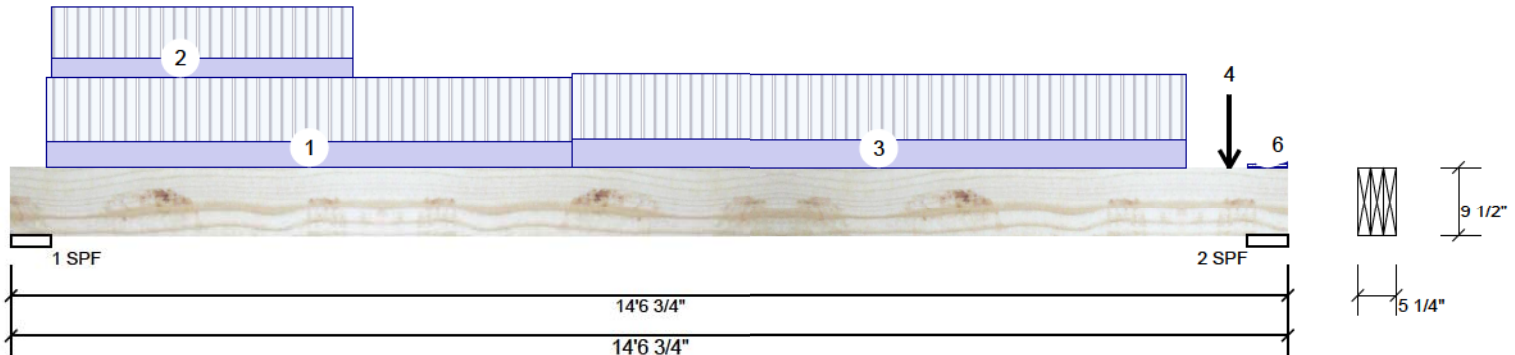


Client: GREENPARK
Project:
Address:

Date: 12/16/2020
Input by: R O
Job Name: BRENTWOOD 4-ELEV. 2-R1
Project #:

F8-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	2803	1170	0	0
2	2248	1010	0	0

Bearings and Factored Reactions

Bearing	Length	Cap.	React D/L lb	Total	Ld. Case	Ld. Comb.
1 - SPF	5.500"	32%	1462 / 4204	5666	L	1.25D+1.5L
2 - SPF	5.500"	26%	1263 / 3372	4635	L	1.25D+1.5L

Analysis Results

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	16225 ft-lb	6'11 13/16"	35449 ft-lb	0.458 (46%)	1.25D+1.5L	L
Unbraced	16225 ft-lb	6'11 13/16"	34201 ft-lb	0.474 (47%)	1.25D+1.5L	L
Shear	5058 lb	13'4 1/2"	13915 lb	0.363 (36%)	1.25D+1.5L	L
Perm Defl in.	0.167 (L/988)	7'2 11/16"	0.459 (L/360)	0.360 (36%)	D	Uniform
LL Defl inch	0.383 (L/431)	7'2 1/8"	0.459 (L/360)	0.830 (83%)	L	L
TL Defl inch	0.550 (L/300)	7'2 5/16"	0.689 (L/240)	0.800 (80%)	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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ID	Load Type	Location	Trib Width	Side	Dead	Live	Snow	Wind	Comments
1	Part. Uniform	0-4-12 to 6-4-12		Near Face	114 PLF	303 PLF	0 PLF	0 PLF	
2	Part. Uniform	0-5-8 to 3-10-12		Top	90 PLF	240 PLF	0 PLF	0 PLF	
3	Part. Uniform	6-4-12 to 13-4-12		Near Face	129 PLF	303 PLF	0 PLF	0 PLF	
4	Point	13-10-12		Near Face	114 lb	278 lb	0 lb	0 lb	J9
5	Tie-In	14-1-4 to 14-6-12	0-3-13	Top	15 PSF	40 PSF			
6	Tie-In	14-2-6 to 14-6-12	0-2-3	Top	15 PSF	40 PSF			
	Self Weight				11 PLF				



Town of
East Gwillimbury
Building Standards Branch BCIN #16487

Notes

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